Masters Degree in Population Studies

Gender Differences in Self-Employment Characteristics in Post-Apartheid South Africa: A Detailed Analysis of the Self-Employed

by Steven Lawrence Gordon

This dissertation is presented in partial fulfilment of the requirements of the Master of Population Studies Degree, Faculty of Humanities, Development and Social Studies, University of KwaZulu-Natal, Durban

June, 2010.

DECLARATION

Submitted in fulfillment / partial fulfillment of the requirements for the degree of ……., in the Graduate Programme in ……, University of KwaZulu-Natal,

Durban, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of …….. in the Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

_____

Student signature

_____

Date

.....

Abstract:

This study investigates gender differences in South African self-employment, focusing particularly on earnings differences. The study identifies a large earnings gap in favour of men in self-employment, and it explores how the determinants of female and male returns to self-employment differ. Using a combination of descriptive and econometric methods and data from the Labour Force Surveys for 2001-2007, I find that female self-employment is more likely than male self-employment to exhibit characteristics that are associated with low returns. The female self-employed tend to work part-time, be home-based, have own account enterprises and work in unskilled occupations in the informal sector. The data also suggest the presence of gender discrimination among the self-employed which may be the result of consumer discrimination and discrimination in access to credit or product markets. Focusing on the non-agricultural informal sector, I construct a more detailed gendered profile of the self-employed using a household survey from October 2005, namely the Survey of Employers and the Self-Employed. This survey captures a wealth of information on the self-employed and their businesses which is not available in the Labour Force Survey data. The analysis reveals that, in comparison to men, women are more likely to enter self-employment out of necessity, spend less starting a business, have poorer access to transport and report lower overheads. In light of the key constraints identified particularly by women in self-employment, the analysis suggests that assistance with marketing, better access to raw materials/supplies, provision of an alternative location, and better access to credit markets would help improve the profitability of their businesses.

Acknowledgements:

When I first embarked on the writing of this dissertation, I began a difficult journey. One that, in many ways, I was unprepared for. However my supervisors, Dr. Daniela Casale and Prof. Dorrit Posel, shepherded me through the pitfalls and hurdles of this journey with more patience, kindness and compassion than I would have expected and perhaps even deserved. I would like to thank my supervisors, in particular Dr. Daniela Casale, for all their advice, words of encouragement and sincerity during these last eleven months.

To everyone involved in the Industrial Organisational and Labour Studies Department at the University of KwaZulu-Natal, I would like to express my gratitude for all the inspiration that you have provided and continue to give me. To my colleagues, Dr. Shawn Rugunan, Sthembiso Bhengu, Bianca Tame and Azad Essa, I would like to extend my grateful thanks for believing in me when I did not and for teaching me about life, academics, politics and the world.

I would like to make special mention of Nompumelelo Nzimande whose empathy, wisdom, wit and fortitude inspired me during my time at the School of Development Studies.

But most of all I would like to thank my father, Robert Lawrence Gordon. I wish to extend my grateful appreciation for his guidance, for his ideas, for his great humour and for his faith in me. Without his support this thesis could not have been written. I am eternally indebted to him for the unconditional love, commitment and reassurance he gave me every day.

Support for this research was received from the Department of Trade and Industry (DTI) as part of their University Research Network Programme (URN) and from the South African Research Chair Initiative (SARChI) through Prof. Dorrit Posel the Chair in Economic Development and the National Research Foundation (NRF).

Contents

List of Illustrations

List of Figures

List of Tables

Abbreviations

ANC	African National Congress
DTI	Department of Trade and Industry
ILO	International Labour Organisation
KMP	Khayelitsha/Mitchell Plain Survey
LFS	Labour Force Survey
MICA	Micro-enterprise Investment Climate Assessment
NASE	Non-Agricultural Self-Employment
NGO	Non-Governmental Organisation
NISE	Non-Agricultural Informal Sector Enterprise
OHS	October Household Survey
OLS	Ordinary Least Squares
SMME	Small, Medium and Micro Enterprise
Stats SA	Statistics South Africa
SESE	Survey of Employers and the Self-Employed
SAWEN	South African Women Entrepreneurs Network
VAT	Valued Added Tax
USA	United States of America

Chapter One: Introduction

This dissertation investigates gender differences in South African self-employment. Its primary objectives are to probe the determinants of earnings in self-employment using national labour force surveys, and to determine whether a gender gap exists in returns to this form of employment. However, it is possible that these conventional surveys may not capture all indicators of economic performance for the self-employed, particularly in the informal sector. Consequently, this dissertation will examine a national household survey that specifically targets informal sector enterprises and their owners to further explore gender differences in self-employment.

1.1 Motivation

Since the democratic transition in South Africa, female self-employment has emerged as a vibrant and growing segment of the post-apartheid labour market. Politicians and government ministers have pointed to self-employment as a means to absorb South Africa's excess labour surplus and provide a 'safety valve' for the productive energies of labour market entrants (see DTI 2007; NPC 2009; DED 2010; and DTI 2010). Entrepreneurial employment of this kind has also been identified as a diffuser and generator of innovation as well as essential to promoting sustainable economic development in South Africa. Indeed, for the ruling African National Congress (ANC), supporting self-employment is a key policy platform that is considered vital to alleviating the apartheid legacies of high unemployment, gross inequality and widespread poverty.

A key component of the government pro-self-employment platform has been to emphasise female participation and gender equality. But progress has been slow and documented post-apartheid trends suggest a hardening rather than softening of gender inequalities in self-employment. In a widely discussed paper entitled "'Two million net new jobs': A reconsideration of the rise in employment in South Africa, 1995–2003", Casale *et al.* (2004) revealed that although self-employment had expanded rapidly since the end of apartheid, this growth was not associated with the creation of 'good' jobs. The findings indicated that the main driver of self-employment growth in

the initial post-apartheid period was an expanding informal sector associated with low returns and insecure working conditions. Furthermore, Casale (2004) argued that most of the 'good jobs' created in self-employment went to men, and that women entering the labour market tended to be 'pushed' into low income forms of self-employment in the informal sector. However while labour market literature has documented a significant rise in female self-employment during the post-apartheid period, the level of growth has been small in relation to the increased supply of female labour.

As women crowded into informal forms of self-employment, a considerable gender gap in returns to self-employment became evident to local researchers (see, for example, Bhorat *&* Leibbrandt 2001a; Casale *&* Posel 2002; and Casale 2004). However while the post-apartheid period has so far produced a significant body of research on the labour market, much of this research was not directed towards gender inequalities in self-employment. In fact, the issue of gender differentials in self-employment has largely been ignored expect by a few noteworthy studies. In 2005 a special report on female self-employment, the South African Women Entrepreneurs Network (SAWEN) stressed the need for further gender-based self-employment research (see SAWEN 2005). SAWEN, an initiative supported by the South African government, laid particular emphasis on the need to undertake research that identifies impediments to economic performance in self-employment. Such research could inform policy designed to assist potential entrepreneurs with start-up costs, and thereby improve returns to self-employment and reduce gender inequality.

1.2 The research problem

As already indicated, a number of labour analysts have identified a gender gap in self-employment that favours men. My own investigation of national labour force survey data is consistent with these findings. Restricting my sample to the non-agricultural self-employed, I found that men earned on average R4 196.34 per month in September 2007, almost three times the monthly average earnings (R1 565.04) of their female counterparts.[1] In order to explain this level of gender inequality, this dissertation probes the determinants of self-employment earnings and interrogates

[1] All monetary values presented in this chapter were adjusted using the Consumer Price Index for 2000 and are presented in 2000 prices.

potential explanatory factors behind the large gender gap observed. In particular, I investigate how much of the earnings gap is derived from differences in the characteristics of the self-employed.

The feminisation of the post-apartheid labour market has been characterised by a strong disparity between the supply of and demand for female labour in wage employment. Female unemployment, which was at a high rate before the post-apartheid transition, has grown to alarming levels in the post-transition years (see Stats SA 2009). A secondary research question considered in this study is: 'Given high female unemployment, why are the numbers of the informal female self-employed so low?' This question requires an investigation into the constraints faced by the female self-employed in the informal sector.

In order to answer the research questions, I made use of the nationally representative Labour Force Surveys (LFSs) from the 2001-2007 period. Given that the majority of the self-employed are located in the informal sector, an extensive investigation of that sector was needed. However the LFSs do not collect adequate information on important characteristics of the informal self-employed, including their access to start-up capital, basic services and government assistance. Consequently, I turned to a national household survey that targeted the informal self-employed, namely the Survey of Employers and the Self-Employed (SESE) for the year 2005. The use of the SESE allowed me to analyse detailed information on the informal self-employed and their activities not found in other surveys. To my knowledge the SESE has not been exploited by existing academic studies. As a result, I am able to present fresh information on the self-employed and hopefully offer a unique contribution to the existing body of knowledge on South African self-employment.

In order to address the research questions identified above, I aim to achieve three key objectives:

- Firstly, I investigate changes in the size and composition of the self-employed, as well as the returns these individuals receive. Using the LFSs and employing descriptive methods, I track trends in self-employment growth in South Africa for the 2001 - 2007 period. I also examine gender differences in this group,

looking specifically at which gender group is more likely to be self-employed, whether this difference is reflected across sectors and industries of the economy, and how this has changed over time. In addition, I investigate the gender-based earnings gap in self-employment, distinguishing between changing patterns in the informal and formal sectors.

- The second objective involves a further exploration of the observed gender gap. I aim to determine whether the observed differential is the result of differences in observable characteristics or the result of differences in returns to these characteristics. A descriptive analysis is used to identify key characteristics of the self-employed by gender and then an econometric analysis is conducted. To achieve this objective, the LFS dataset for September 2005 will be used. The LFS 2005 was chosen because it provides an excellent basis for comparison with the SESE 2005 which is used to achieve the requirements of the third objective.

- The third objective is to construct a detailed gendered analysis of the self-employed and their businesses, and in particular to explore constraints to economic success in informal sector self-employment. I will use the SESE 2005 to identify key characteristics and constraints for the informal self-employed, including the level of start-up capital used, and access to basic services.

1.3 Overview of the structure of the dissertation

The dissertation begins by reviewing the relevant literature on the South African labour market as it pertains to self-employment in Chapter Two. Chapter Three motivates and explains the data and methodology used in this dissertation. Chapter Four uses the LFSs to explore changes in the extent and composition of the self-employed by gender during the period from 2001 to 2007. It also examines the gender gap in non-agricultural self-employment (NASE) earnings, and how the earnings of the non-agricultural self-employed changed during the period. Chapter Five uses econometric methods and data from LFS 2005:2 to investigate gender differences in earnings determinants. Chapter Six examines characteristics of non-agricultural

informal sector enterprises (NISEs) and their owners to identify possible gender-related constraints to earnings that the LFS data were unable to uncover. Chapter Seven summarises the key findings of the study and offers recommendations.

Chapter Two: Literature review

In this chapter, I review the relevant literature on self-employment in South Africa with the focus on gender-differences, particularly male/female differentials in returns to self-employment. I have structured the review thematically by firstly examining the literature on trends in self-employment for the post-apartheid period in order to provide a context for the 2001 - 2007 period which is the focus of this dissertation. Secondly, literature concerning gender differences in returns to self-employment will be examined, and earnings trends for self-employment disaggregated by gender will be presented for the post-apartheid period. Finally, literature on gender inequality in returns to self-employment will be reviewed, focusing primarily on determinants of this inequality. Before these sections are presented, however, the issue of defining self-employment will be addressed.

2.1 Self-employment: a broad category

A major problem when investigating self-employment is the heterogeneity of this employment category. Although self-employment can be considered in very broad terms to be a type of employment in which individuals 'work for themselves', the definition of self-employment varies across data sets and countries (see, for example, Blanchflower 2000; Parker 2004; and Pietrobelli *et al.* 2004). The International Labour Organisation (ILO) provides perhaps the most widely accepted definition, identifying a self-employed individual as someone "who operates his/her own economic enterprise or engages independently in a profession/trade" (cited in Le 1999a:382). This definition subdivides self-employment into two subsets, namely there are those 'employers' who operate their own enterprise and hire one or more employees, and those 'own account workers' who operate their own enterprise but hire no employees (see also Iversen *et al.* 2006:18-23).[2] By adopting this definition, I include a broad and diverse range of economic activities in my object of study.

[2] While self-employment is sometimes considered tantamount to entrepreneurship the above mentioned ILO definition suggests that self-employment encompasses both those engaged in survivalist enterprises (such as subsistence farming) as well as businesses owners. Therefore self-employment cannot be considered as being identical to entrepreneurship.

Popular perceptions of self-employment tend be dichotomised. Some view self-employment from a remarkably positive (see, for example, Parker 2004; Pietrobelli *et al.* 2004; Elam 2008; and Herrington *et al.* 2009). Optimistic proponents of self-employment have argued that the self-employed promote economic growth, create and utilise innovative technologies, and generate employment opportunities for themselves and others. In many developing countries, including South Africa, self-employment has been hailed by some theorists as a pathway out of poverty (see also Chen *et al.* 2004; Maas & Herrington 2006; Allen *et al.* 2008; and Bosma & Levie 2010). However, other researchers present a less optimistic view (see, for example, Kantor 2002; Das 2003; Hughes 2005; and Mandelman & Montes-Rojas 2009). These authors disaggregate self-employment into a modern or formal sector and a traditional or informal sector. The modern sector is characterised by high returns, security, high productivity growth and legislated protections and regulations. On the other hand, self-employment in the traditional or informal sector[3] is viewed as an involuntary and transitory option that provides low earnings for survival in an unregulated environment. Using the term "other side of self-employment", Das (2003) describes how the majority of the self-employed in the developing world are trapped in a vicious cycle of poverty that limits their contribution to employment and wealth creation in national economies. In short, the pessimistic associate informal self-employment with 'disguised unemployment'.

International literature on this issue suggests that the female self-employed are more likely to operate in the so-called 'traditional sector' than men (see, for example, Chen *et al.* 2004; Deininger *et al.* 2006; Elam 2008; and Hiralal 2010). These female-owned informal sector enterprises are often home-based, have few market linkages, and suffer from smallness of scale, as well as low access to raw material, markets, infrastructure and financial services. Increasingly these enterprises are becoming non-agricultural, as new patterns of urbanisation change old patterns of employment.

[3]The South African informal sector is characterised by insecurity, lack of protection from labour legislation and the burdens of enterprise registration (for instance any business with an estimated annual turnover of R20 000 is eligible to register for Value Added Tax). For a more detailed discussion of the informal sector, see Budlender *et al.* (2001); Devey *et al.* (2006); Essop & Yu (2008); and Heintz & Posel (2008).

2.2. Self-employment growth in South Africa

While studies that expressly examine self-employment are rare in South Africa, an extensive literature has evolved on the post-apartheid labour market (see, for example, Bhorat & Leibbrandt 2001b; Casale & Posel 2002; Casale *et al.* 2004; Cichello *et al.* 2006; Devey *et al.* 2006; Kingdon & Knight, 2007; and Heintz & Posel, 2008). I will review this literature to discern how the size and composition of South African self-employment has changed during the post-apartheid era. As the study focuses on the period from 2001 to 2007, this chapter will investigate historical antecedents in order to provide a context for the period under analysis.

2.2.1 Trends in self-employment growth in post-apartheid South Africa

Due to apartheid restrictions as well as a chronic lack of investment in enterprise development, self-employment was widely underdeveloped during the early 1990s. Following the lifting of restrictions and the opening up of the South African economy after 1994, self-employment saw a significant period of growth.[4] In their analysis of the early post-apartheid period, Casale *et al.* (2004) and Casale (2004) provide perhaps the most comprehensive picture of the expansion of self-employment between 1995 and 2003. Disaggregating self-employment into three groups (informal self-employment, subsistence agriculture[5] and formal self-employment), Casale *et al.* (2004:982-984) reveal that 783 000 people entered informal self-employment, 230 200 entered formal self-employment, and 163 700 entered subsistence agriculture during this eight year period (see also Casale & Posel 2002:167). Collectively, more

[4] However, some of this growth may be due to improved methods capturing of marginal forms of employment. Casale *et al.* (2004) argues that improved efficiency of data capturing (as well as definitional changes) allowed labour market analysts to 'pick up' more information concerning the informal self-employed and those in marginal forms of employment. This was prompted by the introduction of the LFS (used in this dissertation) which was more effective than the old October Household Survey (OHS) in capturing information on marginal forms of employment, and utilised modified definitions of employment (see also Budlender *et al.* 2001). Indeed, Casale *et al.* (2004: 990-992) found that the introduction of the LFS led to a spike in informal employment growth of 229 900 jobs between the OHS 1999 and the September round of LFS 2000. Subsequently, researchers argue that the growth in informal self-employment is likely to be less impressive than the data would suggest (see also Muller & Posel 2004).

[5] Subsistence agriculture can be defined as informal agricultural self-employment. Casale *et al.* (2004:984) suggest that subsistence agriculture should be reported separately from the self-employment data. They argue that subsistence agriculture is a highly volatile form of employment, and their analysis of national household survey data reveals large fluctuations in reported figures for subsistence farming on a year-to-year basis (see also Muller & Posel 2004).

than a million people entered self-employment over the period which represented an increase of over 140 percent.[6] The self-employment rate[7] increased from less than 15 percent in 1995 to 18 percent in 2003 (see Casale & Posel 2002:167; and Burger & Yu 2006:5). In contrast, total wage employment (excluding domestic and agriculture work) grew at a far lower rate during this eight year period. Between 1995 and 2003, total wage employment grew by less than eight percent which represented the creation of only 552 500 jobs. Due in part to an overall increase in self-employment during the 1995-2003 period, wage employment as a percentage of total employment decreased from 85 percent in 1995 to 82 percent in 2003 (Kingdon & Knight 2007:826).

During the 1995-2003 period, most of those entering self-employment were either own account operators or employers of only a few people, and tended to be labelled as micro-enterprises. Casale *et al.* (2004:983) argued that during this period the bulk of these micro-enterprises entered South Africa's expanding informal sector, and that over this eight year period the numbers of the self-employed in the informal sector grew at a far faster rate than their counterparts in the formal sector (see also Casale & Posel 2002:167-169). Consequently, informal self-employment grew from 63 percent of total self-employment in 1995 to 71 percent in 2003 as a share of total self-employment (see also Kingdon & Knight 2007:821). In fact, the informal sector was the main contributor to self-employment growth during the initial post-apartheid years.

Growth in self-employment was characterised by the changing opportunities in the post-apartheid era. With apartheid restrictions on movement and trade rescinded, Africans labour market participants found it easier to enter self- employment. Casale (2004:270-272) provided evidence that self-employment was the fastest growing form of employment for Africans during the 1995-2001 period (see also van Klaveren *et al.* 2009:15-19). Most new self-employed Africans entered unskilled and semi-skilled

[6] However, as already indicated, some of this growth may be due to better capturing of marginal forms of employment by the introduction of new survey instruments. Furthermore subsistence farming was only captured from the 1999 October Household Survey (OHS) onwards and it is impossible to know with certainty how many subsistence farmers existed before 1999 (see Casale *et al.* 2004; and Muller & Posel 2004). This makes accurately measuring self-employment during the period 1995-1999 difficult.
[7] The self-employment rate can be described as self-employment over total employment to determine the total share of employment taken up by self-employment (see Blanchflower 2000:11-12; and Iversen *et al.* 2006:18-19).

occupations. For example between 1995 and 2001, 330 000 African labour participants entered self-employment via elementary occupations. A further 195 000 entered as service, shop and market sales workers, and 160 000 as craft and related trade workers. As a result of this unskilled influx, Casale (2004:270-271) noted a shift in the occupational distribution of the self-employed during the period. The considerable rise in the number of African entrants into low-skill forms of self-employment suggests a situation where a growing number of individuals, unable to obtain formal wage employment, 'made work' for themselves (see Casale & Posel 2002). After the end of the 1990s, the boom phase in self-employment growth began to dissipate. Steenkamp (2008:60-66) suggests that only 423 000 entered this type of employment between 2002 and 2006. Informal self-employment growth, in particular, slowed after 2003 and Essop & Yu (2008:43) found that this type of employment increased by only 23 percent between 2002 and 2006. Conversely, wage employment continued to grow after 2002, with more than one million wage jobs created between 2002 and 2006 (see Banerjee *et al.* 2008:724-727).

A comparison of the formal and informal sectors in the post-apartheid period reveals that the self-employed constitute a larger share of the informal sector. Essop & Yu (2008:12) compare informal self-employment as a percentage of total informal sector employment for the 1997-2006 period. They find that the self-employed as a percentage of the informal self-employed remain stable at more than two-thirds between 2003 and 2006, as compared to an average of seven percent for the formal sector self-employed for the same period (see also Steenkamp 2008:61). These findings confirm not only that self-employment in post-apartheid South Africa is concentrated in the informal sector but that the informal sector is primarily comprised of self-employed individuals.

2.2.2 Assessing barriers to self-employment

It is evident from Section 2.2.1, that there has been a significant degree of self-employment growth during the post-apartheid period. The self-employment rate increased from less than 15 percent in 1995 to almost 20 percent in 2006 (see Burger & Yu 2006:5; and Steenkamp 2008:62). However, compared to the country's level of unemployment, this rate is considered small by labour market analysts (see Kingdon

& Knight 2007; and Heintz & Posel 2008). From 1995 to 2007, the official unemployment rate increased from 17 percent to 23 percent.[8] Indeed, the South African labour market is uniquely characterised by high rates of unemployment and relatively limited self-employment. This begs the question: 'Why did limited opportunities in formal wage employment during the post-apartheid period not result in a large rise in self-employment?' The observed trend runs counter to the notion that self-employment, particularly in the informal economy, acts as a 'free entry zone' or 'residual sponge' absorbing excess labour market entrants during times of economic downturn (see also Blanchflower 2000; Pietrobelli *et al.* 2004; and Mandelman & Montes-Rojas 2009).

Discounting the informal economy as a 'free-entry zone', Kingdon & Knight (2007) suggest that unemployed individuals face severe barriers when attempting to enter self-employment. Similarly Heintz & Posel (2008) argue that entry barriers exist not only to self-employment in the formal sector, but also in the informal economy. This suggests a degree of labour market segmentation that goes beyond the 'free entry zone' hypothesis of dualistic labour theorists. The following section reviews pertinent studies in the growing body of local literature that has arisen to investigate these barriers to entry.

A World Bank survey of 500 informal enterprises was conducted in 2001 to shed light on growth constraints in self-employment. This study included extensive sets of questions that directly assessed constraints encountered by these firms, and examined the role that government could play to assist them (see Chandra *et al.* 2001). Although not nationally representative, this survey provided important information on constraints to economic progress faced by small businesses such as severe constraints to profit and growth, with leading constraints being high costs of infrastructure and

[8] Under the International Labour Organisation (ILO) definition, the unemployed can be described as the number of people who were without work and who have taken active steps to look for work and were available for work during the last four weeks. This is the official definition of unemployment in South Africa and is sometimes refer to as the strict or narrow definition of unemployment (see Banerjee *et al.* 2008:719-720). In labour market analyses in South Africa it has become customary to include both this official definition as well as a broad (or expanded) definition of unemployment. Under the broad definition, individuals do not have to actively look for work to be classified as 'unemployed', as a result the board definition includes both those searching for work as well as those who were without work and were available for work but not looking for work (i.e. discouraged work-seekers). From 1995 to 2007, the official unemployment rate increased from 23 percent to 36 percent (see Kingdon & Knight 2007; Banerjee *et al.* 2008; and Stats SA 2009).

services, poor access to training and human capital, low demand and lack of credit (Chandra *et al.* 2001). Other constraints included a shortage of skilled labour, inadequate business space, corruption and inadequate social networks (see also von Broembsen 2007; Herrington *et al.* 2009 and Hiralal 2010). In a parallel Durban study, Skinner (2005) reported similar findings and emphasised that the firms faced severe financial constraints, with little or no access to credit markets. Indeed, according to a paper by Rogerson (2008:62-65), the majority of small and micro-enterprise owners have limited access to collateral, poor credit histories, inadequate business skills, and networks that restricted their usage and access[9] to credit institutions.

Researchers also raised concerns about the 'investment climate' for small and micro-enterprises. To "evaluate the investment climate facing micro-enterprises in South Africa in all its operational dimensions", the World Bank commissioned the 2006 South African Micro-enterprise Investment Climate Assessment (MICA) (Clarke *et al.* 2006:4). The MICA raises concerns about the 'investment climate' for small and micro-enterprises, with particular reference to access to training, financial services, infrastructure and crime. Indeed the MICA indicates that informal enterprises face very different constraints than formal firms (also see Chen *et al.* 2004; Maas & Herrington 2006; and Napier & Lieberman 2006).

The release of panel data from the 2000 Khayelitsha/Mitchell's Plain (KMP) Survey[10] has allowed a number of studies to focus on self-employment barriers (see Cichello 2005; and Cichello *et al.* 2006). Using the 2000 KMP Survey, Cichello *et al.* (2006) found that the key hindrance to self-employment entry was financial capital constraints, particularly among women. The study cited the absence of capital resources to start an informal business and the inability to access credit markets as major impediments to entry. Given that the amount of financial capital invested in the business by a self-employed individual should positively affect earnings (see Hundley

[9] Chandra *et al.* (2001:33-36), in their analysis of small businesses in the Johannesburg metropole, found that access to credit from commercial institutions (rather than the price of credit) was a significant factor hindering small enterprise growth and economic performance.

[10] The KMP Survey is a labour market survey designed to explore employment, unemployment and labour force participation of individuals and households residing in the KMP area. Cichello *et al.* (2006) provide a more detailed discussion of the survey and the many benefits it offers for analysing labour force status and outcomes.

2001a:819), capital constraints of this kind would also be expected to constrain the returns to self-employment. Lesser hindrances identified by Cichello *et al.* (2006) include a lack of skills, concerns over future access to formal wage employment and excepted returns, fear of crime, and community jealousy (see also Cichello 2005). However data from the KMP Survey is not representative of the nation as a whole or even of the metropolitan area of Cape Town, and only represents conditions in the KMP community.

2.3. Gender differences in self-employment growth

The growth in self-employment has coincided with the growing participation of women in this form of employment but research on the feminisation of self-employment is scarce. Indeed, the South African Women Entrepreneurs' Network (SAWEN) has gone so far as to argue that:

> "*...the major problem in South Africa is the lack of empirical studies on woman entrepreneurs and the inadequate quality of statistical data. Research on woman entrepreneurs' contribution to the South African economy is non-existent and few studies point to a general profile of woman entrepreneurs in South Africa*" (SAWEN 2005:14).

Despite this criticism, there are studies on gender differences that provide information on broad trends in self-employment in South Africa (see, for example, Casale & Posel 2002; and Casale 2004). The section which follows will draw on pertinent labour market literature in order to discuss the feminisation of self-employment in the post-apartheid period. In addition, I will consider overall labour market trends, with a particular focus on female unemployment and labour force participation.

2.3.1 The feminisation of self-employment during the post-apartheid period

The post-apartheid period saw a remarkable degree of labour market feminisation which changed the composition of the labour market in South Africa. Using the 1995 and 1999 October Household Survey (OHS) data, Casale & Posel (2002) found that whilst 38 percent of all women in 1995 between the ages of 15 and 65 could be

termed ‘labour participants’ (using the strict participation rate), by 1999 this participation rate had increased to 47 percent (see also Banerjee *et al.* 2008:723). After this period of growth, the increase in female labour force participation slowed. A report by Stats SA (2009:5) indicated that the female rate of labour force participation was 49.8 percent in 2007 (see also van Klaveren *et al.* 2009:16-19).[11] These statistics may reflect an inability on the part of the South African economy to absorb new female labour force entrants, and the fact that significant barriers to labour market entry exist for women. High rates of unemployment, low returns to employment, HIV/AIDS, social stigma and fear of crime may have discouraged women from entering the labour market.[12]

This labour market feminisation was not wholly associated with positive economic upliftment. It is clear from the work of Casale & Posel (2002) that the observed increase in female employment during the 1995-1999 period was not due to structural changes in the economy that had 'pulled' a higher share of women into the labour market. As the result, the researchers argued that the observed feminisation of labour force participation during this period was primarily influenced by supply-side factors. In particular, they suggest that a fall in access to male income (including remittance transfers) among women may be a key factor in explaining the growth in female labour force participation.[13]

---

[11] The figures given reflect the strict labour force participation rate which adopts the official (or narrow) definition of unemployment. Since it has become common practice in labour market analyses in South Africa to discuss both the narrow and broad definitions of unemployment, it is therefore also necessary to assess both the strict and broad definitions of the ‘labour force’. Strict and broad labour force participation rates can be calculated by dividing the respective labour forces by the working age population (see Casale 2004:253). Investigating the broad labour force participation, Casale & Posel (2002:164) indicate that the female broad labour force participation rate increased from 47.8 percent in 1996 to 60.8 percent in 1999. This much larger increase in the broad female labour force participation reveals the growth of discouraged female work seekers in South Africa since 1995. Between 2000 and 2007, the broad female labour force participation rate increased by almost 1 percent (see Stats SA 2009:5). Comparing the 1995-1999 period with the 2000-2007 period, it is clear that labour market feminisation in the 2000-2007 period was considerably slower than in the period 1995-1999.

[12] According to Hinks (2002: 2044), the under-representation of women in the labour market could be the result of occupation-specific hierarchies consistent with occupational barring against females.

[13] Casale & Posel (2002: 174-176), basing their argument on the added-worker hypothesis, argue that when the usual breadwinner (usually a male) becomes unemployed, labour force participation increases as additional family members (typically females) enter the labour market in an effort to maintain family income. Other explanations offered by Casale & Posel include the deepening of the HIV/AIDS pandemic, the reduction in remittance transfers to women due to the breakdown of the traditional migrant-labour structures since 1994, and the growth in female-headed households as a result of male desertion and changing attitudes to marriage.

A significant share of female labour force participants entering the labour market failed to gain employment, and consequently entered unemployment. According to Casale & Posel (2002:166), the official or 'narrow' female unemployment rate increased from 22.1 to 31.5 percent for the 1995-1999 period. If the 'broad' definition is used, female unemployment was even higher at 37.6 percent in 1995 growing to 47 percent in 1999 (see also Banerjee *et al.* 2008:721). In contrast, the male 'narrow' unemployment rate increased from 13.5 percent in 1995 to 21.9 percent in 1999, while the male 'broad' unemployment rate increased from 23 to 32 percent over the same period. Comparing the female and male unemployment rates, it is apparent that women suffer disproportionately from unemployment. After 1999, unemployment rates began to decline. According to Stats SA (2009:5), in 2007 the 'narrow' female unemployment rate fell to 26 percent while the broad female unemployment rate was 45 percent (see also van Klaveren *et al.* 2009:19-21). Similarly in 2007 the 'narrow' male unemployment rate fell to 19 percent and the 'broad' male unemployment rate fell to 30.9 percent. Despite this level of decline, persistently high unemployment remains one of the most pertinent challenges facing modern South Africa.

The discrepancy between the narrow and broad rates of unemployment observed in the literature suggests that many women entering the labour market become discouraged work-seekers (see also Kingdon & Knight 2007:823-825). This is not surprising as searching is not a costless activity, especially in rural districts where poverty rates are high, infrastructure is poor, and there is a lack of job opportunities. The cost of searching for employment may be even higher for women due to their domestic responsibilities, limited mobility and financial constraints (Budlender 2002:37). As a result, women are more likely to become discouraged worker-seekers (see also Casale & Posel 2002:176-177; and Casale 2004:258). Unable to find gainful wage employment in the formal sector, a substantial number of female labour participants entered informal self-employment. According to Casale & Posel (2002:167), female informal self-employment (excluding subsistence agriculture) increased by 174 percent between 1995 and 1999. As a result, informal self-employment accounted for 12 percent of total female employment in 1999. However, feminisation of self-employment did not take place solely in the informal sector. According to Casale and Posel (2002), the number of women in formal sector self-employment almost doubled between 1995 and 1999. Despite this increase, women

still remain under-represented in formal self-employment, which accounted for less than three percent of total female employment in 1999.

Studies suggest that most of the new female entrants into self-employment were home-based and operated in highly competitive environments (see Napier & Lieberman 2006; and Hiralal 2010).[14] In addition, the majority of new female entrants tended to enter low-skill, low-return occupations in the 'service sector'. To investigate this further, Casale's (2004:21-22) examination of occupational categories of the African self-employed is particularly illuminating. According to her analysis, more than 80 percent of self-employed African women were located in service/sales, skilled agriculture and fishery (including subsistence farmers) and elementary occupations in 2001, compared to 54 percent in 1995.[15] Indeed, by the time self-employment growth began to dissipate in the early 2000s, it was evident that female self-employment was concentrated in marginal, low-paying and precarious positions in the informal economy.

2.3.2 Gender and self-employment entry

The international literature on entry into self-employment suggests that although men and women have similar determinants that account for their self-employment, notable gender differences exist. Research by Boden (1999), Clain (2000) and Hundley (2001a), found that female entry into self-employment was associated with marriage[16] and having young children, whereas no relationship between these variables was found for males (see also Leung 2005:760-763). These researchers corroborate an earlier thesis by Carr (1996) that women enter self-employment because it offers greater flexibility for childcare arrangements than formal wage employment. According to Carr (1996), this explains the greater tendency for the female self-

[14]Estimates of home-based enterprises vary widely during the 1995-2005 period with some researchers arguing that home-based enterprises function in at least one in every five households (see Napier & Liebermann 2006: 18-19, for a review of the relevant literature).
[15] By contrast, African self-employed men were more likely to be involved in skilled high-paying occupations as managers, technicians and professionals (see also Bhorat & Leibbrandt 2001a:85-89).
[16] Literature identified by Parker (2004:126-128) suggests that husbands (particularly if they are self-employed) may enable women to overcome capital constraints, provide entrepreneurial skills and knowledge, and alleviate domestic burdens. This literature suggests that marriage, therefore, increases the probability of self-employment among women (see also Budig 2006).

employed to engage in part-time home-based work.[17] There is also a hypothesis that women enter self-employment to escape discrimination and low earnings in wage employment (see, for example, Georgellis & Wall 2005:339-340; Leung 2005:775-776; and Still 2006:55-57). In South Africa it is unknown whether flexibility for childcare arrangements and/or gender discrimination in wage employment are determinants of female self-employment entry. To my knowledge, there has not yet been an application of structural econometric methods to specifically estimate the determinants of female self-employment in South Africa. Consequently, it is not possible to identify those characteristics or factors that are positively or negatively associated with women's participation in self-employment.

According to Parker (2004: 124) women in the developed industrial economies, are a minority within the self-employed work-force.[18] By contrast, women in the developing world are more likely to pursue self-employment and tend to make up a larger share of the self-employed work-force (see also; Chen *et al.* 2004; Allen *et al.* 2008; Elam 2008 and Bosma & Levie 2010). Women in developing countries tend to pursue self-employment out of necessity, engaging in survivalist activities in the informal sector. In other words, the decision to enter self-employment often resembles a 'strategy of desperation' as discussed by Cross & Preston-Whyte (1983) in their South African study on livelihood strategies in the informal sector. Given the labour market conditions faced by women in South Africa, their decision to enter self-employment is most likely primarily governed by necessity (see also Skinner 2005:18-19; Mass & Herrington 2006:17-21; Napier & Lieberman 2006:26-28; and Herrington *et al.* 2009:68-70).

2.4. Gender differences in returns to self-employment

Changes in the size and composition of South African self-employment during the 1995-2001 period have been accompanied by changes in the earnings patterns of the

[17] However, Carr's (1996) thesis was based on U.S.A. research and may not hold true in developing countries. In her multivariate analysis of self-employment entry, for example, Das (2003:22-23) found that being married and 'number of children in the household under five' actually depressed female participation in self-employment (see also Deininger *et al.*2006:14-16).

[18]The incidence of self-employment among women is low in the USA and Europe despite a recent rise in the numbers of the female self-employed in those regions (see Blanchflower 2000; Parker 2004; and Iversen *et al.* 2006).

self-employed. This section will examine the relevant literature and discuss observed returns to self-employment for the post-apartheid period. Labour market research has found that this period has coincided with a general decline in returns to self-employment (see Casale 2004:265; Casale *et al.* 2004:990-997; Kingdon & Knight 2007:827; Burger & Yu 2006:4-6; and Steenkamp 2008:67-68). There is also evidence that this decline has strengthened and entrenched existing gender inequalities in self-employment. After 2001, the earnings of the self-employed increased on balance, although there is no clarity as to the effect that this had on gender inequalities in returns to self-employment. This section also examines the relevant literature to discern gender-based trends in self-employment earnings during the post-apartheid period.

2.4.1 The South African evidence for the post-apartheid period

Casale (2004), in her analysis of feminisation in the South African labour market, provides the most complete investigation to date of gender differences in the returns to self-employment for the 1995-2001 period. Using 1995 OHS data, Casale (2004:265) found that gender differences in monthly returns to self-employment were evident at the beginning of the post-apartheid period (see also Bhorat & Leibbrandt 2001a:81-82). Disaggregating the self-employed by racial groups, she found that the female African informal self-employed earn on average lower returns to self-employment (R1 868 per month) than their male counterparts (R3 687 per month).[19] In formal self-employment, White men in particular were over-represented and reported monthly earnings (R14 442) far higher than other groups in this sector.

The returns to self-employment changed sufficiently over the period. As the previous section made clear, evidence suggests that the expansion of self-employment has not been associated with 'good jobs'. As the number of 'bad jobs' in self-employment proliferated, it is not surprising that researchers documented a marked decline in average earnings of the self-employed. Data analysis by Kingdon & Knight (2007:839) and Casale *et al.* (2004:991-994) reveals that average real monthly earnings of the self-employed fell by more than two thirds from R6 866 per month in

[19] All monetary values presented in this chapter were adjusted using the Consumer Price Index for 2000 and presented in 2000 prices.

1995 to R2 610 per month in 2003 (see also Burger & Yu 2006:5-6). The informal self-employed were hit hardest with their earnings falling by more than 82 percent, from R5 532 per month in 1995 to R964 per month in 2003 (see also Essop & Yu 2008:24-25).[20] As a result, the proportion of the informal self-employed earning below a poverty line of R584 increased from 18.1 percent in 1997 to 42 percent in 2003 (Casale *et al.* 2004:996). Burger & Yu (2006:4) note that it is possible that some of this documented decline in average earnings among the self-employed reflects the more thorough capture of low-income self-employment data by new survey instruments in South Africa.

It is apparent that the female self-employed suffered during this period. Exploring this further, Casale's (2004:14-19) investigation of the gendered earnings of the African self-employed is particularly revealing. Casale (2004:265) found that returns to self-employment for African females in the informal sector declined by 76 percent between 1995 and 2001, and by 60 percent for those in the formal sector during the same period. Furthermore, Casale (2004:273) observed a severe earnings deterioration in the three main informal sector occupational categories where the majority of self-employed African women are located, i.e. elementary occupations, skilled agriculture and fishery, and service/sales during the period (see also Bhorat & Leibbrandt 2001a:80). Within these categories, female average earnings fell by far more than that of male counterparts. This suggests that the recent feminisation of the labour force has not 'bought' self-employed women very much in terms of economic rewards and may have, in words of Casale (2004:251), "reinforced the disadvantaged position of women in the labour market".

The gender disparity in average earnings may be partly explained by the tendency of self-employed women to be 'ghettoised' in positions associated with low returns. However there is evidence that even within different occupations in self-employment, women tend to earn less than their male counterparts. Casale (2004:273) found that occupational gender differences in self-employment existed, particularly within

[20]The formal self-employed also experienced a fall in average real monthly earnings in the post-apartheid period. According to Essop & Yu (2008:24-25), the real monthly average earnings of the formal self-employed fell by more than 40 percent between 1997 and 2003 (see also Casale *et al.* 2004:992).

occupations associated with specialised levels of skill such as technicians, craft workers and managers (see also Bhorat & Leibbrandt 2001a:80).

An increase in average real monthly earnings of the self-employed was reported for both the informal and formal sectors after 2001. According to Essop & Yu (2008:24-25), average real monthly earnings in 2006 was R1 094 and R7 802 for the informal and formal self-employed respectively. Despite this level of growth, current earnings among the self-employed remains far below what they were in 1995 (see also Burger & Yu 2006:4-6; and Steenkamp 2008:67-71). Tracking self-employment earnings by gender after 2003 is difficult. To my knowledge, there are no in-depth analytical studies that specifically and adequately investigate gender differences in returns to self-employment in South Africa for this period. As a result it is not possible to accurately track gender differences in the earnings of the self-employed after 2001.

2.4.1.1 The econometric evidence

A gender gap in earnings among the self-employed might be the result of differences in the distribution of a number of observable factors. For example, male-female differences in earnings can arise from differences across gender in the characteristics of the self-employed (such as the level of their human capital, age, and characteristics of households), as well as differences in the nature of the enterprise (including the number of employees, capital investment, and the sector of operation). In order to determine the role played by gender as a determinant of self-employment earnings, researchers have used econometric methods (see, for example, Clain 2000; Hundley 2001a; Georgellis & Wall 2005; and Leung 2005). To explore the determinants of earnings in a multivariate context, these econometric approaches often use the standard Mincerian earnings equation and estimate the equation using the Ordinary Least Squares (OLS) method.

I will now briefly discuss a local econometric study on returns to self-employment that identified an earnings premium for being male. Steenkamp (2008:85-86) found that men in self-employment earned on average 28 percent more than their female counterparts, even after controlling for a range of variables including human capital, sector of employment and type of occupation, (see also Heintz & Posel 2008:38-40).

In his regression, Steenkamp used a pooled sample of men and women in self-employment. Given gender differences in labour market participation, unemployment and returns to self-employment observed in this review, there is a strong possibility that estimates based on pooled models are likely to produce average parameters that are not accurate representations of either gender group (see also Bhorat & Leibbrandt 2001b:108). Despite this, there is no academic study, that I am aware of, that investigates gender differences in returns to self-employment in South Africa using regressions for males and females.

2.4.2 Explaining female self-employed earnings

Gender inequality in the returns to self-employment is an established finding not only in South Africa but in much of the developing world, including many parts of the developed world (see, for example, Das 2003; Hughes 2005; Leung 2005; Deininger *et al.* 2006; Allen *et al.* 2008; Elam 2008; and Bosma & Levie 2010). However, while women are typically found to earn less than men in self-employment, there are too few international or local studies that specifically investigate this gender gap. Parker (2004:129), lamenting on the international state of knowledge, noted that notwithstanding "its intrinsic interest and importance, the subject of female entrepreneurship has arguably not commanded the degree of research effort that it deserves". This section will review the literature that does exist, with a view to discussing determinants of the gender gap in self-employment earnings.

Aronson (1991) presents what has become the traditional response to the question of gender inequality in returns to self-employment. He argues that women have less experience of business management, are constrained in their self-employment activities by domestic responsibilities, and are less able to access credit and product markets. Furthermore, Aronson (1991) contends that women have a greater preference for the kind of home-working associated with low returns.[21] The compensating differentials argument, suggests that women are more willing to enter in low-return

[21] Clain's (2000) research suggests that the female self-employed tend to have characteristics that are less valued by the market, such as lower levels of educational attainment, when compared to their male counterparts. As a result, women earn less than men in self-employment.

self-employment than men in exchange for the compensating differentials of its family-friendly aspects (see also Budig 2006: 727).

Hundley (2001a, 2001b) updates this hypothesis by investigating the gender gap in self-employment by applying an Oaxaca-decomposition[22] to gender-specific earnings functions in self-employment. Utilising a USA sample, Hundley found that the most important explanatory variables were housework, work hours and the number of young children. Together these accounted for between 30 and 50 percent of the gender differential in average annual earnings among the self-employed. As domestic work is allocated unequally among household members, distinct differences may appear in the impact of various family characteristics on male and female self-employment. This follows the classic Becker (1985:35) argument that individuals have a limited stock of human energy. As a result, engaging in non-market work depletes the energy available for income generation and therefore causes a decline in earnings.[23] In other words, women earned less in self-employment because they tend to spend less time managing and developing their businesses. This finding has led researchers such as Hughes (2005:18) to question the potential of self-employment to offer new choices or new forms of freedom for women, and to suggest that "self-employment may simply entrench women's labour market disadvantage".

On the subject of entry into self-employment, it is interesting to note that research has suggested that a majority of South African small and micro enterprise owners enter self-employment from formal wage employment (see, for example, Chandra *et al.* 2001). Supporting this finding, Devey et al. (2006) argues that, a connection exists between self-employment and formal wage employment. Citing research that uses the

[22] A detailed description of the composition used by Hundley is provided by Oaxaca (1973).

[23] In South Africa, the multiple roles society demands of women often restrict their control over their own time, diverting their labour into unpaid forms (such as responsibility for cooking and washing dishes, child-care, fetching and heating water, and collecting firewood) which limit the time available for income-generating activities. Using the 2000 Time Use Survey (TUS), Budlender (2002:48-50) found that employed women spent far more time on average on unpaid housework, caring for other members of the household, or collecting fuel or water, than employed men. Consequently, Budlender found that employed men spend more time on market-related work than their female counterparts. In his review of informal employment literature, von Broembsen (2007:14) cites a qualitative study arguing that "[w]omen at home do household chores first before they switch to working on their businesses. These chores could take up half of their day. Being at home in African areas, especially in areas where people are unemployed, often means attending to visitors or passers-by as it is rude to chase people away. Sadly therefore the business suffers". As a result of this domestic burden, the female self-employed are more constrained in their income-generating activities and tend to adopt flexible work schedules.

KwaZulu-Natal Income Dynamics Study (KIDS), these researchers suggests an intra-household link between self-employment activities and formal sector workers. Devey et al. (2006) infers, therefore, that there is a transfer of human and financial capital by the formally employed to self-employment activities (see also Skinner 2005:17; and Cichello et al. 2006). Indeed, studies suggest that gender differences in sectoral preferences are related to previous experiences of women in wage employment, given that most new entrepreneurs enter self-employment on the basis of experience and knowledge drawn from previous wage employment (see Parker 2004:127). This preference reproduces self-employment that reflects the poor prospects of traditional female employment (see also Das 2003: 25-26).

Low infrastructure access can also have a negative impact on self-employment earnings. Studies reviewed by Napier & Lieberman (2006) argue that income generation in home-based enterprises, where a significant share of the female self-employed are located, is negatively affected by poor access to formal housing, electricity, water and other services (see also Chen *et al.* 2004; Skinner 2005; and von Broembsen 2007). For example, a 2002 study on compound dwellers in Kumasi Ghana found that households using their homes for income generation are constrained by the size and space available inside the house (see also Hiralal 2010). In addition, it has been argued that women are more negatively affected by low infrastructure access than men. As women are responsible for the bulk of domestic housework, low access to infrastructure increases the time they have to spend on performing domestic tasks such as fetching water (see Budlender 2000). In accordance with Hundley's hypothesis, this would negatively impact on the time the female-self-employed have available for economic activities and in turn cause a decline in earnings.

As has already been indicated, many South African women who enter self-employment tend to enter low-skill occupations in industries associated with low returns. This trend is not unique to South Africa. In her USA study, for example, Budig (2006:732) suggests that gender segregation by occupation and industry may be greater among the self-employed than the wage-employed. At the international level, researchers question the decision by women to enter economically unrewarding forms of self-employment (see, for example, Anna *et al.* 1999; Kantor 2002; Chen *et al.* 2004; Parker 2004; and Elam 2008). These researchers suggest that differences

between men and women on sectoral choices are likely to be influenced by many different market factors, including individual preferences, previous work experience, gender discrimination, household responsibilities, and sector-specific investment requirements. In addition, pre-market factors such as differential treatment by parents and schools as well as gender differences in educational access and business experience, channel entrepreneurial women into particular occupations and industrial sectors associated with low incomes (see also Allen *et al.* 2008:29-30). Furthermore, these researchers present evidence for gender differences in the intergenerational transmission of skills and knowledge, levels of cultural endowments, access to cultural organisations and credit associations.

Low access to start-up capital would also be expected to constrain returns from self-employment, reduce opportunities for growth, and increase the probability of business failure. According to Parker (2004:128), research in the USA confirms that self-employed women are more constrained in obtaining start-up capital than their male counterparts due to risk aversion, owning fewer assets that can be sold or used as collateral, less experience with credit markets, discrimination by credit markets, and poorer business networks (see also Verhaul & Thurik 2001:332-337; Parker 2004:168-170; and Hughes 2005:119). There is also evidence that supply-side factors negatively influence the use of credit by self-employed women, particularly in developing countries (see Elam 2008:50-52). According to researchers, gender discrimination and inappropriately designed financial services can obstruct the use of credit institutions by the female self-employed. [24]

The barriers to economic success faced by the self-employed include not only observable variables (such as marriage and number of children), but also more intangible variables. For instance, in her review of self-employment literature, Elam (2008:54-55) noted that women in self-employment are generally said to be more

[24] Gender differences in access to finance for the self-employed have been the subject of some recent South African research. The International Finance Corporation's Gender Entrepreneurship Markets programme recently completed a study addressing the challenges of access to finance for South Africa's female entrepreneurs (see Naidoo *et al.* 2006). The research, completed in 2006, identified a lack of appropriate financial products, negative attitudes within credit institutions, and poor financial literacy on the part of entrepreneurs as the factors behind poor access to credit markets for South African female entrepreneurs. The research concluded that "a more deliberate and integrated strategy focusing on women in business" is needed at the national level (Naidoo *et al.* 2006:6).

risk-averse than men. This may lead self-employed women to adopt a more conservative approach to investment opportunities, and could result in lower returns to their economic activities (see also Loscocco *et al.* 1991:72-79; Verhaul & Thurik 2001:337-342; and Allen *et al.* 2008:36-39). According to Das (2003:5-6), since social capital is very important to the-self-employed, women may also have lower returns because their major spheres of activity are often in the home rather than in the marketplace where larger and more productive social networks are built. As well as these intangible constraints, researchers such as Anna *et al.* (1999: 452-460); Kantor (2002:138), Leung (2005:760) and Budig (2006:732) argue that women and men have different goals with respect to self-employment activity, and that these respective goals influence their business strategies and consequently their earnings (see also Maas & Herrington 2006:33-36). Although it is likely that gender differences of this kind have an impact on the earnings of the self-employed, it is very difficult to capture information on (and therefore measure) such variables. Certainly, South African national labour market surveys such as the LFSs do not capture information on these kinds of intangible variables. As a result, the contribution of these important but unobserved variables in explaining a gender gap in earnings among the self-employed cannot be empirically explored.

2.4.3 Gender discrimination

Gender discrimination in returns is commonly defined as the gap in earnings that remains between male and female workers once all observable characteristics have been accounted for. Like racial or ethnic discrimination, gender discrimination is a socially constructed phenomenon that affects participation and success in the labour market. Despite the fact that gender discrimination in wage employment has been documented in a number of local studies, including Rospabè (2001), Hinks (2002), Ntuli (2007) and Posel & Muller (2008), the literature yields little clarity concerning the role and impact of gender discrimination in South African self-employment.

One possible explanation for gender discrimination in self-employment is provided by the taste-based model. Developed by Becker (1971), this model is the longest-standing explanation of earnings discrimination despite doubts concerning its compatibility with competitive markets. Becker's earnings discrimination model

assumes that functional utility is affected by association with members of other identifiable groups. In other words, people are willing to pay more if they can transact with people from a preferred group. Based on this model of 'tastes', Borjas & Bronars (1989) developed the concept of consumer discrimination which suggests that customers are less willing to purchase goods or services from a self-employed individual due to non-market related factors such as race, ethnicity, religion or gender. Leung (2005:775) found empirical evidence of this form of discrimination in his Canadian study in which he suggests that inequality in the form of consumer discrimination is partially responsible for an observed earnings gap between males and females in self-employment[25] (see also Clain 2000:510-511; Verhaul & Thurik 2001:339-343 and Deininger *et al.* 2006:12-16).

Discrimination can also take the form of what has been termed 'statistical discrimination' (Rospabè 2001:11) where discrimination within the labour market can spread to other markets such as credit or product markets, thereby affecting the earnings of the self-employed. Statistical discrimination differs from taste-based discrimination and assumes that individuals use average characteristics of a group (in this case women) to predict the behaviour or attitudes of individual members of that group. As a result of such discrimination, female-owned firms seeking to obtain credit may for example face obstacles unrelated to their credit worthiness and this would affect earnings (see also Parker 2004:116).

Aside from these forms of discrimination, societal patriarchy can create mutually-reinforcing constraints that limit productivity, profitability and business growth in female enterprises. In her analysis of female micro-enterprises in developing countries, Chen *et al.* (2004:89-90) identifies a number of mutually-reinforcing constraints, including: lack of social investment in female entrepreneurial education and skill acquisition, societal restrictions on female mobility, unwillingness of men to work under a female entrepreneur, limited claims by the female self-employed to unpaid male family labour, and low female participation in community decision-making (see also Kantor 2002). These restrictions can prevent female micro-

[25] However Leung (2005: 770-775) is quick to point out that his evidence suggests that women face less discrimination in self-employment than in wage-employment.

enterprises from growing, improving profitability, reaching new customer markets and moving into the formal economy.

2.5. Conclusion

This chapter started by reviewing the relevant literature on the size and composition of self-employment in South Africa. Over the post-apartheid period, self-employment grew and this growth was driven in part by the feminisation of the post-apartheid labour market. The review examined evidence that finds that most new entrants into self-employment are located in low-return unskilled and semi-skilled occupations in the informal economy. However, this sector is not the 'free entry zone' predicted by the dualist labour market theorists. The size of informal self-employment remains small in comparison to the numbers of both women and men who remain unemployed.

The trends presented in this review also highlight a gender gap in the returns to self-employment, with men reporting greater earnings than their female counterparts. The literature reviewed in this chapter suggests that earnings differences between men and women in self-employment are likely to be influenced by a number of market and pre-market factors, including domestic burdens, educational access, previous work experience and access to credit markets. More intangible variables also affect earnings, with researchers arguing that self-employed women have different attitudes towards risk-taking and business strategies than their male counterparts. Gender discrimination is also considered to play a significant role. The review, however, highlights the fact that research targeting the gender gap in returns to self-employment remains relatively sparse, particularly in South Africa. As a result, it is difficult to offer a complete explanation for the gender gap in the returns to self-employment.

Previous studies have not adequately mapped gender differences in self-employment (particularly in returns to self-employment) in South Africa for the 2001-2007 period. This knowledge gap has implications for policy creation and implementation, especially in light of contemporary policy which seeks to support small and micro-businesses, and particularly women in self-employment. This dissertation aims to

address this knowledge gap and contribute to a growing body of research on self-employment in South Africa.

Chapter Three: Methodology

This study employs quantitative methods to investigate gender differences in self-employment in South Africa, with a focus on the gender gap in self-employment earnings. In order to achieve this, I use national household surveys conducted between 2001 and 2007. This chapter will describe the methods of analysis employed to examine these surveys, as well as the rationale for their selection. As a starting point, the methods used in each of the empirical chapters will be described.

In Chapter Four, I use descriptive methods to track changes in self-employment by gender during the 2001-2007 period. This exploration will examine changes in the size and composition of the self-employed over the period, distinguishing between changing patterns in the informal and formal sectors. In this chapter, I will also explore gender differences in returns to self-employment for the period from 2001 to 2007. In order to avoid comparability errors, I used a single survey instrument for this period, i.e. the biannual Labour Force Survey (LFS).

To further develop the discussion on the observed gender difference in earnings, an econometric analysis of the earnings differences among the self-employed is then presented in Chapters Four and Five. In Chapter Four I conduct a trend analysis of self-employment earnings while in Chapter Five I examine whether the gender-based differential in earnings is the result of differences in observable characteristics or differences in returns to these characteristics using the LFS 2005. The LFS 2005 was chosen to coincide with the Survey of Employers and the Self-Employed (SESE) 2005 which will be used to create a more detailed gendered analysis of the self-employed and their businesses in the informal sector in Chapter Six. Differences in access to financial capital and services will be the central focus of this examination which will use descriptive methods.

3.1. Data used

3.1.1 The Labour Force Surveys (LFSs) and the Survey of Employers and the Self-Employed (SESE) 2005

The LFS is a household survey that collects detailed information on labour market participation, employment and unemployment, as well as various other demographic and household level characteristics. Introduced in 2000, the LFS was chosen because of its ability to capture information pertaining to marginal forms of employment.[26] The LFS sample is approximately 30 000 households, which translates into roughly 100 000 individual participants and is weighted to be nationally representative. In order to avoid seasonal effects, the September rounds of the LFSs will be utilised.

Whilst the LFS may capture a wide array of informal self-employment activities in the South African labour market, it *cannot* capture many vital characteristics of the enterprises owned by the informal self-employed as it is a household level survey and was designed specifically for this purpose. Furthermore, traditional firm level surveys, such as the Quarterly Employment Surveys (QES), overlook unregistered businesses and their owners since, the latter are very difficult to capture in surveys that rely on responses from owners, especially given that unregistered businesses often have mobile or temporary business premises. In order to access more detailed information on these 'invisible' enterprises, I turn to the SESE 2005,[27] a national household survey designed specifically to target informal businesses.

---

[26] The definition of employment constructed for the LFS prompts respondents to report that they are employed, even in cases where they engage in employment activity for only an hour a week. As already indicated, the LFS is an improvement on older survey instruments, such as the October Household Survey (OHS), in terms of capturing informal activities in particular. Stats SA introduced more advance questions in the LFS to capture the nature and extent of informal employment and set up new forms of training for LFS fieldworkers and coders. In this manner, the LFS captures even marginal forms of informal employment activity (see Budlender *et al.* 2001:7-10; and Casale *et al.* 2004:980-981).

[27] A similar survey was undertaken in 2001. However data gathered from the SESE 2001 will not be included in this study. The SESE 2005 includes more contemporary data, and during an interview with senior statistician Mr. Buwembo (2010) in the Household Surveys Department of Statistics South Africa issues were raised about the credibility of the 2001 data. Fieldworkers from the SESE 2001 received additional monetary compensation for each household that they found to be connected with an informal enterprise. Mr. Buwembo (2010), who is currently working on a new SESE conducted in October 2009 and has intimate knowledge of the two previous SESEs conducted in 2001 and 2005 respectively, admitted that this may have led some fieldworkers to fabricate household data.

The SESE was designed to collect information on small and micro-businesses in the informal sector by targeting individuals who ran one or more businesses and were not registered for Value Added Tax (VAT).[28] This survey of entrepreneurs and business owners was conducted in October 2005. Due primarily to the nature of such enterprises, the SESE 2005 used the household-based LFS 2005:2 to identify the informal self-employed and their businesses directly through their owners in the 30 000 randomly selected households that were sampled. In this sense, the SESE 2005 can be described as a subset of the LFS 2005:2. The sampling methodology ensures that a nationally representative picture of small-scale enterprises is obtained. As a result the SESE 2005 offers a far better resource for data on the informal self-employed than is currently available in firm-level or case-study research. At the time that this dissertation was completed, the SESE 2005 provided the largest and most complete national survey of informal businesses in South Africa.

The SESE 2005 possesses two key advantages that make it an extremely useful resource for a study of this kind. Firstly, it captures detailed information not captured in other national surveys on the informal self-employed including questions on access to credit, business constraints, and the level of employment creation. Secondly, the survey captures information through a nationally representative household level survey that interviews individuals in their households rather than through a firm level survey that interviews owners/managers in firms. This methodological approach enables the SESE 2005 to pick up information on even marginal unregistered businesses without a permanent physical address. It also allows information on the household characteristics of the self-employed to be captured concurrently.

3.1.2 Earnings variables

This section provides a description of how earnings information was extracted from the LFS and the SESE 2005 datasets respectively. The standard method to obtain

---

Subsequently the 2005 survey took measures to address these criticisms, using the LFS 2005 to identify respondents and after a four week reference period returned to administer the survey.

[28] A business with an annual turnover of R20 000 is eligible to register for VAT, while any business with an estimated turnover of R300 000 or more is obliged to register for VAT. The latter is therefore used as a cut-off point for not being registered for VAT. It serves as an indicator of business size, with small and micro-businesses generally unable to register for VAT (see Stats SA 2005:iii).

earnings information from the employed in the LFS is simply to extract this information from those questions in the LFS that pertain to "total salary/pay of the respondent's main job". When answering this question, it is assumed that the self-employed respondent will indicate the net profit they are able to obtain from their business. If respondents refuse to give the actual value or say that they do not know it, they choose from a set of earnings categories. In most of the labour market literature dealing with the LFS, the chosen earning categories are converted to point values by assigning to the category response the midpoint of that respective category (see Posel & Casale 2005). This dissertation follows that tradition.

The LFS earnings questions described above failed, however, to gather information on the value of expenses that respondents incur during the course of their business operations. According to Parker (2004:14), any analysis of the earnings of the self-employed that fails to exclude the estimated value of expenses will overestimate the returns to self-employment. This problem is not present in the SESE 2005 where respondents are asked to report their total income before deductions and expenses. Respondents are then asked in subsequent questions to report estimated net profit, and the estimated value of the expenses that the business incurred.

In the two datasets considered, the vast majority of respondents who were identified as self-employed reported positive earnings values. However, there were a number of respondents who identified themselves as 'self-employed' but also indicated zero returns. I have included these respondents in the earnings analysis as this may indicate that the respondents received either a negative or zero return for their self-employment activities at the time the survey was conducted or that the returns received were too marginal to be reported as a non-zero value. [29]

[29] In the LFSs and the SESE 2005, zero earnings responses were not distributed randomly across the self-employed sample. This is particularly evident when highlighting the distribution of these responses across industry and sector. The majority of these respondents are located in the informal employment, particularly in the agricultural industry. From this it can be inferred that the observed number of respondents who reported zero earnings probably comprises many within subsistence agriculture or other survivalist occupations who receive own-consumption returns to their self-employed activities. In the LFS 2005:2, 832 respondents reported zero hourly returns to self-employment, approximately 15.2 percent of the (unweighted) total sample of the self-employed in that year. The majority (706 respondents or 84.8 percent of the unweighted sample who reported zero hourly returns to self-employment) reported skilled agriculture and fishery as their occupation. They were primarily located in the informal agricultural industry (the bulk of the remainder in informal manufacturing and construction). Only 19 respondents who reported zero hourly returns were in the

When considering the measurement of earnings, the specified time period is of critical importance. Due to the greater control exercised by the self-employed over their working hours, these workers often report highly varied working hours (see, for example, Portes & Zhou 1996:220-221; Hundley 2001a:97-99; Parker 2004:197; and Hughes 2005:78-83). In order to account for variability in working hours, the conversion of annual or monthly earnings into hourly earnings is essential. The SESE makes no inquiry about the number of hours worked by respondents, thus making it impossible to examine hourly earnings with this survey. Therefore, in this study, hourly earnings data is generated using information collected in the surveys on hours worked.

3.1.2.1 Limitations of the earnings variables

All survey data reported in the empirical chapters were self-reported, and as a result I assume that all respondents accurately represented their current operations as well as other information. However in his review of self-employment literature, Parker (2004:13-30) suggests that there are frequent reporting errors when the self-employed answer earnings questions in household surveys. One of the most prevalent errors observed in these studies is the under-reporting of earnings by self-employed respondents. As reported net profit is generally an accounting profit that may be used as the basis for the calculation of net income for tax purposes, there is a tendency on behalf of business owners to understate true profits (see also Hamilton 2000:611). Individuals may feel a general mistrust toward state institutions with regard to privacy of information reported in surveys, particularly when their businesses are not registered. In general, this is the result of what Parker (2004:15) refers to as mistrust of "interviewers' claims that they are truly independent of the tax inspectorate". This mistrust may persuade respondents to misreport profits and expenses. Evidence suggests that informal entrepreneurs have little understanding of the differences between turnover, gross profit and net profit (see, for example, Skinner 2005). Moreover, Posel & Casale (2005:3) argue that both response rates and possibly the accuracy of reported earnings may be negatively affected when income sources are

---

formal economy. This suggests that the majority of those respondents who reported zero hourly returns to self-employment received non-monetary goods in kind as returns to their activities.

irregular and either sporadic (as may be the case with those respondents in the 'survivalist sector' of self-employment) or diverse (as may be the case with the professionally self-employed). [30] The problem is compounded when there is proxy reporting of earnings. As a result, earnings data should be treated with caution.

In addition, a number of self-employed individuals did not answer questions on earnings and their answers to these questions were coded as 'missing'. A significant number of these respondents were located in occupations associated with high-returns in the formal economy.[31] The non-random nature of missing earnings responses could lead to bias in the earnings equation. Estimating earnings for the self-employed is further obstructed by the inability of survey instruments to record own-consumption returns to self-employment activities.[32] As the value of such production is not taken into account when earnings are derived from the survey instruments, it is possible that these instruments underestimate the earnings of the self-employed (Heintz & Posel 2008:36). Own-consumption returns in self-employment are often associated with respondents involved in agriculture, particularly subsistence agriculture.

3.1.3. Sample definition

As already discussed, I adopt a broad classification of a self-employed individual, based on the definition provided by the International Labour Organisation (ILO). Under this definition, a self-employed individual is someone "who operates his/her own economic enterprise or engages independently in a profession/trade". This definition includes self-employed individuals who could be considered entrepreneurs, as well as self-employed individuals engaged in survivalist activities. Hence, those respondents in the LFS who define themselves as either 'working on his/her own or with a partner, in any type of business' or 'on a small household farm/plot or

[30] This is particularly true for the informal enterprise owners. An investigation of the SESE 2005 data on bookkeeping reveals that of those who kept records only 23.4 percent kept any kind of records and less than four percent of informal enterprise owners reported full annual accounts. This indicates that most of the respondents were answering questions about net profit, gross income and expenditure from memory. This unfortunately casts doubt on the reliability of their answers.

[31] In the LFS 2005:2, 380 respondents reported missing hourly returns to self-employment, which represented approximately 7 percent of the total self-employed sample in that year. Almost two thirds were located in the formal economy

[32] Another problem involves the issue of 'payments in kind' as household surveys fail to capture information on the estimated value of these payments. Consequently, returns to employment of those individuals who receive 'payments in kind' may be underestimated.

collecting natural products from the forest or sea' were identified in this study as being self-employed.

But while a broad definition was used when examining changes in the composition and size of the self-employed, a more restricted set of criteria was used when the earnings of the self-employed were investigated. In order to control for 'own-consumption' bias, I restricted the earnings investigation in Chapter Four and Five to only those respondents engaged in non-agricultural self-employment (NASE). The LFS sample was restricted to those self-employed respondents who reported non-zero working hours of less than 112 hours per week (a figure reported in excess of this cap could be attributed in all probability to a false or inaccurate response to this question).[33] This was done to allow for an examination of working hours and hourly earnings. Those respondents who indicated that they were self-employed but refused to report either working hours or monthly income (and therefore had 'missing' values coded for those questions) were removed from the sample.

I restricted the object of my investigation in Chapter Six to the non-agricultural self-employed in order to avoid 'own-consumption' bias and maintain a significant level of comparability between the SESE 2005 and the LFS. Unlike the LFSs, the SESE 2005 does not target subsistence farmers and, as a result does not capture information on all the informal agricultural self-employed. The SESE sample was not restricted to self-employed respondents who reported non-zero working hours of less than 112 hours per week, as the SESE makes no inquiry about the number of hours worked by respondents.

3.1.4 Comparing data sets

One of the problems faced by labour market studies in post-apartheid South Africa is that they have had to analyse and compare data across years that use different survey

[33] The 'hours worked' data used to generate the hourly earnings data are collected from Question 4.2.1 a) which asks about average hours worked per week in a respondent's main job (in the LFS 2001:2; LFS 2002:2, the LFS 2003:2 and the LFS 2004:2) and from Question 4.2.5a) in the LFS 2005:2; LFS 2006:2 and LFS 2007:2. According to the LFS 2005:2, four respondents who were identified as non-agricultural self-employed reported zero weekly working hours, and 53 reported working in excess of 112 hours per week with seven reporting working 17 hours a day and five reporting working 20 hours a day.

instruments to measure labour market information (i.e. the October Household Survey (OHS) and the LFS). When comparing estimates using different survey instruments, a researcher needs to take into account the possibility that observed differences between survey instruments may be due partially to differences in survey design. While the SESE 2005 sample was drawn from the LFS 2005:2, certain dissimilarities become evident when the two datasets are compared. I will now compare the sample identified in the SESE 2005 and the LFS 2005.

Table 1 : A comparison of the informal non-agricultural self-employed from the LFS 2005:2 and the SESE 2005

	LFS 2005			SESE 2005		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
	N					
Total	1,374	2,002	3,376	1,220	1,836	3,056
Weighted, (1000s)						
Total	709	835	1,544	746	880	1,626

Source: SESE 2005; LFS 2005:2
Notes: 1. Data are weighted using the weights provided by Statistics South Africa specifically designed for the SESE 2005 and the LFS 2005:2. 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years. 3. Informal/formal definition is based on VAT registration.

Table 1 above compares tabulations of the informal non-agricultural self-employed in the LFS 2005 with those of the SESE 2005. It is evident that the SESE 2005 sample is smaller than the LFS 2005:2. This may suggest that the SESE 2005 does not account for all enterprise-owners in the informal sector. The SESE was conducted four weeks after the LFS reference period, creating problems for fieldworkers. Of the 3537 respondents identified from the LFS 2005:2, 7 percent (or 254 respondents) either could not be located by fieldworkers, or refused to participate or had ceased their self-employment activities by the time of the survey (see Stats SA 2005:iii). As a result, it could be argued that SESE 2005 'misses' a share of informal businesses and their owners who are on the margins of the South African economy (Buwembo 2010). This may bias the findings in my investigation of the SESE 2005 data.

The data in SESE 2005 and the LFS 2005 are weighted using separately designed weighting schemes. As a result when the SESE 2005 and the LFS 2005 data are weighted, the results show that the SESE 2005 estimates a higher number of non-agricultural informal self-employed than the LFS 2005. These differing weighting

systems can lead to discrepancies when comparing the results. Other discrepancies between the profile presented by the SES 2005 and that found in the LFS 2005 were also noted, a more detailed comparison between the two datasets is presented in Appendix A.

3.2. Econometric analysis

This study uses econometric analysis to estimate the determinants of the returns to NASE by gender. In constructing these estimations, I follow a standard semi-logarithmic Mincerian form of the earnings equation. The linear regression used in this study can be expressed with the following equation:

$$\ln(W_i) = \alpha + \beta X_i + \varepsilon_i$$

Where W*i* represents hourly earnings (hourly net profit) of individual *i*, χ^i represents the vector of parameters, β is the vector of coefficients and ε*i* is the error term. The Ordinary Least Squares (OLS) estimation method is used to estimate the above equation. The data used in the equation is from the September round of the LFS 2005 (as this was the period when the SESE 2005 was conducted). Earnings equations are estimated for the pooled sample of men and women and then separately by gender.

Although earnings equations based on the standard Mincerian method are generally similar in construct, each earnings equation is unique because of adjustments made in the choice of the functional form, the measurement of the dependent variable and the introduction of explanatory variables. The pertinent literature on these adjustments will be reviewed and discussed below, and the model employed in this study subjected to further elaboration.

3.2.1 The model (functional form)

In this study, I use the log-linear form. Econometric analyses often treat earnings as a 'return on investment' and focus on the 'return' to years of schooling, work experience, marital status and other variables. This has led to a preference for the log-linear form which can be described as the logging of earnings and "regressing them

on a linear combination of the form $g(\chi,\beta)$ where χ stands for an array of predictors and β stands for corresponding coefficients" (Portes & Zhou 1996:220-222). Advantages to using the log-linear form include the ease with which the coefficients produced can be interpreted and how this model fits the data. In addition, the logarithmic transformation allows the inclusion of outliers, although Portes & Zhou (1996) argue that the log-linear form obscures some of the results by giving too much weight to the outliers (see also Bradley 2004).

3.2.2 The dependent variable

When constructing earnings equations for the self-employed, choosing the correct measurement criteria is crucial. As already indicated, several studies found that the self-employed have highly variable working hours when compared to the wage-employed. In order to control for this, it is necessary to use hourly returns as the dependent variable.[34] Although hours worked could have been included as a variable, controlling for this variable as a 'predictor' would miss-specify the equation (see Portes & Zhou 1996:221). Moreover a 'predictor' of this kind is probably not exogenous to earnings. Therefore, using hourly earnings as a measure not only allows for greater comparability of gender outcomes in self-employment, but it also prevents hours worked from biasing the earnings differential.

3.2.3 Independent variables

The independent variables used in the earnings equation can be categorised into three groups and include: individual household and employment-related characteristics. In this subsection, I will discuss each of these groups in detail, review the relevant literature, and indicate the specific independent variables included in the earnings equation.

[34] Hourly returns is the most common form of the dependent variable used in econometric analyses of self-employment earnings (see, for example, Hamilton 2000:611; Hundley 2001a 99; and Georgellis & Wall 2005:334)

3.2.3.1 Individual characteristics

Educational attainment is often identified as an important determinant of returns to employment. Mincer (1974), who developed the human capital model of earnings estimation, advanced the idea that the more educated an individual, the greater his or her productivity and in turn the higher that individual's earnings from employment. Furthermore, education may also act as an important screening device used by employers (the 'screening hypothesis', see Parker 2004:22). Although the self-employed do not face this requirement (as they are not employed by someone else), educational attainment may influence the kinds of self-employment that labour participants can enter into. In addition, educational attainment may impact on an individual's ability to negotiate consumer and capital markets, which could affect economic performance. In estimating the impact of educational attainment on returns to NASE, I use 'years of completed school' which measures educational attainment as a continuous variable.

In econometric analyses of returns to self-employment, education is commonly cited as having a significant and positive impact on earnings. For instance, Le (1999b:392), in his examination of returns to self-employment among Australian immigrants, finds that the earnings of the self-employed increases by 7 percent with each year of completed education. Since educational attainment positively impacts on self-employed earnings regardless of gender (see, for example, Clain 2000:507; Georgellis & Wall 2005:335; Leung 2005:764; and Veitch 2007:9), differences in the distribution of educational attainment among men and women could contribute to gender-based earnings differences. If the pattern of educational attainment is similar, then as Hundley (2001a:818) explains, "the extent to which differences in self-employed earnings are attributable to male/female differences in general human capital is likely to be modest".

Work experience, which would be expected to influence productivity and therefore earnings, is a common feature of the standard Mincerian earnings equation. Econometric studies on the self-employed have found that work experience has a significant and positive impact on returns (see, for example, Portes & Zhou 1996:223; Le 1999b:393; and Bradley 2004:548). As the relationship between returns and work

experience is predicted to be non-linear, this variable is typically represented as a quadratic variable in earnings equations. Work experience is often not captured in labour market related surveys and, as a result, most econometric studies use 'age less six years' to control for years of schooling (see, for example, Boden 1999:75; Clain 2000:504; Hamilton 2000:620; and Leung 2005:764). However, 'age less than six years' is not suitable for the South African context.[35] In order to compensate, I use a quadratic variable for age as a proxy for work experience in this study. But it is possible that this specification may underestimate the extent to which the gendered earnings differential is due to differences in returns to work experience (Hundley 2001a:818). In particular, the proxy fails to account for temporary exits from the labour market. This would underestimate the true gender difference in work experience, especially if the female self-employed exit more frequently and for longer periods (due perhaps to the demands of childbearing and motherhood) than the male-self-employed.

Race is a key individual explanatory variable used in this study. Numerous studies in the developed world control for race (see, for example, Clain 2000:504; Bradley 2004:547-555; and Hamilton 2000:617) when conducting earning equations of the self-employed, and find that those in the White race group earn significantly more than other race groups. In South Africa, given the legacy of apartheid, race takes on even greater significance, and it has become a well-established part of post-apartheid studies when returns to self-employment are considered.[36] The consensus view is that certain race groups (such as Whites) benefit from higher earnings and that even after controlling for other observable factors, race has a significant impact on returns.

[35] This formulation is problematic in South Africa because there is considerable discontinuity in the time taken by students to complete a year of education.

[36] Steenkamp (2008) has produced a noteworthy study on race and returns to self-employment. Using the Labour Force Surveys for 2000-2006, he examines the extent to which this earnings gap is attributable to differences in observed characteristics of the self-employed, and the extent to which it derives from differences in the returns to unobserved characteristics. On the subject of race as a determinant of earnings, see also Bhorat & Leibbrandt 2001b; Casale 2004; Kingdon & Knight 2007; and Heintz & Posel 2008.

3.2.3.2 Household characteristics

Given the international literature on the issue, the presence of children in the household was included in this study (see, for example, Boden 1999:74-81; Clain 2000:503-505; Georgellis & Wall 2005:337; and Elam 2008:56-59). An increase in the number of children in a household may boost household demand, and therefore amplify the motivation to increase returns from self-employment. Hundley (2001b:105) argues, however, that there are gender differences in the response to changing household size, and that an increase in the number of children in a household may have a negative impact on female returns to self-employment. Assuming that women share the primary burden of childcare, an increase in the number of children in a household may result in a greater domestic burden and could be associated with a decrease in returns to self-employment (see also Loscocco *et al.* 1991:72-79; and Leung 2005:768-771). In this study, I control for the number of children in the household by including two continuous variables in the estimation. The first identifies the number of children who were seven years of age or younger while the second captures the number of children older than seven but younger than fourteen years of age in the household.

In their analysis of the male marital earnings premium in the context of bridewealth payments in South Africa, Casale & Posel (2010:220-221) argue that marriage has a positive impact on returns to self-employment. With spousal support (perhaps through financial assistance and/or participation in the business), a married individual could be more productive in self-employment and may find self-employment activities less demanding. Moreover, those selected into marriage may have characteristics that are more favoured in the labour market than those not selected into marriage (see also Le 1999a). But while marriage may have a positive effect on self-employment returns, some studies have argued that marriage has a positive impact on the earnings of the male self-employed but a negative effect on those of their female counterparts (see, for example, Clain 2000; Hundley 2001b; and Leung 2005). Since married women assume the largest share of work in the conjugal household, female earnings may decrease with marriage (see also Loscocco *et al.* 1991:79-80; and Hughes 2005:117-118). In this study, a dummy variable controlling for whether a respondent is married is included in the OLS estimation.

Economic and labour market conditions in South Africa vary greatly depending on the region or district where the household is located. Indeed, the location of a household is an important variable to control for when estimating earnings differences among employed women and men (see, for example, Rospabé 2001:21-22; Hinks 2002:2051-2052; and Ntuli 2007:5). Nine dummy variables were included controlling for an individual's province of residence. The estimation also controlled for whether or not an individual was located in a metropolitan area. Those located in the metropolitan areas tend to have higher earnings than their rural counterparts due to better access to services, markets, and infrastructure (see, for example, Le 1999b:390-391; Das 2003:20-23; Heintz & Posel 2008:38; and Casale & Posel 2010:221).[37]

3.2.3.3 Employment-related characteristics

Dual labour market theorists suggest that enterprise owners operating in the informal sector earn less than those in the formal sector (see Kingdon & Knight 2007). Indeed, econometric studies that control for differences between these two sectors have found that the self-employed in the formal sector have significantly higher returns than those in the informal sector, *ceteris paribus* (see, for example, Bhorat & Leibbrandt 2001b:126; Veitch 2007:26; and Heintz & Posel 2008:38). I would therefore expect the sector of employment to be a large and significant determinant of earnings among the self-employed, and a binary variable (equal to 1 if the enterprise is located in the informal sector and 0 otherwise), is included in the earnings estimations.

Regardless of sector of operation, however, econometric analyses of self-employment earnings have revealed a 'skills hierarchy' that exists within self-employment. Those occupations at the bottom of the hierarchy (i.e. those associated with low levels of education and expertise) have been found to be associated with low average earnings. For example, Bhorat & Leibbrandt (2001b:124-127), present an earnings equation for all the African employed disaggregated by gender, and find that managerial and professional occupations offer the highest returns, while elementary unskilled

[37] The earlier LFSs included a variable identifying whether or not an individual was living in a rural or an urban area. The later LFSs, including the LFS 2005:2 did not, and it is only possible to distinguish metropolitan from non-metropolitan areas with these datasets.

occupations offer the lowest. Gender-based differences have been noted in certain econometric studies that have disaggregated the analysis by male and female. Studies by Hundley (2001b:106) and Clain's (2000:509) found that self-employed women located in occupations in the wholesale and retail sector as well as the service industry earn on average less than their male counterparts, *ceteris paribus* (also see Anna *et al.* 1999). The type of industry and occupation is included as a set of variables that accounts for earnings differences in the earnings equation.

The self-employed who employ others to work for them (i.e. employers) tend to be associated with activities that are larger and more productive than their 'own account' counterparts (see, for example, Loscocco *et al.* 1991:79-80; Das 2003:4-5; Budig 2006:731; and Mandelman & Montes-Rojas 2009:1914-1916). As result econometric studies tend to find that being 'own account' results in an earnings penalty to self-employment. For example, Heintz & Posel (2008:38), in their earnings equations for the self employed, found that the own account self-employed generated lower returns than those self-employed with one or more workers in their businesses (see also Steenkamp 2008:88-89). Given these findings, I added a dummy variable to control for own account status.

The type of premises used by the self-employed can influence access to services and markets and consequently income. However, choice of premises may also have non-pecuniary benefits. Carr (1996) argues that women choose to work from home in order to better combine domestic and income-generating activities (also see Boden 1999; Hughes 2005; and Budig 2006). Parker (2004:125) contends that self-employed women may choose to adopt flexible work schedules in home-based work in lieu of pursuing more lucrative 'profit maximising strategies'. As a result, the female home-based self-employed may receive lower returns to self-employment than their male counterparts. To control for the type of premises used by the self-employed, variables are introduced to account for whether a self-employed individual operates in a formal, informal or home-based enterprise.

3.2.4 Selection bias

In the econometric literature reviewed for this study, researchers often estimate a selection equation before estimating returns to self-employment (see, for example, Le 1999b; Hamilton 2000; Clain 2000; Georgellis & Wall 2005; Leung 2005; and Deininger *et al.* 2006). This is done in part to explain the determinants that govern entry into self-employment, and in part to control for selection bias in the earnings equation.[38] The probability of selection into self-employment may be affected by a range of unobservable variables which may in turn affect the earnings of the self-employed (Bhorat & Leibbrandt 2001b:112-115). As a result, self-selection bias in this case can be depicted as similar to omitted variable bias.

Although a variety of selection equations can be employed, the most common is the Heckman two-stage procedure (see, for example, Hamilton 2000:616; Bhorat & Leibbrandt 2001b:114; Leung 2005:763; and Veitch 2007:10) which involves "estimating a reduced-form self-employment equation to obtain a value for the inverse Mills ratio term to be included in the earnings functions" (Le 1999b:385). This inverse Mills ratio (or lambda) variable is included in the earnings equation to make the equation conditional on employment selection into self-employment and to detect for the presence of self-selection bias. In her USA study, Clain (2000) noted that the sign of the lambda coefficient (and consequently the negative or positive selection into self-employment) was related to gender and argued that due to negative selection of females into self-employment, women suffer a comparative disadvantage in this form of employment.

While the Heckman two-stage method may be a viable tool in removing self-selection bias in many econometric studies, the application of this approach to my own study is marred by the complexity of the local labour market environment. Bhorat & Leibbrandt (2001b:114) argue that it is difficult to successfully identify selection into

[38] The most common estimation method used in economic studies of self-employment earnings is the Ordinary Least Squares (OLS) method. However, according to Le (1999b: 385) an estimation such as this may be influenced by the possibility that individuals "may select themselves into a particular employment status because they have comparative advantage". Indeed, the OLS earnings equation can suffer from self-selection bias and yield inconsistent estimates of population parameters if the sample is truncated in a non-random manner (see also Hamilton 626-627). Such a bias would impact on the robustness of earnings equation estimations.

employment due to very high unemployment rates and low levels of labour force participation in South Africa. The application of the Heckman method is further complicated by the gender focus of this study, as more complex selection mechanisms may be needed to explain why women are in the labour force compared to men (see Veitch 2007:5). The econometric analysis that would be needed to breach the particularly South African disparity between employment selection and labour market participation selection is unfortunately beyond the scope of this dissertation.[39] As a result, this study does not control for self-selection bias.

[39] In order to overcome self-selection bias in the South African labour market, Bhorat & Leibbrandt (2001b: 114) were forced to use a probit model to derive a participation equation, and thereafter another probit model to derive employment probability estimates conditional on the characteristics of all labour market participants and "conditional on the fact that these are actual participants taken from a full sample of all potential participants". This required the creation of two lambdas (one derived for labour force participation and one derived for employment) in order to make the earnings equation conditional on labour force participation and selection into employment (see also Veitch 2007:22-26).

Chapter Four: Describing self-employment in South Africa, 2001-2007

In this chapter, I provide a descriptive analysis of self-employment in South Africa in order to investigate changes in its size and composition, as well as the distribution of self-employment earnings. Section 1 presents trends for men and women in self-employment using four national Labour Force Surveys (LFSs), namely: LFS 2001:2; LFS 2003:2; LFS 2005:2; and LFS 2007:2. Section 2 focuses on the returns to self-employment disaggregated by gender, and uses seven national labour force surveys (LFS 2001:2; LFS 2002:2; LFS 2003:2; LFS 2004:2; LFS 2005:2; LFS 2006:2; and LFS 2007:2) to analyse trends in average earnings and the distribution of earnings of the self-employed.

4.1 Analysis of composition trends in self-employment, 2001-2007

4.1.1 Tracking labour market changes in unemployment and employment

Self-employment is an integral part of the South African labour market, and as such cannot be discussed in isolation from overall labour market trends, particularly unemployment. Using data from four national labour force surveys, key labour market trends have been calculated for the 2001-2007 period and are presented in Table 2. The labour market trends observed in the table below are consistent with the local literature on unemployment and labour force participation (see Banerjee *et al.* 2008; van Klaveren *et al.* 2009; and Stats SA 2009). It is evident from these labour market trends that the feminisation of employment observed by Casale (2004) for the period 1995-2001 has continued, with female employment growing at a faster rate than male employment. The female labour force participation rates observed in Table 2 did not notably increase, however, indicating that women were exiting unemployment rather than economic inactivity to enter employment over the 2001-2007 period. The feminisation of self-employment was particularly evident with the number of female self-employed growing at almost twice the rate of their male counterparts, albeit from a lower base.

Table 2: Key labour market variables, (1000s) in South Africa, 2001-2007

	2001		2003		2005		2007		Change 2001-2007	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Population 15-65	13,598	14,484	13,995	14,933	14,289	15,364	14,314	15,358	5%	6%
	(80.45)	(79.02)	(87.58)	(84.16)	(101.21)	(99.25)	(129.24)	(126.08)		
Economically inactive	4,877	7,258	5,189	7,821	5,123	7,639	5,183	7,717	6%	6%
	(50.49)	(60.15)	(54.56)	(65.79)	(60.94)	(74.43)	(70.02)	(84.14)		
Broad labour force (employed + searching + non-searching unemployed)										
Labour force	9,833	9,235	10,197	9,589	10,362	9,975	10,423	9,966	6%	8%
	(74.50)	(70.47)	(81.55)	(74.57)	(91.62)	(85.73)	(118.49)	(111.17)		
Unemployment	3,408	4,512	3,595	4,787	3,323	4,747	3,223	4,451	-5%	-1%
	(43.56)	(48.27)	(47.59)	(52.86)	(49.78)	(59.38)	(56.97)	(63.92)		
Unemployment rate (%)	35%	49%	35%	50%	32%	48%	31%	45%	-4%	-4%
LFP rate (%)	72%	64%	73%	64%	73%	65%	73%	65%	1%	1%
Strict labour force (employed + searching unemployed)										
Labour force	8,721	7,226	8,806	7,112	9,166	7,725	9,131	7,642	5%	6%
	(72.14)	(64.84)	(78.41)	(67.27)	(88.92)	(77.73)	(115.06)	(103.00)		
Unemployment	2,296	2,503	2,204	2,310	2,127	2,497	1,932	2,128	-16%	-15%
	(36.89)	(36.89)	(38.81)	(38.57)	(42.09)	(44.36)	(46.84)	(45.25)		
Unemployment rate (%)	26%	35%	25%	32%	23%	32%	21%	28%	-5%	-7%
LFP rate (%)	64%	50%	63%	48%	64%	50%	64%	50%	0%	0%
Employment										
Total Employment	6,425	4,723	6,602	4,802	7,039	5,228	7,199	5,514	12%	17%
	(62.57)	(54.39)	(66.68)	(54.81)	(76.62)	(63.41)	(103.44)	(91.84)		
Self-employment	1,086	882	1,098	885	1,164	1,072	1,159	996	7%	13%
	(27.70)	(23.85)	(29.70)	(26.14)	(32.70)	(28.16)	(40.75)	(38.96)		
Wage employment	5,223	3,709	5,410	3,810	5,752	3,981	5,930	4,403	14%	19%
	(53.76)	(47.24)	(59.44)	(47.99)	(68.85)	(56.31)	(94.75)	(83.15)		
Domestic Work	28	843	49	837	29	821	78	884	183%	5%
	(3.79)	(13.60)	(8.40)	(15.90)	(5.37)	(18.77)	(12.47)	(35.03)		
Self-employment rate (%)*	18%	20%	18%	19%	18%	22%	17%	19%	1%	1%

Sources: Labour Force Surveys (LFS) 2001:2, 2003:2, 2005:2, 2007:2

Notes: 1. Standard errors are in parentheses. 2. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Count in thousands and data are weighted. 4. The LFP refers to Labour Force Participation (LFP).

*Self-employment as a percentage of total employment

According to the above table, wage employment was the main driver of employment growth for both sexes during the 2001-2007 period, growing from a larger base and at a faster rate than self-employment. The self-employed comprised a relatively small share of the total employed. Represented by the self-employment rate in Table 2, it is evident that 19 percent of employed women and only 17 percent of employed men

were engaged in self-employment in 2007. Indeed, the self-employment rate is low given the high unemployment rates shown in the table and supports the thesis that self-employment does not act as a 'free entry zone' absorbing excess labour market participants (see Kingdon & Knight 2007). Furthermore, this suggests that men and women face barriers to entering self-employment.

Table 2 reveals that women report significantly higher levels of both narrow and broad unemployment than their male counterparts. In 2007, the official female unemployment rate was 28 percent (or 45 percent using the broad definition) compared to 21 percent for male unemployment (or 31 percent using the broad definition). If men and women faced equal barriers to self-employment entry, we would expect female self-employment rates to be significantly higher than male rates, given the considerable gender difference in unemployment. However, the observed female self-employment rate is only slightly higher than the male rate. This raises an important question: Why do higher female self-employment rates not attenuate higher measured rates of female unemployment, as is the case in other developing countries? One explanation could be that women in South Africa face greater barriers to self-employment entry than their male counterparts.

4.1.2 Tracking labour market changes in self-employment in South Africa, 2001-2007

Self-employment is a far from homogenous category of employment, and it can describe a wide range of agricultural and non-agricultural enterprises in both the informal and formal sectors. While men and women may have similar self-employment rates (as observed in Table 2 above), their distribution across sectors is highly disparate. Table 3 presents the composition and size of self-employment across the informal and formal sectors, disaggregated by gender and whether or not an individual is engaged in agriculture.

It is clear from the table below, that the vast majority of the self-employed, in both agricultural self-employment (ASE) and non-agricultural self-employment (NASE) are located in the informal sector. However it is apparent that self-employed women are over-represented in the informal sector. Over 95 percent of women in ASE were

located in the informal sector in 2007 compared to 81 percent of men. In NASE, the gender disparity was even greater, with 83 percent of the female non-agricultural self-employed located in the informal sector as compared to only 68 percent of their male counterparts.

Table 3: Self-employment distribution (1000s) in South Africa 2001-2007

	2001		2003		2005		2007		Change 2001-2007	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Agricultural self-employment										
Total	181	99	157	112	123	119	143	113	-21%	14%
	(8.92)	(7.37)	(7.61)	(8.48)	(7.38)	(6.25)	(11.29)	(5.81)		
Formal	61	9	28	3	20	5	27	5	-57%	-39%
	(6.11)	(3.27)	(3.39)	(1.05)	(2.57)	(1.53)	(3.56)	(1.42)		
Informal	117	88	128	107	103	114	117	107	0%	22%
	(6.31)	(6.29)	(6.72)	(8.11)	(6.89)	(5.80)	(10.66)	(5.30)		
Non-agricultural self-employment										
Total	881	773	901	762	1006	940	981	856	11%	11%
	(25.22)	(22.31)	(27.85)	(24.27)	(31.39)	(27.17)	(38.72)	(37.40)		
Formal	265	105	313	107	295	103	309	140	16%	34%
	(15.97)	(10.69)	(17.29)	(10.01)	(18.67)	(12.54)	(26.27)	(25.39)		
Informal	599	666	579	645	709	835	670	711	12%	7%
	(18.88)	(18.99)	(21.50)	(21.41)	(24.97)	(23.45)	(28.23)	(27.00)		

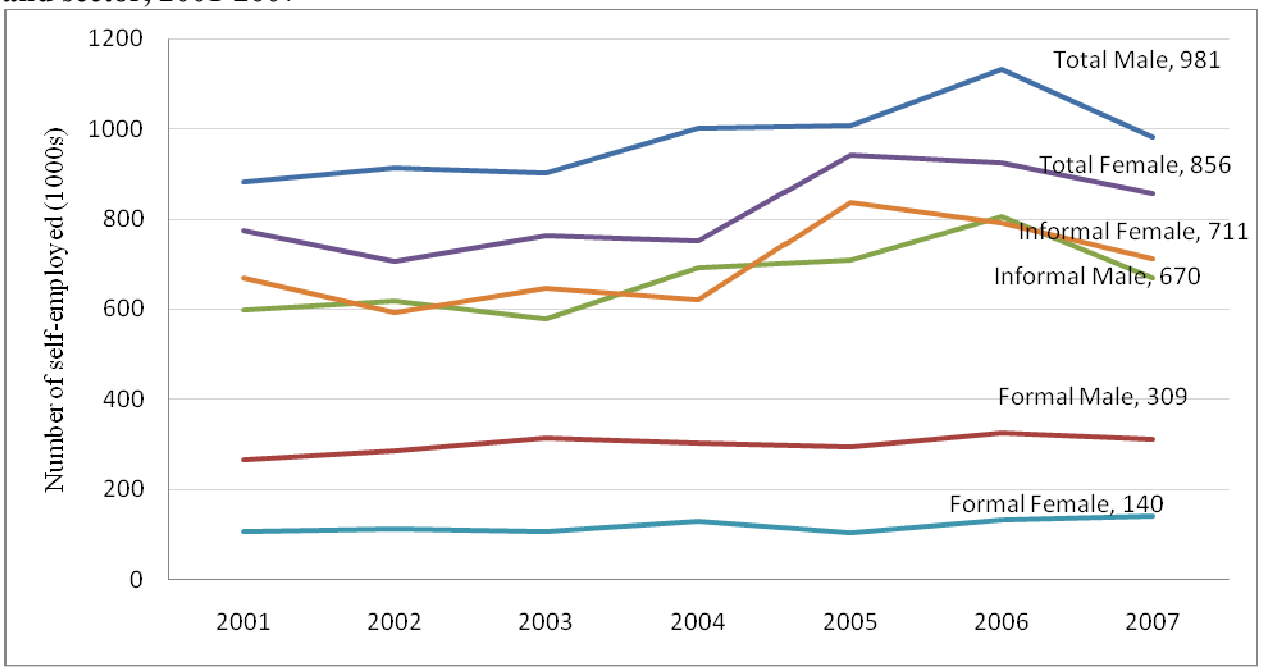
Sources: Labour Force Surveys (LFS) 2001:2, 2003:2, 2005:2, 2007:2
Notes: 1. Standard errors are in parentheses. 2. Estimates are for all self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. The formal/informal definition is based upon the registration of the enterprise for VAT.

According to the table above, informal female ASE increased by 22 percent between 2001 and 2007 indicating that a significant number of women entered subsistence farming during the period. Given the low returns associated with subsistence farming (see Heintz & Posel 2008:10), this trend seems to suggest that the choice to enter this form of self-employment is the result of entry barriers in other industries and types of employment. Informal NASE showed positive growth patterns for both the male and female self-employed, although the male self-employed entered informal NASE at a faster rate. Female informal NASE grew by 7 percent during the period, compared to 12 percent for male informal NASE. However, as is evident in Figure 1, informal

NASE is a highly volatile form of employment and is subject to turbulent fluctuations.[40]

In contrast to other segments of the economy, a significant number of jobs were 'lost' in formal ASE decreased over the period although men fared worse than their female counterparts. Formal NASE, on the other hand, shows strong growth. Women in formal NASE grew significantly over the period increasing by 34 percent between 2001 and 2007 (albeit from a low base), compared to 16 percent for their male counterparts. However, given the overwhelming concentration of the female self-employed in informal NASE, Table 3 seems to indicate that the women still face greater barriers to formal NASE entry than their male counterparts despite this growth trend.

Figure 1: Changes in non-agricultural self-employment distribution by gender and sector, 2001-2007



Source: Labour Force Survey (LFS) 2001:2; 2002:2; 2003:2; 2004:2; 2005:2; 2006:2; 2007:2
Notes: 1. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 2. Data are weighted.

[40] For instance, a notable growth spike is evident in South African self-employment between 2001 and 2007 which is consistent with the findings of Essop & Yu (2008:43) and Steenkamp (2008: 63). Female informal NASE jumped from 645,000 in 2003 to 835,000 in 2005, and then fell to 711,000 in 2007. Investigating this 'growth spike', I found that its primary cause was 165,000 informal non-agricultural self-employed females entering the wholesale and retail trade industry in 2005. By September 2006, 66,000 of these informal non-agricultural self-employed females had left this industry and by September 2007 another 62,000 had left.

Table 4 provides a more detailed picture NASE growth for the 2001-2007 period, examining changes by sector and industry. It is immediately apparent from this table (see below) that women appear to be concentrated in certain industries. In the formal sector, women appear to be over-represented in community and social services where they share parity with their male counterparts. Unsurprisingly, the male self-employed significantly outnumber women in all other industries, particularly in regard to transport, construction and the wholesale and retail trade. A similar pattern is evident in the informal sector where the female self-employed are likewise over-represented in community and social services, and under-represented in construction, transport, and finance. In both the formal and informal sectors, a disproportionate number of the female self-employed seem to be concentrated in the wholesale and retail trade industry.

Despite a substantial level of fluctuation, one of the fastest growing industries for men and women in formal NASE during the 2001-2007 period was manufacturing. It is evident that self-employed women have made significant inroads into formal manufacturing. Indeed, female self-employment in formal manufacturing increased by 160 percent during the period, almost twice the level of growth showed by their male counterparts. Conversely, manufacturing was not a growth industry for the female informal self-employed, an industry traditionally dominated by women in the post-apartheid period (see van Klaveren *et al.* 2009:35-40). It was observed that an increasing number of the male self-employed entered this industry during the 2001-2007 period. Male self-employment in informal manufacturing grew by 44 percent during the period compared to the static situation observed for their female counterparts. [41]

There was evidence that the female self-employed made inroads (albeit from a small base) into formal and informal industries traditionally dominated by men. For example, 17,000 and 2,000 'jobs' for women in self-employment were created in the formal transport and construction industries respectively between 2001 and 2007, and 5,000 self-employed females entered the traditionally male-dominated informal

[41] A similar trend was observed for the wholesale and retail industry in the informal sector. Male self-employment in this industry grew by 10 percent, more than three times the level of growth reported by their female counterparts.

financial industry during the period. Despite these inroads, the growth patterns observed during the period have not altered the skewed composition of the self-employed by gender, industry and sector observed at the beginning of the period. Women in NASE remain crowded into the service sector, particularly the informal wholesale and retail trade industry.

Table 4: Changes in non-agricultural self-employment by industry and sector in South Africa (1000s) 2001-2007

	2001		2003		2005		2007		Change 2001-2007	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Formal sector										
Manufacturing	29	11	39	8	31	11	54	29	88%	160%
	(6.57)	(2.57)	(6.60)	(2.34)	(5.89)	(2.94)	(11.36)	(10.93)		
Construction	30	2	29	2	38	3	53	19	76%	665%
	(6.09)	(1.15)	(5.10)	(0.91)	(5.77)	(1.37)	(15.88)	(16.31)		
Wholesale and retail trade	98	40	105	41	102	30	88	43	-10%	7%
	(8.51)	(6.31)	(9.52)	(5.86)	(9.92)	(4.82)	(9.34)	(6.47)		
Transport	21	2	27	4	24	3	40	4	95%	66%
	(4.12)	(1.16)	(5.88)	(1.51)	(4.49)	(1.61)	(7.10)	(1.87)		
Financial	66	30	79	25	74	36	50	24	-24%	-20%
	(7.32)	(6.85)	(7.87)	(5.37)	(10.25)	(9.52)	(10.43)	(13.67)		
Community/social	20	18	32	27	21	22	22	21	12%	18%
	(3.63)	(3.87)	(4.79)	(5.06)	(5.23)	(5.20)	(6.71)	(4.82)		
Informal sector										
Manufacturing	49	95	58	83	78	106	70	95	44%	0%
	(5.75)	(7.02)	(6.12)	(7.87)	(8.86)	(8.92)	(8.28)	(8.42)		
Construction	115	17	98	18	101	11	162	21	42%	20%
	(8.48)	(3.45)	(7.66)	(4.53)	(9.46)	(2.57)	(15.26)	(4.12)		
Wholesale and retail trade	305	476	304	455	391	620	336	492	10%	3%
	(12.83)	(14.62)	(15.52)	(15.99)	(17.59)	(18.12)	(20.24)	(20.84)		
Transport	46	3	39	4	52	10	40	3	-13%	-5%
	(4.95)	(1.13)	(4.66)	(1.43)	(6.24)	(2.69)	(5.43)	(1.25)		
Financial	37	13	32	19	34	24	19	18	-48%	31%
	(5.54)	(3.07)	(7.16)	(3.66)	(7.14)	(5.03)	(4.01)	(4.00)		
Community/social	46	60	47	61	53	64	39	81	-16%	35%
	(5.58)	(6.37)	(6.65)	(7.78)	(7.24)	(7.10)	(5.54)	(12.09)		

Sources: Labour Force Surveys (LFS) 2001:2, 2003:2, 2005:2, 2007:2

Notes: 1. Standard errors are in parentheses. 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. The formal/informal definition is based upon the registration of the enterprise for VAT.

Given the part that race played in determining the allocation of resources and opportunities during the South Africa's colonial and apartheid periods, it is widely acknowledged that there are clear racial differences in the composition of self-employment. Traditionally most of the non-White self-employed has been located in ASE. However, literature reviewed in this study, suggests that a significant number of non-Whites have entered NASE in the last few decades. Table 4 shows the racial differences in NASE composition during the 2001-2007 period. African females are disproportionately located in informal NASE where they form the largest segment of that population. Conversely, White men were found to be over-represented in formal sector NASE. Although White males accounted for only seven percent of total NASE in 2007, they represented 30 percent of the non-agricultural self-employed in the formal sector.

Table 5: Non-agricultural self-employment distribution by race and sector in South Africa (1000s), 2001-2007

	2001		2003		2005		2007		Change 2001-2007	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Formal sector										
African	41	22	59	27	65	32	125	44	202%	102%
	(4.39)	(3.12)	(8.45)	(5.80)	(7.66)	(8.64)	(14.57)	(7.06)		
Coloured	11	4	18	3	12	3	19	8	68%	111%
	(2.39)	(1.27)	(3.69)	(0.93)	(2.90)	(1.72)	(4.35)	(5.14)		
Indian	30	5	22	5	44	4	30	6	-2%	23%
	(4.29)	(1.69)	(3.55)	(2.02)	(7.01)	(1.57)	(5.25)	(2.26)		
White	180	73	214	72	171	64	135	82	-25%	12%
	(12.82)	(9.55)	(12.14)	(7.43)	(13.34)	(8.37)	(19.72)	(23.51)		
Informal sector										
African	488	598	475	574	615	777	553	648	13%	9%
	(15.35)	(15.11)	(17.15)	(17.10)	(21.24)	(19.19)	(21.08)	(21.33)		
Coloured	32	24	24	19	28	16	24	20	-26%	-15%
	(3.83)	(4.34)	(3.17)	(6.18)	(5.06)	(3.27)	(4.82)	(5.08)		
Indian	18	8	18	5	21	5	29	4	61%	-48%
	(3.04)	(2.00)	(3.43)	(1.54)	(4.62)	(2.12)	(6.85)	(1.63)		
White	59	37	60	46	44	38	55	37	-7%	0%
	(7.16)	(5.83)	(9.45)	(5.95)	(7.72)	(7.24)	(14.30)	(11.96)		

Sources: Labour Force Surveys (LFS) 2001:2, 2003:2, 2005:2, 2007:2

Notes: 1. Standard errors are in parentheses. 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. The formal/informal definition is based upon the registration of the enterprise for VAT.

Table 5 also describes changes in NASE by sector, gender and race from 2001 to 2007. It is evident that the traditionally White dominated formal NASE is 'browning', with 84,000 and 22,000 African men and women respectively entering this form of employment during the period. This represents an increase of 202 percent and 102 percent respectively. A similar trend is evident in the informal sector where the number of African men and women in NASE grew by 13 percent and 9 percent respectively. The 2001-2007 period has also seen a significant increase in the number of Coloured men and women entering formal NASE. In the informal sector, on the other hand, Coloured men and women seem to be exiting NASE, with the numbers of Coloured men and women in informal NASE falling by 26 and 15 percent respectively over the period.

4.2 Analysis of the earning trends in non-agricultural self-employment, 2001-2007

The gendered distribution of the returns to NASE is now explored using data from national labour force surveys for the period from 2001 to 2007. This section will further strive to illustrate that the period of growth noted in the previous section coincides with a modest rise in real earnings for both men and women. However, this positive but modest change has not altered significant gender differences in real earnings for the self-employed. To demonstrate this finding, in this section income patterns for men and women are discussed separately and then compared. All monetary values presented have been adjusted for inflation using the Consumer Price Index 2000 to allow for a real comparison between returns in 2001 and 2007. For a further discussion on how earnings data for men and women in NASE has been calculated in this study, please refer to section 3.1.2.

4.2.1 The distribution of monthly earnings for men and women in non-agricultural self-employment

Using the LFS 2001:2 and the LFS 2007:2, I measured the distribution of NASE earnings by gender and the findings are presented in the figures below. Figures 2 and 3 plot the distribution real monthly returns to NASE in 2001 and 2007 for men and women respectively. It is clear that the female distribution is more strongly skewed

towards the lower end of the income distribution than the male distribution. This indicates a distinct level of income inequality between men and women in NASE. In 2007 more than 60 percent of all men in NASE earned more than a R1 000 per month and 20 percent reported a monthly income in excess of R6 000, compared to 33 and six percent respectively for women in NASE. It is apparent from the figures above that, despite a modest shift to the right between 2001 and 2007, self-employed women remain crowded into low-paying activities.

Figure 2: Earnings distribution of men in non-agricultural self-employment, 2001 and 2007

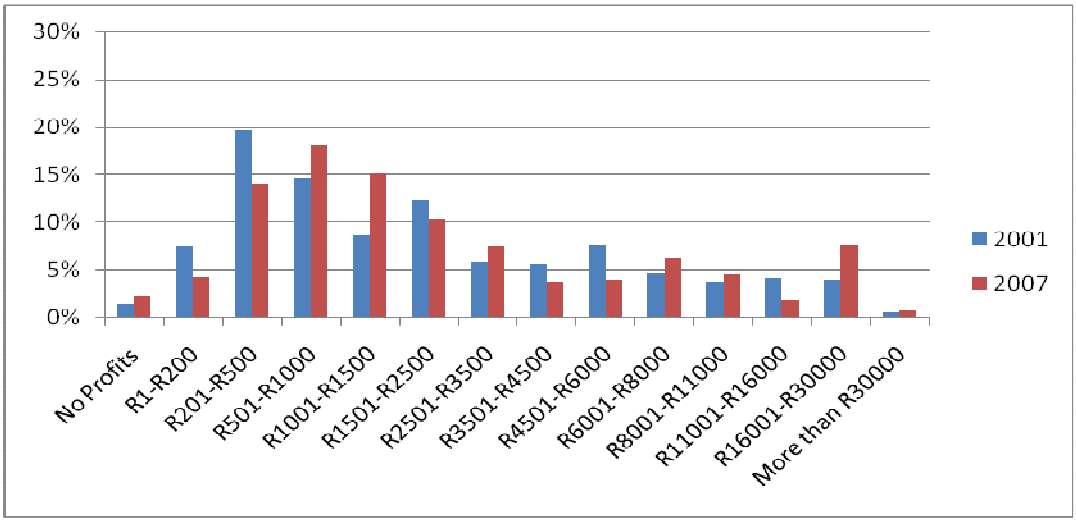
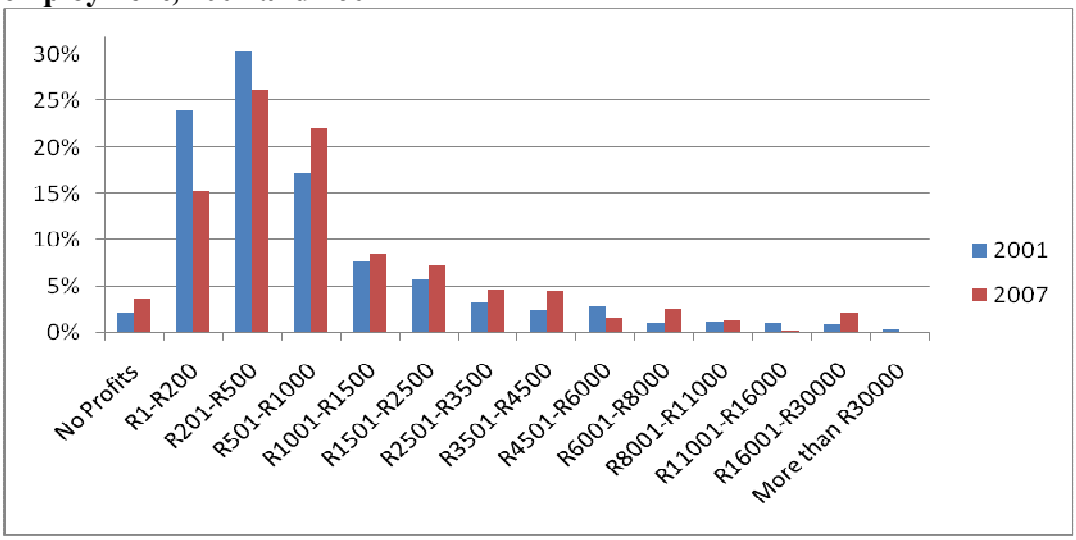


Figure 3: Earnings distribution of women in non-agricultural self-employment, 2001 and 2007



Sources: Labour Force Surveys (LFS) 2001:2; 2007:2

Notes: 1. Earnings were adjusted using the Consumer Price Index for 2000 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. Earnings estimates include values for zero but exclude missing values.

As can be seen in the above figures, many individuals in self-employment reported earnings that can be termed 'poverty returns' (i.e. returns that would not allow an individual to escape poverty). Table 6 indicates the incidence of those in NASE who earn 'poverty returns', based on two poverty lines developed by Hoogeveen & Özler (2005:7). The first is the 'conservative' line A of R322 per month with 2000 as the base year, while the second is a more 'generous' line B of R593 per month also with 2000 as the base year.

Table 6: Number and proportion of non-agricultural self-employed earn below the poverty line: 2001, 2007

	Real poverty earnings line A (R322 per month in 2000 prices)				**Real poverty earnings line B** (R593 per month in 2000 prices)			
	2001		**2007**		**2001**		**2007**	
Thousands	Male	Female	Male	Female	Male	Female	Male	Female
Total NASE below the line	122	273	118	279	239	427	223	423
	(8.34)	(8.85)	(8.92)	(11.06)	(10.96)	(11.27)	(12.33)	(14.11)
Percent								
Share of total NASE	14%	35%	12%	32%	27%	55%	24%	49%
Share of total NASE below the line	31%	69%	30%	70%	36%	64%	35%	65%

Sources: Labour Force Surveys (LFS) 2001:2; 2007:2

Notes: 1. Earnings were adjusted using the Consumer Price Index for 2000 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. Earnings estimates include values for zero but exclude missing values.

According to Table 6, a significant number of women in NASE earn 'poverty returns'. In 2007, 427 000 women (almost half of all women in NASE) reported earnings below the 'generous line', and 279 000 (almost a third of all women in NASE) reported earnings below the 'conservative' line. More women than men reported earning 'poverty returns', regardless of the line chosen. Of the male non-agricultural self-employed in 2007, 223 000 (24 percent of all men in NASE) were earning below line B, and 118 000 (12 percent of all men in NASE) reported earnings that were below line A. It seems evident then from Table 6 that women are more likely than their male counterparts to be earning 'poverty returns' to NASE.

A modest decrease was observed in the absolute and relative numbers of self-employed who earned below the poverty line between 2001 and 2007. [42] The rise in the number of the non-agricultural self-employed earning 'poverty wages' (see Casale *et al.* 2004:996) has clearly ceased, reaching a plateau during the period. However, this trend has not altered the over-representation of self-employed females who earned below the poverty line. In 2007, women made up less than half of all those in NASE yet constituted 70 percent of all the non-agricultural self-employed earning below line A and 65 percent using line B. Indeed, it can be concluded from Table 6 that, regardless of the line chosen, the female non-agricultural self-employed are disproportionately found to be earning 'poverty returns' when compared to their male counterparts.

4.2.2 The distribution of weekly working hours for men and women in non-agricultural self-employment

Research presented in the literature review suggests that the female self-employed assign more of their time and energy to household work than do their male counterparts which reduces their productivity in market-work and lowers their earnings. Using the LFS 2001:2 and the LFS 2007:2, this section measures the distribution of hours worked per week for the non-agricultural self-employed by gender. Depicted in Figures 4 and 5, the gender distribution of hours worked per week indicates that men in NASE work substantially longer hours than the female self-employed. Indeed, compared to their female counterparts, self-employed men are far more likely to adopt a 'normal working week' pattern that resembles wage-employment. Figure 5 indicates that in 2007, only 16 percent of the male non-agricultural self-employed worked 20 hours per week, as compared to 32 percent of their female counterparts. Although there is evidence that suggest a shift to the left for both women and men in non-agricultural self-employment with more of the self-employed working fewer hours per week in 2007 compared to 2001, the shape of working-hours distributions of the male and female self-employed remains relatively constant during that period.

[42] This is with the exception of those self-employed women who reported earnings below line B. Between 2001 and 2007, the absolute number of these women increased by the modest number of 6,000.

Figure 4: Distribution of hours worked per week for women in non-agricultural self-employment

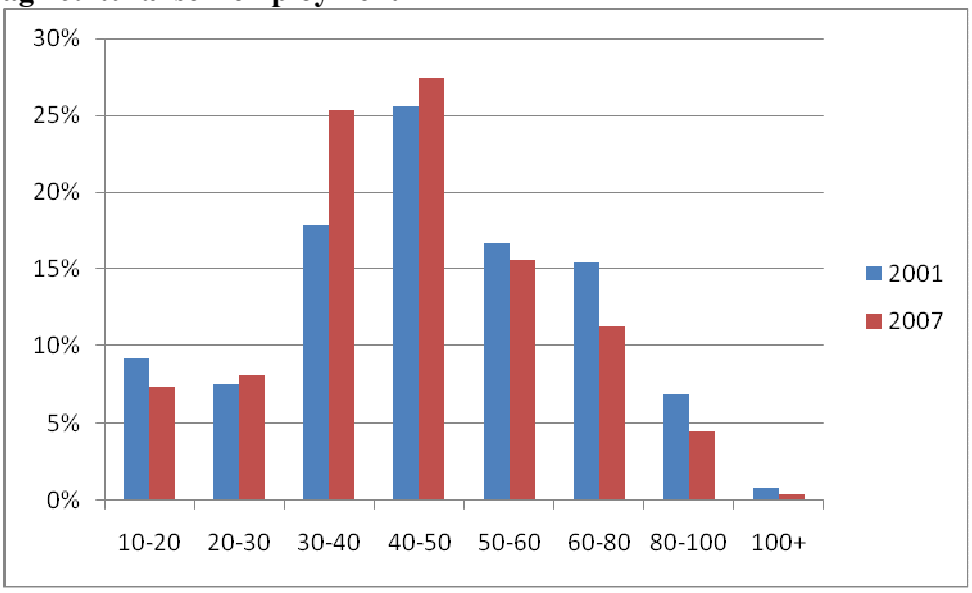
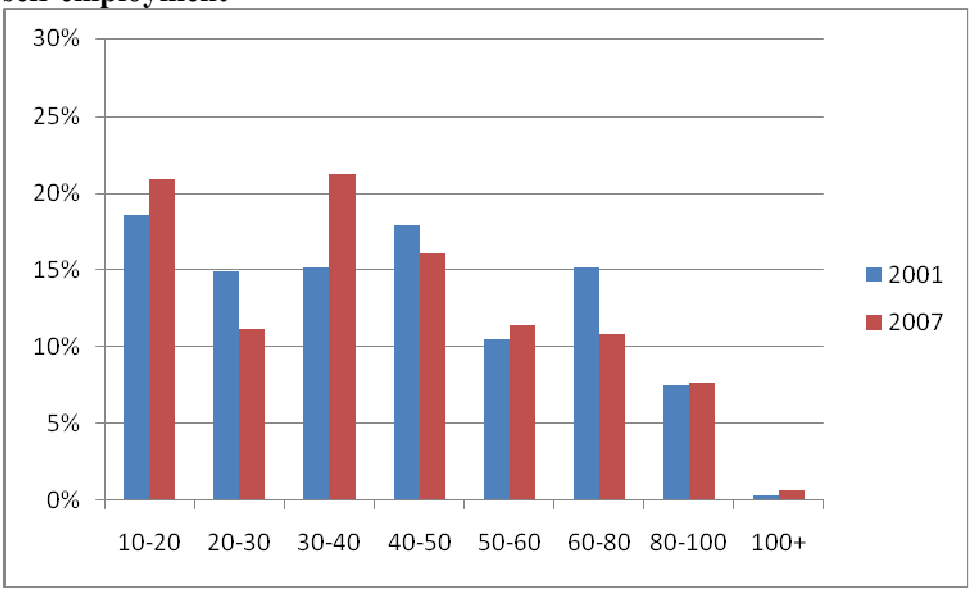


Figure 5: Distribution of hours worked per week for men in non-agricultural self-employment



Sources: Labour Force Surveys (LFS) 2001:2; 2007:2

Notes: 1. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 2. Data are weighted.

The distribution observed in Figure 4 may indicate the adoption of flexible work schedules by the female self-employed. This could signal a personal choice on the part of self-employed women who would find it beneficial to adopt a flexible and part-time work schedule to accommodate domestic and childcare duties. Alternatively this could suggest that self-employment is one of multiple earnings sources for these

workers. Qualitative studies of the self-employed suggest that many women in self-employment combine a range of income generating activities –more so than their male counterparts (see, for example, Allen *et al.* 2008; Bosma & Levie 2010; Chen *et al.* 2004; and Elam 2008). However, it may also represent a negative consequence in cases where financial and social constraints (such as household duties, inadequate capital to buy stock, the high cost of transport and fear of crime) prevent women from working more hours and earning a greater profit. It is likely that the disparity evident in this section can partially explain the significant gendered differences in the distribution of returns noted in section 4.2.1. As a result, it is necessary to control for the number of hours worked when comparing the incomes of the male and female self-employed, in order to accurately measure returns to NASE.

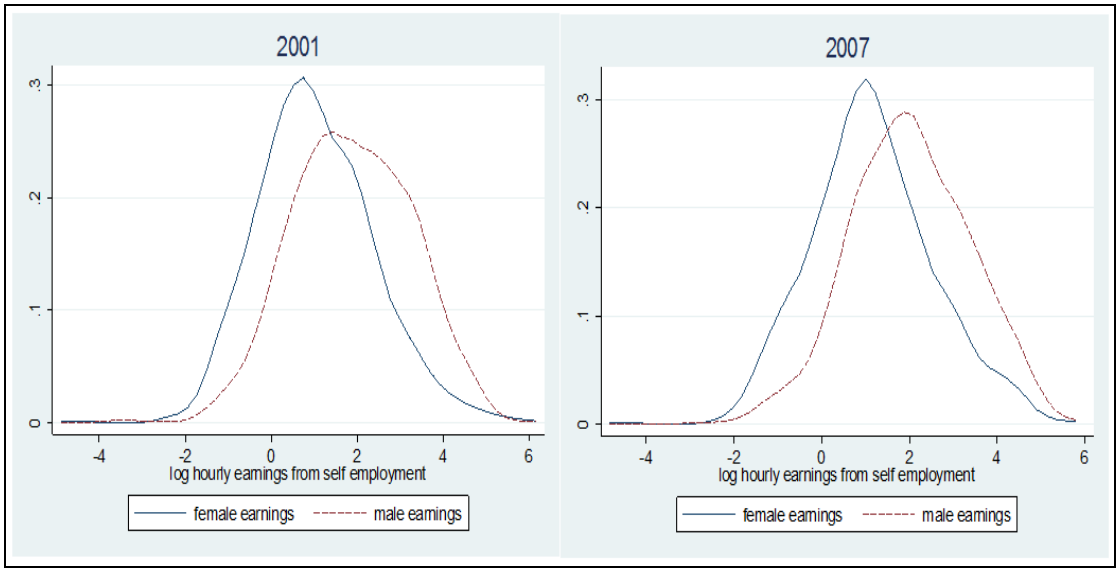
4.2.3 Hourly returns to non-agricultural self-employment

The previous section provided evidence that suggests gender differences in the monthly returns to NASE may partly reflect differences in the working-hour patterns of men and women in NASE. To test this, I estimated density functions by gender for log hourly earnings using the LFS 2001:2 and the LFS 2007:2. An Epanechnikov kernel estimator was used to approximate the density functions, and the resulting density plots are shown in Figure 6. A comparison of the distributions in 2001 and 2007 reveals a relatively modest shift towards the right during the period. This suggests a general increase in self-employment earnings over the period which is consistent with the findings of other studies on returns to self-employment (see, for example, Heintz & Posel 2008; and Steenkamp 2008).

The two panels in Figure 6 indicate that male and female earnings distributions are clearly distinct, even if differences in working hours are controlled for, with the female earnings distribution skewed to the left of the male distribution in both 2001 and 2007. It is apparent that males enjoy the advantage over females in both the lower quantiles of the distributions, as well as in the upper quantiles. It appears from these raw earnings distributions that there distinct level of gender inequality with regards to NASE earnings.

The difference evident in Figure 6 between male and female hourly earnings could be the result of other factors aside from gender, namely the concentration of the female self-employed in the informal sector. Indeed, NASE is a highly heterogeneous form of employment, and earnings may differ greatly between sectors. In order to control for the heterogeneity of NASE, I provide a breakdown of real mean hourly returns to NASE by gender and sector for the 2001-2007 period in Table 7. The table also allows a comparison to be made of earnings growth in wage employment.

Figure 6: Distribution of log hourly earnings for the self-employed by gender, 2001 and 2005



Sources: Labour Force Surveys (LFS) 2001:2; 2007:2
Notes: 1. Earnings were adjusted using the Consumer Price Index for 2000 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. Earnings estimates include values for zero but exclude missing values.

As expected, returns to employment differ considerably between sectors, with those employed in the formal sector reporting significantly higher earnings than those in the informal sector. This is particularly true for those in NASE with non-agricultural self-employed men reporting earnings almost four times greater than their female counterparts in the informal sector in 2007. This suggests that part of the observed gender difference in average real returns to NASE is due to the under-representation of non-agricultural self-employed women in the formal sector. However, even after controlling for sector, it is apparent from the table below that men reported higher hourly earnings than their female counterparts.

Table 7: Mean real hourly earnings for employment in South Africa, 2001-2007

	2001		2002		2003		2004		2005		2006		2007		Change 2001-2007	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total															(% per annum)	
Self-employment*	17.09	8.39	18.59	8.57	25.2	12.5	21.96	12.59	17.17	7.58	18.1	10	20.84	11.81	3.66%	6.79%
	(0.91)	(0.71)	(1.08)	(0.72)	(4.47)	(4.74)	(1.25)	(1.21)	(1.18)	(0.59)	(1.07)	(0.98)	(1.37)	(1.11)		
Wage-employment**	16.85	12.91	16.21	13.53	16.4	13.77	18.68	15.86	16.36	14.2	17.47	14.44	17.38	14.69	0.52%	2.30%
	(0.33)	(0.27)	(0.29)	(0.30)	(0.35)	(0.28)	(0.39)	(0.34)	(0.40)	(0.37)	(0.43)	(0.39)	(0.47)	(0.41)		
Formal Sector																
Self-employment*	38.41	35.22	41.59	32.02	44.08	31.4	49.58	48.87	41.15	35.08	45.07	38.91	46.63	37.73	3.57%	1.19%
	(2.38)	(4.38)	(2.66)	(4.14)	(2.68)	(4.70)	(2.93)	(5.51)	(2.98)	(4.17)	(2.90)	(4.10)	(3.16)	(4.31)		
Wage-employment	17.96	16.93	16.85	16.89	16.96	16.46	19.28	17.94	17.51	16.33	18.85	16.94	18.77	17.93	0.75%	0.98%
	(0.36)	(0.35)	(0.35)	(0.48)	(0.44)	(0.44)	(0.44)	(0.48)	(0.52)	(0.59)	(0.55)	(0.62)	(0.52)	(0.48)		
Informal Sector																
Self-employment*	9.11	4.88	8.69	5.24	9.11	4.65	11.72	6.53	8.16	4.83	8.76	5.48	9.4	7.55	0.53%	9.12%
	(0.51)	(0.26)	(0.61)	(0.37)	(1.26)	(0.28)	(0.83)	(0.42)	(0.48)	(0.27)	(0.49)	(0.51)	(0.63)	(0.87)		
Wage-employment	6.04	6.48	5.66	5.51	4.84	6.42	5.53	6.14	5.1	5.98	5.1	5.74	6.07	7.37	0.08%	2.29%
	(0.30)	(0.60)	(0.41)	(0.52)	(0.21)	(0.78)	(0.25)	(0.73)	(0.24)	(0.47)	(0.17)	(0.56)	(0.27)	(0.81)		
Domestic work	3.6	2.98	2.68	2.83	3.07	3.19	4.41	4.53	3.41	3.62	6.34	4.02	4.84	4.44	5.74%	8.17%
	(0.37)	(0.07)	(0.24)	(0.08)	(0.26)	(0.08)	(0.42)	(0.18)	(0.37)	(0.07)	(1.50)	(0.09)	(0.36)	(0.20)		

Source: Labour Force Survey (LFS) 2001:2; 2002:2; 2003:2; 2004:2; 2005:2; 2006:2; 2007:2

Notes: 1. Standard errors are in parentheses. 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Return estimates include values for zero but exclude missing values. 4. Returns were adjusted using the Consumer Price Index for 2000. 5. Data are weighted.

* Excludes those in agriculture.

** Includes domestic workers.

The evidence presented in Table 7 seems to confirm that real earnings for the female non-agricultural self-employed have risen at a faster rate than those for their male counterparts. From 2001 to 2007, average real hourly income for women in NASE increased by seven percent per annum compared to a less than three percent per annum for the male non-agricultural self-employed. Female earnings in NASE increased at a faster rate in the informal sector than in the formal sector. According to Table 7, informal non-agricultural female self-employed saw their hourly increased by nine percent over this period compared to 1.2 percent for the formal non-agricultural female self-employed. However, given the volatility associated with average returns to NASE, any conclusions about trends in returns to NASE must be treated with caution.

Given that real hourly returns to NASE increased by more than the hourly returns to wage-employment, it is interesting to compare the earnings of men and women in wage- and self-employment. While men in NASE earn more on average than those in wage-employment, the opposite is true for women in NASE. In 2007 the male self-employed earned on average R2.26 more hourly than his counterpart in wage employment, compared to the female self-employed who earned R3.55 less.

This imbalance is in part due to the over-representation of women in informal NASE. In 2007 both men and women in formal NASE reported earnings that were more than double the earnings of their wage-employed counterparts. The difference between the earnings of the self- and wage-employed is less severe in the informal sector. In 2007, self-employed men earned 55 percent more on average than men in wage employment, while self-employed women on average received hourly returns more or less equal to those of the female wage-employed (excluding domestic workers). This may indicate that women, who choose to enter NASE rather than wage employment, do so for non-pecuniary benefits. However it may be far more likely that women choose to enter NASE as a result of considerable entry barriers to other more lucrative forms of employment.

4.3. Conclusion

In this chapter, data from seven labour force surveys (LFSs) was used to track changes in self-employment by gender over the 2001-2007 period. The findings of this chapter fall into two broad categories: Firstly, I found that although the feminisation of self-employment noted by Casale (2004) continued during the period, unequal gender conditions within self-employment remained unchanged. Using survey data, I found that self-employed women were under-represented in the lucrative formal sector, and remain crowded into low-paying activities in the informal service sector. Furthermore, using descriptive statistics, I observed that the female self-employed in South Africa are more likely than their male counterparts to enter certain industries, particularly those industries associated with the service sector.

Secondly, I identified a gender gap in returns to NASE that favours the male self-employed. This disparity did not alter during the period, and the trend analysis of NASE earnings indicated no clear changes by gender, aside from a modest rise in real average earnings overall. Another factor that may account for the gap was the tendency of the female self-employed to work fewer hours per week than their male counterparts. However, even after controlling for hours worked, a gender-based difference in reported returns to NASE was still evident. In order to determine how much of the observed gap is derived from differences in the characteristics of the self-employed, it is necessary to undertake a more in-depth investigation of these characteristics.

Chapter Five: A multivariate analysis of earnings in non-agricultural self-employment

The previous chapter indicated that even after controlling for hours worked, a gender gap still exists in non-agricultural self-employment (NASE) earnings. The female self-employed reported average real hourly earnings of R7.58 in September 2005, which was less than half that reported by their male counterparts (R17.17). However, as the previous chapter suggested, this gender gap in earnings may be due to observable differences in the characteristics of men and women. Consequently, this chapter explores the determinants of NASE returns using the LFS 2005:2[43], and discusses the returns to observable characteristics that might contribute to the gender gap in NASE. Before that however, a descriptive exploration of key correlates of NASE returns is conducted in order to better understand the observed gender gap.

5.1. The correlates of non-agricultural self-employed earnings

5.1.1 Summary statistics

The following section will focus on a descriptive analysis of the variables included in the regression analysis. In Table 8, a comparison of the mean characteristics of the non-agricultural self-employed indicates that while there are key similarities between men and women in NASE, important differences are also evident. The female self-employed tend to be African, operate in the informal sector, have own account enterprises and work in unskilled occupations. These characteristics are associated with low returns to NASE. By contrast the male non-agricultural self-employed have a greater tendency to be in skilled occupations, to be non-own account, and to operate in the formal sector. These characteristics are associated with high returns to NASE.

[43] The LFS 2005:2 was selected because this survey was used to identify and select the SESE 2005 sample. Therefore the use of this LFS will allow a more compatible link to be drawn between the findings of this chapter and those in Chapter Six.

Table 8: Characteristics of the non-agricultural self-employment, 2005

Variables	Total Mean/Prop.	Std. Dev.	Male Mean/Prop.	Std. Dev.	Female Mean/Prop.	Std. Dev.
Individual characteristics						
Age	40.46	0.25	40.4	0.37	40.53	0.32
Years of schooling	8.86	0.09	9.55	0.13	8.14	0.13
Married	47.21	1.08	51.43	1.59	42.72	1.46
African	77.03	1	68.08	1.56	86.47	1.16
Coloured	3	0.35	3.98	0.57	1.97	0.38
Indian	3.75	0.45	6.5	0.83	0.88	0.27
White	16.22	0.92	21.43	1.44	10.69	1.1
Household characteristics						
No. children under 7 in hh	0.67	0.02	0.53	0.03	0.83	0.03
No. of children 7-14 in hh	0.8	0.02	0.57	0.03	1.04	0.03
Living in a metropolitan area	38.5	1.16	28.86	1.56	47.7	1.62
Employment related characteristics						
Average weekly hours worked	50.66	0.47	52.51	0.62	48.73	0.71
Informal sector	79.61	0.99	70.53	1.52	89.22	1.2
Own account	61.9	1.09	48.45	1.59	76.08	1.38
Formal premises	17.19	0.89	23.83	1.44	10.15	0.94
Informal premises	24.06	0.96	27.33	1.42	20.65	1.28
Home-based premises	58.75	1.09	48.83	1.59	69.21	1.42
Occupational variables						
Skilled occupations	25.5	1.04	33.46	1.56	17.06	1.34
Legislative/managerial	15.6	0.8	22.6	1.4	8.2	0.9
Professionals	3.4	0.5	4.6	0.8	2.2	0.6
Technical & associate professionals	6.5	0.6	6.4	0.8	6.7	1
Semi-skilled occupations	36.86	1.03	40.01	1.53	33.6	1.36
Clerks	0.7	0.2	0.3	0.1	1.1	0.5
Service/shop/sales workers	16.6	0.8	12.3	1	21	1.2
Craft and related trades workers	17.4	0.8	24.1	1.3	10.4	0.8
Plant and machine operators	2	0.3	3.2	0.5	0.8	0.2
Unskilled occupations	37.57	1.02	26.5	1.4	49.27	1.46
	(n= 3652)		**(n= 1618)**		**(n= 2034)**	

Sources: Labour Force Surveys (LFS) 2005:2

Notes: 1. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 2. Data are weighted. 3. The formal/informal definition is based upon the registration of the enterprise for VAT. 4. Enterprises with formal premises include business owners with premises in factories, offices or service outlets (such as a shop, school or post office). Home-based premises include business owners with premises in their home or in someone else's home. Enterprises with informal premises include those operating from a market, a footpath, street, street corner, open space or from a mobile location. 5. Skilled occupations include: legislative/managerial, professional, technical/associate professional occupations. Semi-skilled occupations include: clerk, service/sales, craft and related trades and plant/machine operators. Unskilled occupations include: elementary occupations. 6. No. children under 7 in hh refers to the number of children under the age of seven in household. No. of children between 7 and 14 in hh refers to the number of children between the ages of seven and 14 in household. 7. Sample size represented by (n =).

Due to the importance of education and work experience as determinants of NASE earnings, human capital variables are considered in the table above. No notable difference was observed when comparing the average age (the proxy for work experience) of men and women. However, as has already been discussed, this proxy fails to account for temporary exits from the labour market which may underestimate the true work experience differences between men and women in NASE. Table 8 also shows that when years of schooling is disaggregated by gender, the male non-agricultural self-employed report having more years of completed education on average (9.6) than their female counterparts (8.1).[44] Gender disparities in educational attainment are even more pronounced when examined by race and sector of employment. Self-employed Africans reported 7.5 years of schooling on average compared to 13 years of schooling for male and female self-employed Whites. This indicates that, within NASE, women (particularly African women) have lower levels of average educational attainment than men.

5.1.2 Differences in the distribution of occupation

As discussed in Chapter Two, education can influence the kind of occupation that self-employed individuals can enter, with high levels of educational attainment associated with high-skilled occupations in self-employment. Table 9 presents the distribution of the NASE population by occupation, sector, years of completed schooling, and gender. It is evident from the table below that educated self-employed individuals are more likely to enter high-skill occupations in the formal sector than their uneducated counterparts. This suggests that the educated are better able to access the consumer, product and credit markets that allow entry and success in these high-skill formal occupations.

[44] This may be the result of a significantly larger portion of the female self-employed reporting seven years or less of completed schooling (equivalent to completed primary education or less). An examination of the LFS 2005:2 indicates that 30 percent of the female self-employed reported attaining seven years or less of completed education compared to 19 percent of the male self-employed.

Table 9: Distribution of non-agricultural self-employment by gender, level of educational attainment and occupational category in South Africa, 2005

Years of Schooling	Less than 8 years		8 - 11 years		12 years		13+ years	
Occupational category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Formal Sector								
Legislative/managerial	3.14	0.38	7.81	1.84	28.11	13.01	40.12	13.06
	(1.49)	(0.33)	(1.53)	(0.68)	(2.90)	(2.64)	(5.35)	(3.68)
Professionals	N/A	N/A	0.28	0.22	N/A	0.21	10.44	12.02
			(0.26)	(0.22)		(0.21)	(3.58)	(4.66)
Technical & associate professionals	0.26	N/A	0.83	0.3	4.58	3.12	8.73	23.98
	(0.22)		(0.53)	(0.19)	(1.29)	(1.42)	(3.59)	(9.50)
Clerks	N/A	N/A	N/A	0.12	0.53	2.7	0.56	1.56
				(0.12)	(0.27)	(1.58)	(0.56)	(1.04)
Service/sales	1.05	0.17	1.58	1.53	3.37	3.24	0.52	4.11
	(0.74)	(0.16)	(0.56)	(0.64)	(1.16)	(1.35)	(0.37)	(2.41)
Craft & related trades	0.74	N/A	2.6	0.15	5.86	0.55	5.8	N/A
	(0.48)		(0.80)	(0.15)	(1.53)	(0.29)	(2.24)	
Plant/machine operator	N/A	N/A	1.22	N/A	0.64	0.59	1.7	N/A
			(0.57)		(0.48)	(0.59)	(1.69)	
Elementary occupations	N/A	N/A	1.58	0.1	2.79	0.16	1.27	0.4
			(0.76)	(0.10)	(1.45)	(0.13)	(1.10)	(0.41)
Total (Formal Sector)	5%	1%	16%	4%	46%	24%	69%	55%
Informal Sector								
Legislative/managerial	6.18	1.15	6.83	2.49	6.94	8.23	5.28	5.82
	(1.64)	(0.36)	(1.21)	(0.85)	(1.75)	(2.31)	(1.90)	(2.33)
Professionals	N/A	N/A	0.89	N/A	0.57	N/A	7.73	3.65
			(0.62)		(0.35)		(4.23)	(2.69)
Technical & associate professionals	3.07	2.88	3.74	3.42	2.35	3.77	1.18	3.62
	(1.06)	(0.73)	(1.06)	(0.92)	(0.87)	(1.32)	(0.57)	(1.77)
Clerks	N/A	0.23	0.27	1.02	N/A	N/A	N/A	N/A
		(0.16)	(0.19)	(1.01)				
Service/sales	14.05	13.15	13.1	20.4	9.29	17.28	4.03	18.6
	(2.74)	(1.52)	(1.73)	(1.95)	(1.78)	(2.51)	(2.00)	(5.19)
Craft & related trades	33.48	8.84	25.47	11.21	15.6	7.16	7.23	2.28
	(4.46)	(1.13)	(2.22)	(1.56)	(2.29)	(1.67)	(2.62)	(1.21)
Plant/machine operator	4.45	0.72	3.63	0.62	1.48	0.94	N/A	N/A
	(1.56)	(0.39)	(1.08)	(0.26)	(0.69)	(0.64)		
Elementary occupations	33.83	72.74	30.15	56.57	17.69	39.03	5.42	10.89
	(4.30)	(1.88)	(2.51)	(2.42)	(2.39)	(3.40)	(2.28)	(3.05)
Total (Informal Sector)	95%	99%	84%	96%	54%	76%	31%	45%
Total (All)	100%	100%	100%	100%	100%	100%	100%	100%

Sources: Labour Force Surveys (LFS) 2005:2

Notes: 1. Standard errors are in parentheses. 2. Estimates are for all non-agricultural self-employed individuals aged 15 years and above who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. The formal/informal definition is based upon the registration of the enterprise for VAT.

The results from Table 8 suggest that the female self-employed are 'crowded' into low skill occupations. Of all women in NASE, almost 50 percent were in unskilled occupations and only 17 percent were in skilled occupations, compared to their male counterparts who occupied 38 percent unskilled occupations and 25.5 percent skilled occupations respectively.[45] This may be the result of occupational segregation which can be defined as differences in the distribution of individuals across occupational categories even after controlling for differences in education (Beller 1984). In order to examine the presence of occupational segregation in NASE, I turn to Table 9 which indicates that equally qualified men and women in NASE are not engaged in comparable occupations.

It is evident from Table 9 that even after controlling for educational attainment, the women in NASE are more likely than men to be located in low skill occupations in the informal sector. Of the female non-agricultural self-employed, approximately 85 percent of those with completed primary education or less (seven years of completed education) and 77 percent of those with incomplete secondary education (eight to eleven years of completed education) were working in the informal sector as elementary or service/sales workers. Conversely, less than half of their respective male counterparts were working in similar occupations in the informal sector. This suggests that regardless of their educational attainment, the female non-agricultural self-employed face greater barriers than their male counterparts to entering lucrative skill-intensive occupations.

In addition, proportionately more men than women with similar educational qualifications were in those formal skill-intensive occupations associated with high earnings. Of the male non-agricultural self-employed, over half of those with a degree or diploma (13 or more years of completed education) and 46 percent of those with a matriculation qualification (12 years of completed education) were working in the formal sector as either managers/legislators or professionals. In contrast, only 25 and 13 percent of their respective female counterparts were in similar occupations in the formal sector.

[45] It should be noted that, in discussing occupational distribution, it has been Statistics South Africa's practices to allow respondents operating without employees to classify themselves as managers. Certain labour analysts, such as Budlender, have raised issue with this practice as it could be misleading.

5.1.3 Differences in the premises used by the non-agricultural self-employed

The location of an enterprise has an important impact on the capacity of that enterprise to function profitably. In South Africa, a legacy of racial segregation and the impact of apartheid geography have compounded the importance of business premises (see Budlender 2000; Napier & Lieberman 2005; and Hiralal 2010). The non-agricultural self-employed operating from informal premises (such as street traders) face different constraints and opportunities than those operating from home or from more formal business premises (such as an office or a factory). In order to determine the type of premises from which these non-agricultural self-employed operate, Table 10 presents a depiction of the NASE population distributed across premises, sector and gender categories. It is apparent from Table 10 that the majority of the self-employed operate from home. However home-based enterprises were clearly more common in the informal rather than the formal sector.

Table 10: Distribution of non-agricultural self-employment by gender and premises in South Africa, 2005

	Total		Formal Sector		Informal Sector	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Owner's home/farm	42.66	62.81	22.33	37.5	51.23	65.98
	(1.56)	(1.47)	(2.50)	(5.69)	(1.83)	(1.43)
Someone else's home	6.11	6.26	4.25	2.94	6.9	6.68
	(0.77)	(0.77)	(1.48)	(1.83)	(0.90)	(0.83)
Formal premises	23.83	10.17	65.97	49.85	6.26	5.21
	(1.27)	(0.85)	(2.78)	(5.63)	(0.77)	(0.63)
Market	0.59	0.52	0.77	0.37	0.52	0.51
	(0.24)	(0.19)	(0.54)	(0.37)	(0.26)	(0.20)
Footpath/street/field	6.38	7.25	1.03	N/A	8.62	8.14
	(0.81)	(0.76)	(0.67)		(1.10)	(0.85)
No fixed location	20.35	12.91	5.49	9.33	26.42	13.37
	(1.27)	(1.12)	(1.42)	(6.63)	(1.63)	(0.99)
Total	100%	100%	100%	100%	100%	100%

Sources: Labour Force Surveys (LFS) 2005:2

Notes: 1. Standard errors are in parentheses. 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years of age who reported non-zero working hours of no more than 112 hours per week. 3. Data are weighted. 4. Enterprises with formal premises include business owners with premises in factories, offices or service outlets (such as a shop, school or post office).

Unsurprisingly, businesses with formal premises were the minority in the informal sector while the opposite was true in the formal sector. In the formal sector, a higher proportion of the male non-agricultural self-employed (66 percent) had formal premises compared to their female counterparts (50 percent). Racial differences inform the observed gender differences in Table 9. The majority of the non-agricultural self-employed who reported that they operated out of formal business premises were White men, perhaps indicating the larger size and higher financial investment associated with White male-owned businesses. This suggests that either men (particularly White men) in formal NASE had better access to the financial resources necessary to obtain formal premises or that women preferred not to operate from formal premises.

The female self-employed were far more likely to operate a home-based enterprise than their male counterparts. More than 57 percent of men in NASE operated businesses that were based outside the home, as compared to only 37 percent of self-employed women. It is possible that the female self-employed may prefer to operate from home-based enterprises, as home-based work may allow women to better manage domestic burdens. However a compelling case could be made that the female home-based self-employed may be prevented from changing to other premises by other factors such as financial constraints, the availability and cost of transport, and the fear of crime.

5.2. The determinants of returns to non-agricultural self-employment by gender

To investigate determinants of NASE returns with a particular focus on gender differences, I use a multivariate analysis. In order to calculate the determinants of this gender inequality using econometric methods, it is necessary to make a difficult choice on how to deal with gender. In the earnings equations, I was confronted by the question: ‘Should gender be dealt with using a dummy variable or, using separate equations?’ I found this choice largely defined by the descriptive analysis presented in this study. According to my findings, females have lower labour market participation, higher rates of unemployment and lower earnings than their male counterparts. Within NASE, women are more likely than men to operate small, informal and low-skill enterprises. In addition, women and men in NASE tend to operate in different

industries. Given these findings, I believe that there is a strong possibility that estimates based on aggregate self-employment models may produce average parameters that are not true representations of either gender group. Therefore it seems appropriate to run separate estimations for males and females.

5.2.1 Econometric Framework

To examine the determinants of earnings in NASE, the Ordinary Least Squares (OLS) method was used to estimate earnings regressions. The dependent variable is the log of hourly earnings (*Wi*), while the independent variables include a vector of observable individual-, household- and employment-related characteristics (*Xi*), with β as vector of coefficients and $\in i$ as the error term.

$$\ln(W_i) = \alpha + \beta X_i + \varepsilon_i$$

Data from the September round of the 2005 Labour Force Survey (LFS) was used for the regression. The following four regression equations were conducted: Regression I is for a pooled sample of the self-employed (i.e. men and women) but does not control for occupation, while Regression II is for the pooled sample but controls for occupation. Regression III is for the male self-employed only, while Regression IV is for the female self-employed only. The omitted categories in each of the regressions are 'not married', 'non-own account', 'living in a non-metropolitan area', 'operating in the informal sector', 'African', 'working from home', and 'in an elementary occupation'. In Regressions I and II, the omitted category for gender is female. All the regressions control for province and industry, although the results are not reported.

5.2.2 Results

The results of the OLS estimations are reported in Table 11. Most of the estimated coefficients are significantly different from zero and have the expected signs. Importantly, the results from the OLS estimations reveal a distinct premium to being male. Controlling for a wide variety of human capital, household and employment-related variables, Regression I reveals that men earn 42.2 percent more than their

female counterparts.[46] This may be the result of gender discrimination in consumer, credit and product markets. But while discrimination may play a role in limiting female access to credit and product markets, access to economic assets could also be a factor. Due to a greater ability to provide collateral, men may be better able than their female counterparts to purchase and borrow on credit.

The female self-employed are 'crowded' into low-return occupations. According to Table 8, 71 percent of the female self-employed are located in elementary or service/sales occupations which, according to Table 11, are occupations that elicit the lowest returns from self-employment. By contrast, less than 39 percent of the male self-employed are located in these low-return occupations. Consequently, Regression II indicates that the premium to being male decreases from 42.2 to 23 percent if occupational selection is controlled for. This further supports the argument that occupational segregation exists in NASE. Indeed, the results of Regression II seem to indicate the existence of occupation-specific hierarchies consistent with occupational barring against females.

The gender gap observed in Regression II may also be explained by unobserved variables such as endowments of social capital, level of entrepreneurial ability, and gender-based differences that are related to organisational style and strategy. Although these variables cannot be included in the analysis because the LFS 2005:2 does not attempt to measure and/or record them, they could in part explain the gender gap.

The results of the OLS estimations of the earnings equations for the self-employed indicate gender differences in earnings determinants. It is clear from Regression III and IV that while there are some similarities, important differences are also apparent. The following sections will consider these differences in a discussion of the explanatory variables identified. These variables are divided into individual-, household- and employment-related characteristics, and each will be discussed in turn.

[46] To calculate the percentage change in earnings for a binary variable in a semi-logarithmic equation, I used the conversion (exp (ψ)-1)*100). For the estimated coefficient on men specifically, the percentage increase in earnings equals (exp (0.352)-1)*100, or 42.2 percent.

Table 11: Linear regressions for non-agricultural self-employment earnings, 2005

	I	Std. Err.	II	Std. Err.	III	Std. Err.	IV	Std. Err.
Individual characteristics								
Male	0.352*	0.054	0.208*	0.053	N/A		N/A	
Age	0.066*	0.016	0.055*	0.014	0.057**	0.022	0.047**	0.016
Age2	-0.001*	0	-0.001**	0	-0.000**	0	-0.000**	0
Yrs. School	0.058*	0.007	0.048*	0.007	0.048*	0.011	0.049*	0.009
Coloured	0.538*	0.132	0.45*	0.123	0.461**	0.163	0.344**	0.172
Indian	0.613*	0.135	0.672*	0.133	0.665*	0.151	0.948*	0.226
White	0.933*	0.108	0.782*	0.102	0.708*	0.137	0.918*	0.141
Household characteristics								
Married	0.106**	0.052	0.089***	0.048	0.07	0.08	0.128**	0.06
No. children under 7	0.034	0.028	0.023	0.026	0.054	0.045	0.013	0.031
No. children from 7 to 14	-0.004	0.022	-0.005	0.021	-0.034	0.033	0.02	0.027
Living in a metropolitan area	-0.004	0.069	-0.044	0.068	-0.042	0.091	-0.024	0.1
Employment related characteristics								
Informal Sector	-0.657*	0.114	-0.425*	0.102	-0.387**	0.129	-0.539*	0.136
Own Account	-0.382*	0.064	-0.295*	0.06	-0.292**	0.084	-0.249**	0.081
Informal premises	0.129**	0.062	0.157**	0.062	0.017	0.09	0.302*	0.079
Formal premises	0.438*	0.093	0.382*	0.089	0.411*	0.128	0.373**	0.132
Occupational variables								
Legislative/managerial	-	-	0.612*	0.107	0.543*	0.148	0.687*	0.16
Professionals	-	-	0.411**	0.172	0.441**	0.219	0.211	0.284
Technical & associate professions	-	-	0.441*	0.124	0.345***	0.183	0.449**	0.157
Clerks	-	-	-0.155	0.249	0.12	0.283	-0.398	0.309
Service/sales	-	-	0.066**	0.069	0.013	0.12	0.089	0.088
Craft & related trades	-	-	0.434*	0.095	0.355**	0.122	0.508**	0.162
Plant/machine operator	-	-	0.606**	0.189	0.521**	0.221	0.813**	0.341
_cons	-0.606	0.337	-0.701	0.321	-0.468	0.483	-0.575	0.375
N	**3655**		**3655**		**1620**		**2035**	
R 2	0.459		0.504		0.513		0.414	

Source: LFS 2005:2

Notes: 1. The regressions also control for province of residence, and the 7 relevant industry variables which are not reported here. 2. The data are weighted. 3. The dependent variable is the log of hourly earnings (return estimates include values for zero but exclude missing values.). 4. Earnings were deflated using the Consumer Price Index for 2000. 5. The estimates are for self-employed individuals aged between 15 and 65, who reported non-zero working hours of less than 112 hours a week. 6. Regression I includes a pooled sample of self-employed individuals across both gender groups but with the occupation variables omitted. Regression II includes the pooled sample with the occupation variables. Regressions III and IV include samples of self-employed men and women.

* significant at 1% level; ** significant at 5% level; *** significant at 10% level.

5.2.2.1 Individual characteristics

As already discussed, this study uses a quadratic variable for age as a proxy for work experience. The age variables are statistically significant at the one percent level for

both the pooled self-employed samples as well as the gender-specific samples. The results of this coefficient suggest unsurprisingly that earnings increase non-linearly with age, as is consistent with human capital theory (see Mincer 1974). Earnings increase by 5.5 percent with each year of experience acquired by a self-employed individual until a maximum is reached after which earnings start to fall. Comparing Regression III and IV, it is clear that men receive a modestly higher premium than women, with men earning 5.7 percent more with each year of experience compared to 4.7 percent for self-employed women.

According to standard human capital theory, education increases the productivity of the employed, and as a result the returns to NASE rise (see Mincer 1974). However, it is also possible (as I have shown descriptively) that more educated individuals than are able to enter into NASE activities that are associated with high returns. This may be due to the fact that educated individuals have access to more economic capital accumulated from previous employment or that risk-adverse creditors may regard the NASE activities of educated individuals as a more secure investment.

Consistent with human capital theory, the results in the OLS estimations of the earnings equations reveal that higher levels of educational attainment are associated with higher levels of hourly earnings among the self-employed in South Africa. In Regression II, an individual earns on average an additional 4.8 percent for every year of completed education, *ceteris paribus*. A comparison between average returns to educational attainment in Regression III and IV reveals insignificant gender differences. As a result, it can be argued that the gender gap is not influenced by differences in returns to observable educational attainment. However it is important to remember that the descriptive analysis earlier in this chapter revealed that the male non-agricultural self-employed are more educated than their female counterparts.

A distinctive feature of labour market research in post-apartheid South Africa is the clear racial hierarchy in returns to employment. As expected, the OLS estimations expose this hierarchy, with a significant racial differential evident after controlling for a vector of observable characteristics. It can be noted that being African elicits the lowest returns, followed by Coloureds and Indians while being White elicited the highest returns. In Regression II, the observed premium to being White rather than

African is a 118.6 percent increase in earnings *ceteris paribus*. The earnings 'White premium' is higher for women in NASE than men. In Regression III, White men on average earn 103.6 percent more than African men (the base category); while in Regression IV, White women on average earn 150.4 percent more than African women. This could suggest a combination of two possible explanations: (1) cultural and social traditions and endowments associated with those communities in South African defined as 'African' may have a greater negative impact on self-employed women than the cultural and social traditions associated with the White group; (2) African self-employed females face greater levels of racial discrimination than their White female counterparts. Indeed, this racial discrimination may take the form of consumer discrimination and/or statistical discrimination. These forms of discrimination would limit the access of Africans to consumer and product markets as well as negatively affect access to credit markets. As a result, these forms of racial discrimination in NASE could limit the size and the success of African-owned businesses.

5.2.2.2 Household characteristics

The dummy variable that controls for marital status reveals an earnings premium in both regressions for the pooled samples. In Regression II, married individuals earned 9.2 percent more than unmarried individuals, *ceteris paribus*. Unexpectedly, Regression IV indicated a marital earnings premium for women, while there is no evidence of a significant marital earnings premium among men in NASE. This may suggest that, contrary to expectations, married women receive support for their NASE activities from their partners. It is also possible that the status acquired through marriage in a community may have economic benefits that may translate into higher returns among married women.

The number of children under the age of seven years in the household, as well as the number of children who are between seven and fourteen years of age in the household, were also found to be insignificant. The estimated coefficients across Regressions I to VI suggest that the number of children in a household does not affect the earnings of those in NASE. This may suggest that it is easier to combine non-market childcare work with NASE than it would be in wage employment due to the

level of control the self-employed have over their working hours.[47] The initial specification of the earnings equation also included separate variables for male and female pensioners to account for the possible contribution of pensionable persons in the household to NASE activities. However these variables did not prove to be significant and were excluded from the final earnings equations.

5.2.2.3 Employment-related characteristics

In Regression II, the self-employed operating in the informal sector earned 53 percent less than those in the formal sector, *ceteris paribus.*[48] Working in the formal sector should also increase the likelihood of a self-employed individual gaining access to formal credit markets. Access to these markets has been found to have a positive impact on earnings (see Heintz & Posel 2008:38) which may explain part of the observed penalty. The penalty is greater among women in NASE than men, with the female self-employed earning 71.4 percent less when operating in the informal sector, as compared to a 47.3 percent penalty among men reported in Regression III.

The results from the OLS estimations suggest that individuals who are own account earn less on average than those who employ others. In Regression II, own account operators earn 34.2 percent less than the base category, *ceteris paribus*. However this may be an endogenous variable, as only those self-employed who receive high earnings may choose to employ others and expand their businesses. The earnings difference is similar for self-employed men and women, although being own account elicited a lower penalty (28.2 percent) in Regression IV than in Regression III (34 percent). This may be the result of the different organisational styles associated with men and women in NASE, in which men show a preference to use excess capital to expand their business enterprises while women prefer to remain 'small' (see Hughes 2005:159-160).

---

[47] This finding could also be attributed to limitations within the LFS questionnaire itself. The LFS does not ask who looks after the children in the household or how the domestic burdens of childcare are shared among household members. In addition, it is not possible to match biological and/or adopted children to their parents in the data.

[48] However, it is possible that 'sector of employment' is itself endogenous to earnings. As earnings increase, the self-employed may move their businesses into the formal sector by registering for VAT.

The site of operation can often determine access to markets, services and business inputs, and therefore can act as a determinant of income in estimating returns to NASE. It is evident from the OLS estimations that operating a home-based enterprise is associated with low returns to NASE. Both those individuals who operated from formal premises as well as those who operated from informal premises (such as street corner or a market stall) reported higher returns from NASE, *ceteris paribus*. Expectedly, it is evident from Regression II that the premium to working from formal premises (46.5 percent) was greater than the premium from working from informal premises (17 percent).

The premium to working from formal premises is higher for women (50.8 percent) than their male counterparts (45.2 percent). Working from informal premises is not significantly different from working from home for the male non-agricultural self-employed. However for the female self-employed, operating from an informal business location is a significant determinant of hourly earnings. Those females who operate from an informal business location earn 35.4 percent more on average than those who work from home, *ceteris paribus*. This could suggest that a home-based enterprise either presents more constraints to the earning power of the female self-employed, or it may reflect the lower economic value of home-based work conducted by women.

5.3 Conclusion

This chapter illustrates descriptively that women in NASE are more likely than men to be home-based, own account, based in the informal sector, and working in low-skill occupations. All these characteristics would be associated with lower average returns to NASE. However in the regression analysis, I revealed that even after controlling for these observable characteristics, women continue to earn significantly less than men. This gender gap in earnings may derive from differences in the returns to characteristics, or from unobservable characteristics that are omitted from the earnings estimations.

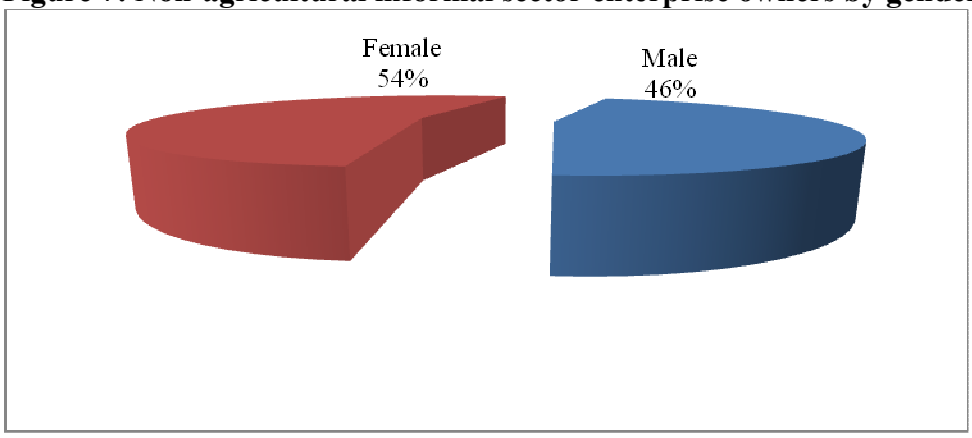
I examined different determinants to NASE earnings disaggregated by gender using a multivariate analysis. The results of which indicated that men and women in NASE had similar returns to education. However, key gender differences in returns were noted when examining observable characteristics like employment sector, age and particularly race group. In addition, I found that although individuals in home-based enterprises earn less, *ceteris paribus*, than those with informal or formal business premises, being home-based presents more constraints to the earning power of the female than the male non-agricultural self-employed. The findings in this chapter therefore indicate that significant gender differences exist in the constraints and conditions facing the non-agricultural self-employed.

The findings in this chapter offer a partial explanation for the observed gender gap. However the above investigation does not touch on access to finance and basic services for those in informal NASE. Researchers, such as Skinner (2005), Clarke *et al. (*2006) and Rogerson (2008) have argued that business performance, particularly in the informal sector, is reliant to a significant degree on these services. In addition, access to these services can play a role in explaining entry barriers to informal self-employment (see also Chen *et al.* 2004; Cichello 2005; and Maas & Herrington 2006). Analysing the access of informal enterprises to these services could provide answers to the question: 'Why do higher female self-employment rates not attenuate higher measured rates of female unemployment as in other developing countries?' Furthermore, an analysis of this nature could help to identify ways to improve the profitability of the informal non-agricultural self-employed. In order to provide clarity on these issues, I investigate informal NASE in Chapter Six using the Survey of Employers and the Self-Employed (SESE) 2005.

Chapter Six: A gendered profile of the informal non-agricultural self-employed

Chapter Four identified that the majority of the self-employed are located in the non-agricultural informal sector.[49] This is particularly true of the female self-employed who are over-represented in this sector where they make up almost 54 percent of all those in the sector (see Figure 7 below). Indeed, I found that almost 90 percent of all women in self-employment are located in this segment of the informal sector compared to 70 percent of all men. In Chapter Four, I also detected gender inequalities in informal non-agricultural self-employment (NASE), with women engaging in NASE activities reporting lower hourly earnings than their male counterparts. The female informal non-agricultural self-employed reported average real hourly earnings of R4.83 in September 2005 compared to R8.16 reported by their male counterparts.

Figure 7: Non-agricultural informal sector enterprise owners by gender, 2005



Source: SESE 2005
Notes: 1. Data are weighted. 2. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years.

The focus of this chapter will be the issue of access to finance and basic services for those in informal NASE. As already indicated research has suggested that access to these services can serve as a significant determinant of self-employment entry and success. These factors also play a role in explaining barriers to informal self-employment entry in South Africa. In order to investigate these issues, the Survey of

[49] In this dissertation, the self-employed in the informal sector are defined as those who run one or more businesses but are not registered for Value Added Tax (VAT).

Employers and the Self-Employed (SESE) 2005 will be used to explore key gender differences in access to start-up capital, basic services like transport, and expenditure characteristics.

The objective of this chapter is to construct a gendered profile of non-agricultural informal sector enterprises (NISEs) and their owners in the informal sector. Section 6.1 will explore gender differences in the business start-up phase, examining differences in motivation for start-up, as well as the extent and source of economic start-up capital used. Section 6.2 provides income information for NISE-owners by discussing gender differences in expenditure and net profit, while Section 6.3 provides information concerning the operational capacity of the informal non-agricultural self-employed. Section 6.4 examines gender differences evident in the hiring practices of employers in this sector. One of the strengths of the SESE is the emphasis placed on identifying contributions that government and non-government actors could make towards promoting the profitability of informal businesses. Finally, Section 6.5 considers the contributions identified in the SESE 2005.

6.1. The business start-up phase

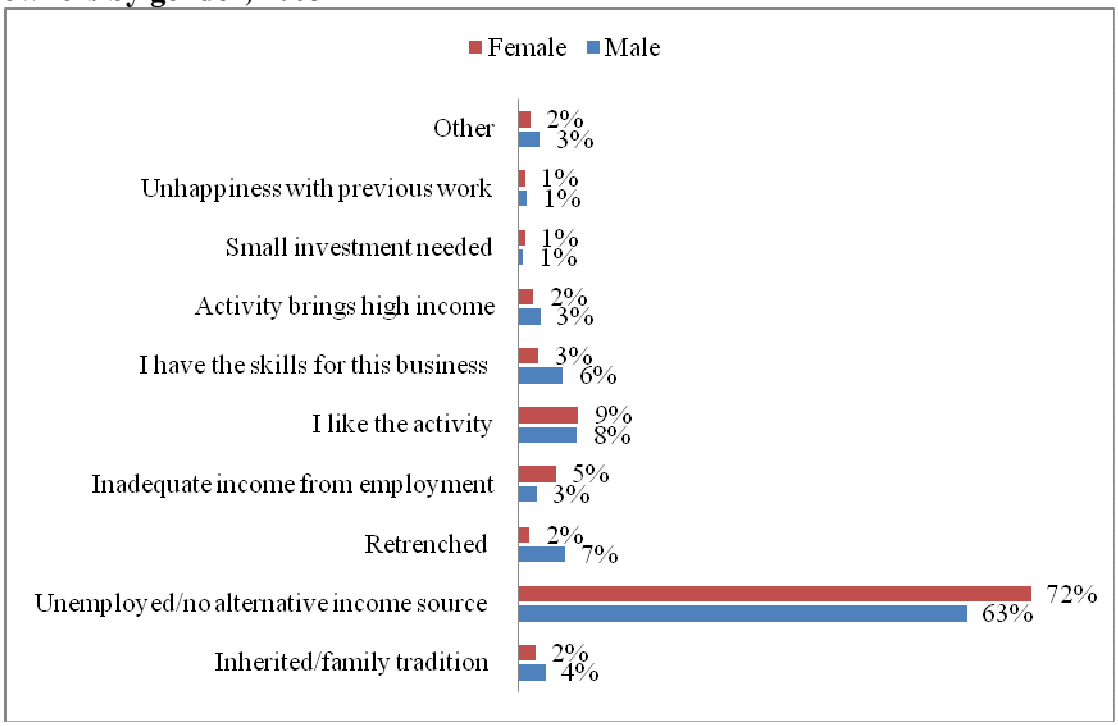
6.1.1 Start-up motivation

A key debate within contemporary self-employment studies is whether people freely choose to enter self-employment or whether they are forced into this form of employment out of necessity. The LFS does not ask questions about the motivations behind business start-up. However, the SESE 2005 does ask respondents for the motives underlying their choice to enter into self-employment. The responses to this question are presented in Figure 8 below.

Overwhelmingly, the principal reason given for entering NASE was ‘lack of an alternative source of income such as formal wage employment’. These findings seem to indicate that people are involuntarily ‘pushed’ into the informal NASE, adopting what Cross & Preston-Whyte (1983) referred to as ‘strategies of desperation’ to support themselves in an economic climate with few opportunities. However, in comparison to men, more women gave unemployment (72 percent) and inadequate

income from employment (five percent) as their reason for entering NASE in the informal sector. This may suggest that women are 'pushed' into entering informal NASE out of necessity because they face more substantial barriers to entering wage employment than men. This supports Casale's (2004) thesis that many women have been 'making work' for themselves in the informal sector because they are unable to find regular employment.

Figure 8: The start-up motivation for non-agricultural informal sector enterprise owners by gender, 2005



Source: SESE 2005
Notes: 1. Data are weighted. 2. Estimates are for all non-agricultural self-employed individuals aged between 15 and 65 years.

6.1.2 Start-up capital

Access to start-up capital is an important indicator of entry to and economic success in NASE. However, the LFS does not provide data on either the amount or the source of capital used to start an informal business. I therefore turn to the SESE 2005 as the basis for this section's discussion of the economic capital used by self-employed individuals to start their businesses. In the following two sub-sections, the questions of the source of this start-up capital and the amount used by NISE-owners will be addressed.

6.1.2.1 Sources of start-up capital

The SESE 2005 was used to identify the kind of start-up capital used by the informal non-agricultural self-employed, and this information is presented below. Figure 9 shows the source of capital utilised by the self-employed to start-up their business by gender. It is apparent that only a small number of respondents reported using pensions or inherited wealth. Racial disparities were evident with White NISE-owners reporting utilising retirement/severance packages (seven percent) and inherited wealth (19 percent) to a greater extent than their African counterparts (two and six percent respectively). This indicates the more favourable economic background of White NISE-owners and the greater range of sources of start-up capital available to them.

The most common source of start-up capital identified was from economic assets accumulated during either past or present wage employment. More male NISEs owners (55 percent) utilised this source than their female counterparts (30 percent). This could suggest that the female NISE-owners may have more limited access to wage employment which would be unsurprising given the high rate of female unemployment, and also that they may have received inferior returns from wage employment during the period before their entry into NASE. [50]

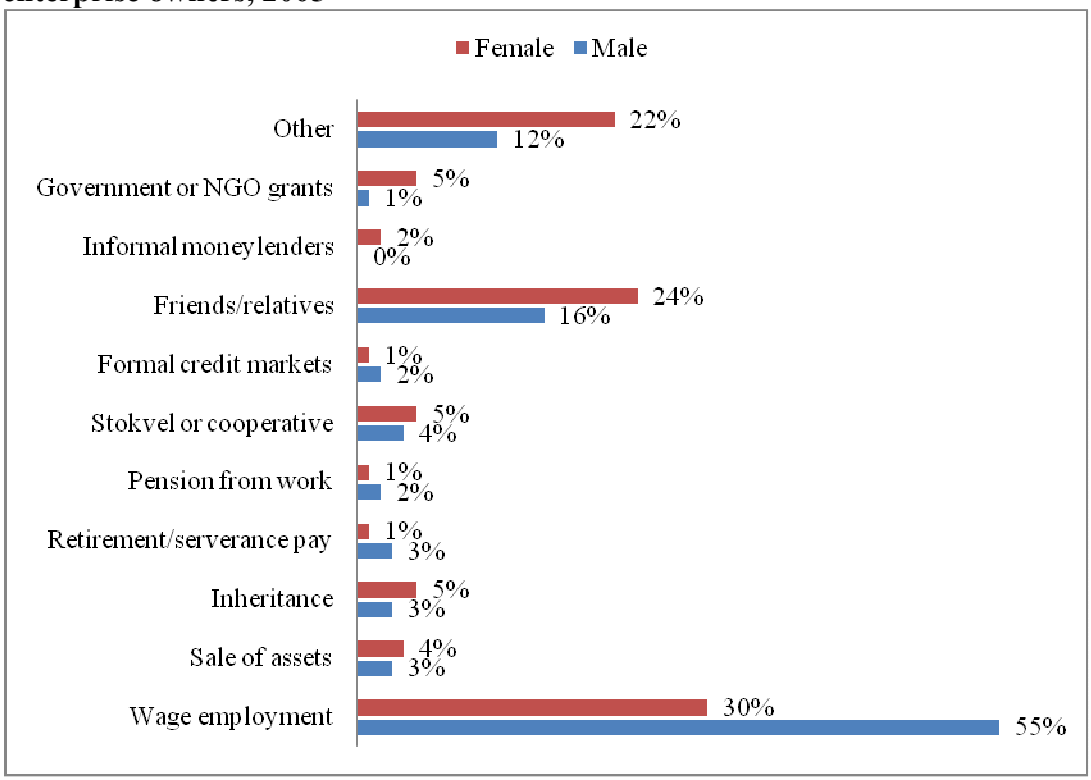
Retrenchment/severance packages were not reported as a common source of funding for the self-employed. This may suggest that while a significant number of NISE-owners were 'pushed' into self-employment by a loss of wage employment many did not work in the formal sector before moving into their current positions. Unlike the LFS 2005, the SESE provides a unique set of data on the use of credit by the NISE-owners. As Figure 9 indicates, only a few NISE-owners utilised loans from formal credit markets, grants from a non-governmental or state institutions, or credit from informal moneylenders (i.e. 'mashonisas') to start their businesses. [51] This suggests

[50] However this gender disparity was not evident for White owned NISEs, indicating that female White NISE-owners are not as disadvantaged in access to and returns from wage-employment (either past or present) as their African counterparts. This suggests that the capacity of African women to use accumulated capital from previous employment to fund business start-up in particular is limited by past and present wage employment disparities.

[51] These results should be viewed with a certain degree of caution as it is possible that the responses regarding credit markets may be biased because fieldworkers and respondents during the 2005 SESE could have misunderstood the question as applying only to very large sums of capital (Stats SA

that NISE-owners are isolated from credit markets, and that the private sector, national government and non-governmental agencies are clearly not servicing the financial needs of these entrepreneurs.

Figure 9: Source of start-up capital for non-agricultural informal sector enterprise owners, 2005



Source: SESE 2005

Notes: 1. Data are weighted. 2. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years. 3. Figure restricted to those who used economic capital to start a non-agricultural informal sector business.

It is clear from Figure 9 that a significant number of NISE-owners relied on credit obtained informally from friendship and/or familial networks to start their businesses. This seems to indicate that social capital is an important asset in the entry into informal NASE. More female NISE-owners (24 percent) obtained credit from familial and/or friendship networks than their male counterparts (16 percent). This may indicate that female owners have better access to this form of credit than their male counterparts. However, it could also suggest that women are 'pushed' into obtaining credit from these networks as a result of possessing lower stockpiles of accumulated

2005:xxviii). However, the data should not be discounted, as the statistics reveal in part the limited capacity of informal businesses to gain access to credit facilities.

capital than men, and/or because of greater barriers to accessing other forms of credit.[52]

6.1.2.2 Size of start-up capital

According to the SESE 2005 data on start-up capital, NISE-owners invested on average R1 870.92 to start a business.[53] Racial disparities were noted. White-owned NISEs reported using on average significantly higher levels of start-up capital (R5 043.69) than African-owned NISEs (R1 773.36). It was also evident that White-owned NISEs reported obtaining higher average amounts (R19 167.14) on credit to start a NISE than their African counterparts (R965.79). This could signal racial discrimination in credit markets as well as suggest that White NISE-owners had better access to collateral and better credit histories than African NISE-owners.

Gender disparities were also observed with women differing from men in the size of start-up capital used. Male NISE-owners reported using much higher sums of capital (R3 274.01) compared to their female counterparts (R787.02). This gender disparity is clearly depicted in the figure below which employs an Epanechnikov kernel estimator to approximate the density functions and calculate the density plots using a log function of start-up capital.

The figure below indicates that male and female distributions are clearly different, with the female distribution lying distinctly to the left of the male distribution. It is also apparent that males enjoy the advantage over females in both the upper quantiles of the distribution as well as in the lower quantiles. Gender differences in start-up capital used may indicate significant differences in both the kind of businesses[54]

---

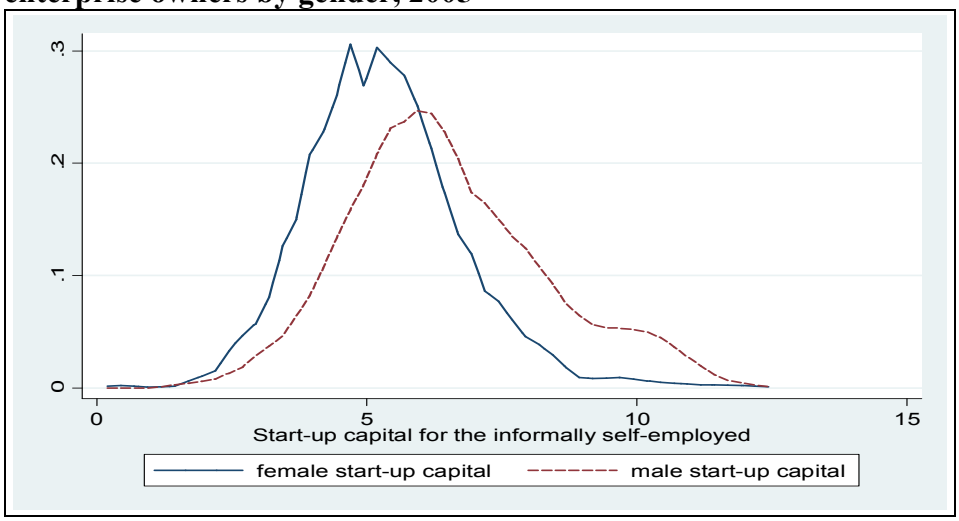
[52] This was corroborated by the fact that women borrow on average less than men. According to data collected from the SESE 2005, women borrowed on average R1083.17 to start an informal business, compared to an average of R4 162.53 borrowed by their male counterparts.

[53] All monetary amounts in this chapter are presented in real terms, adjusted using the Consumer Price Index for the base year 2000 so that figures are comparable to those presented in the earlier chapters.

[54] As can be expected, there is a relationship between the industry in which a self-employed individual is operating and the start-up funds needed. An examination of the SESE data reveals that substantially larger start-up investments were used to start businesses in the manufacturing industry compared to other industries such as the wholesale/retail trade and construction. According to the SESE 2005, on average a self-employed individual in informal manufacturing started their businesses with more than twice the capital used by self-employed individuals in the informal construction industry, and almost three times the sum used by those in the informal wholesale and retail trade industry. Perhaps unsurprisingly, those in the informal wholesale and retail trade industry used less capital on average to start their businesses than those in other informal industries. When comparing start-up capital

started by men and women, as well as the profitability and productivity of those businesses.

Figure 10: Distribution for start-up capital for non-agricultural informal sector enterprise owners by gender, 2005



Source: SESE 2005
Notes: 1. Earnings were adjusted using the Consumer Price Index for 2000. 2. Data are weighted. 3. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years who used economic capital to start a business.

The gender difference observed in Figure 10 could be the result of barriers encountered by female NISE-owners when trying to acquire start-up capital. Indeed, the evidence from the previous sub-section seems to indicate that female NISE-owners have more limited access to economic assets than their male counterparts and are 'pushed' into obtaining capital from friendship and/or familial networks. However some researchers have suggested that women, particularly poor women, may prefer to start businesses that are smaller and less risky than their male counterparts (see, for example, Parker 2004; Still 2006; Maas & Herrington 2006; and Allen *et al.* 2008). Smaller enterprises require less start-up capital, and this might play a role in explaining the gender disparity observed in Figure 10. More research is needed to determine whether the size of start-up capital is linked to access constraints or is due to ex-ante risk management strategies that may be common among the poor (see Cichello *et al.* 2006:5).

6.2. Expenditure and profit for the informal non-agricultural self-employed

disaggregated by gender and industry, it is evident that while men on average tend to use more capital to start their NISEs, and the difference was greatest in the informal manufacturing industry, which highlights the gender disparities that exist in this industry.

As discussed in preceding empirical chapters, there are substantial gender differences in the returns from informal NASE. However, these chapters derived their information from the LFS which does not include questions about gross income[55] or expenditure on key inputs. In order to obtain this information, I turn to the SESE 2005 from which I was able to estimate average monthly gross income, wage expenditure, expenditure on raw materials and supplies, and finally net profit for NISEs in South Africa. The findings are presented in Table 12, disaggregated by selected race groups and gender.

Table 12: Mean gross income, expenditure and profit for the informal non-agricultural self-employed, 2005

	Total		African		White	
	Male	Female	Male	Female	Male	Female
Gross income	2386.92	1066.78	2025.24	950.79	6710.82	4177.63
	(224.47)	(104.62)	(205.29)	(100.78)	(1 660.68)	(1 067.52)
Supplies/raw material expenditure*	1193.68	565.14	969.14	532.24	3499.63	1441.94
	(134.77)	(56.30)	(89.96)	(57.61)	(1 382.34)	(343.88)
Wage expenditure**	1253.08	1127.06	1001.05	875.03	3152.53	2563.06
	(211.65)	(56.39)	(98.88)	(254.14)	(1 180.84)	(1 068.28)
Net profit	1149.46	545.15	998.09	475.77	2750.79	2415.95
	(73.91)	(43.71)	(68.62)	(37.79)	(648.17)	(444.47)

Source: SESE 2005
Notes: 1. Earnings were adjusted using the Consumer Price Index for 2000. 2. Data are weighted. 3. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years. 4. Earnings estimates include values for zero but exclude missing values.
*Only calculated for those who reported purchasing supplies and/or raw materials
**Only calculated for those who reported employing one or more paid employees and includes salaries/wages (including bonuses) as well as payments in kind (food, clothing, drinks, etc) and refunded transport costs.

As expected, gender differences were exhibited in the average real monthly net profit reported by the informal non-agricultural self-employed. Indeed, the average real monthly net profit for male NISE-owners was R1 149.46, more than double the net profit (R545.15) reported by female counterparts. The LFS 2005 estimated average monthly net profit for the informal non-agricultural self-employed at R1 318.22 for men and R676.69 for women. This may indicate that the LFS slightly over-estimates

[55] Gross income in Table 12 refers to the total sum of money generated from business activities as well as non-business activities (for example, gifts from other persons to the business) before any deductions.

returns to informal NASE which could be a result of the LFS not attempting to record gross income and expenditure of the self-employed.[56]

It is clear from Table 12 that a significant gender disparity was found when investigating gross income. Regardless of race, male-owned businesses tend to generate on average a greater gross income than female-owned businesses. This suggests that female-owned NISEs are smaller, produce less, and deal with fewer outputs than their male counterparts. This finding is further supported by looking at monthly expenditure on supplies and raw materials. The majority (almost 84 percent) of NISE-owners use supplies and/or raw materials in their self-employment activities. Male real average monthly expenditure on supplies and/or raw materials is more than double the average monthly female expenditure on these items. This would be consistent with male NISE-owners purchasing higher quality supplies and/or raw materials, as well as purchasing these items in greater volumes.

A more in-depth analysis of expenditure data for 2005 reveals that men on average spent more than women on business inputs such as fuel, spare parts, rental of business premises and machinery, maintenance and business services (e.g. accounting and advertising).[57] In addition, more male NISE-owners spent money on fixed assets (such as equipment and machinery) than their female counterparts during 2005. This indicates that male owned-businesses tend to accumulate larger stockpiles of economic assets. However, expenditure reports should be treated with caution because of poor record-keeping among NISE-owners.[58]

[56] If the attrition in the sample from the September round of the LFS 2005:2 to the SESE 2005 (conducted in October) was among the low-earning informal self-employed, then the difference in average net profit across the two surveys will be underestimated.
[57] Many within the SESE declined to answer detailed questions regarding this issue, and therefore this expenditure data should be treated with caution.
[58] An analysis of the SESE data reveals that three-quarters of the informal non-agricultural self-employed did not keep any records of transactions (including sales and expenditure), with fewer women keeping records than men. Of those who kept records, 85.3 percent kept records of their purchases; and of those who kept records of purchases, more than half (55.8 percent) only kept informal records. Not only does this highlight a poor level of entrepreneurial expertise, but it also means that most of the respondents were reporting figures depending mainly on their memories, which in turn would influence the reliability of answers concerning their expenditure.

6.2.1. Gender differences in wage expenditure

The majority of NISE-owners were 'own account', with only a small fraction reporting having one or more employees (15 percent). A larger share of male NISE-owners identified themselves as 'employers' (30 percent) compared to female NISE-owners (10 percent). As a result, the majority of NISE-owners who employ others were male (71 percent).[59] Regardless of gender, most employers only employed small numbers of workers.

Table 12 reveals that NISEs who could be defined as 'employers' did not have on average high wage expenditure. Among those who reported employing one or more paid employees, female NISE-owners had moderately lower average wage bills (R1 127.06) than their male counterparts (R1 253.08).[60] However the observed gender difference was not considerable and does not indicate a significant difference in the wage expenditure of male and female NISE-owners. This section probes further, investigating the amount that NISE-owners pay their employees.

Using data on wage bill expenditure and number of paid employees working in NISEs, I estimated 'wage expenditure per paid employee' which is presented in Figure 11. The evidence suggests that most of the paid jobs created by NISE-owners are low-paying. According to Figure 11, only a third of all informal employers paid their workers more than R600 per month, and only three percent paid more than R2000 per month.[61] In particular, female informal employers reported paying low wages, with only seven percent paying their workers more than R1000 per month compared to 17 percent by their male counterparts. In addition, the vast majority of

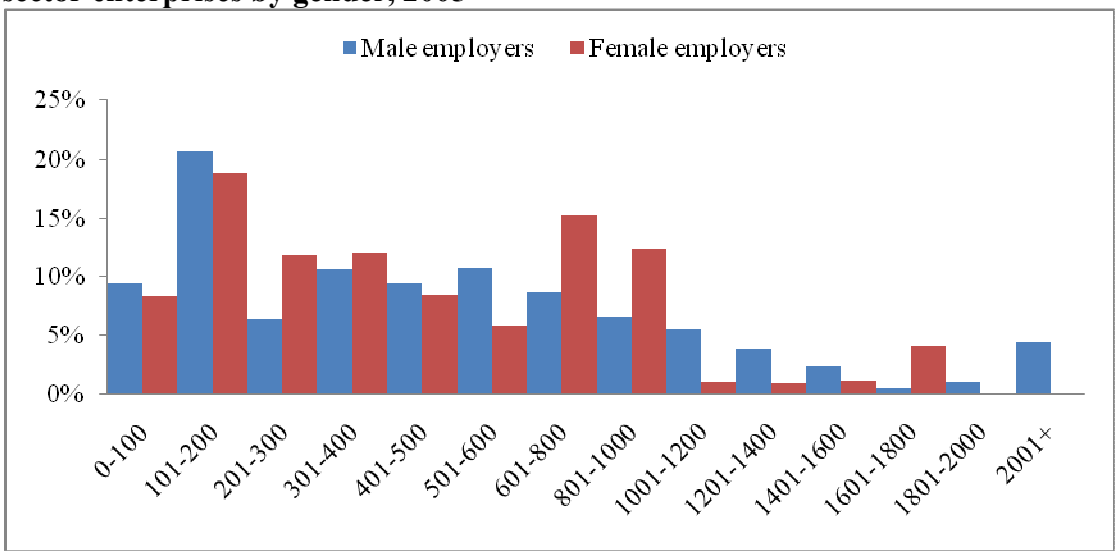
[59] There were few gender differences in the numbers of employees hired by informal employers. According to employment data from the SESE 2005, 84 percent of male informal employers reported having between 2-4 employees compared to 85 percent of their female counterparts. However, slightly more male informal employers (six percent) reported hiring more than 10 employees than female informal employers (four percent).

[60] Racial disparities were particularly evident here, with White informal employers reporting significantly larger average wage bills (R2888.41) than their African counterparts (R948.04). This suggests that these businesses have a greater number of employees and pay their employees more. As indicated in the table above, female-owned businesses regardless of race reported lower average wage bills.

[61] This is in part determined by the fact that the many of NISE-owners (23.3 percent) used part-time labourers who would have lower monthly wages than full-time labourers due to their lower working hours. However, even if those informal employers who hire part-time workers are removed and only informal employers who have full-time paid labour are considered, very low average monthly wages per employee (R742.63) are still reported by NISE-owners.

NISE-owners had no written contract with their employees, and offered their employees no benefits regardless of whether they worked full- or part-time. This indicates that paid workers in NISEs suffer under relatively harsh working conditions.

Figure 11: Average wage expenditure per employee in non-agricultural informal sector enterprises by gender, 2005



Source: SESE 2005
Notes: 1. Earnings were adjusted using the Consumer Price Index for 2000. 2. Data are weighted. 3. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years who reported employing one or more paid employee. 4. Estimates include exclude values for zero and missing values. 5. Wage expenditure, calculated in rands, includes salaries/wages (including bonuses) as well as payments in kind (food, clothing, drinks, etc) and refunded transport costs.

6.3. The business operations of the informal non-agricultural self-employed

This section will examine the operational capacity of the non-agricultural self-employed in the informal sector, focusing on key gender-based differences in order to discern challenges faced by individuals operating in this sector. Numerous similarities exist between male and female NISE-owners. Regardless of gender, the majority of NISE-owners had started their businesses less than three years before the time of the survey. Although backward linkages with small or large businesses were noted[62], the majority of NISE-owners sold their goods or services to private individuals in highly localised markets. This study will now focus on the access NISE-owners had to basic services such as transportation, piped water, electricity, flush sanitation and

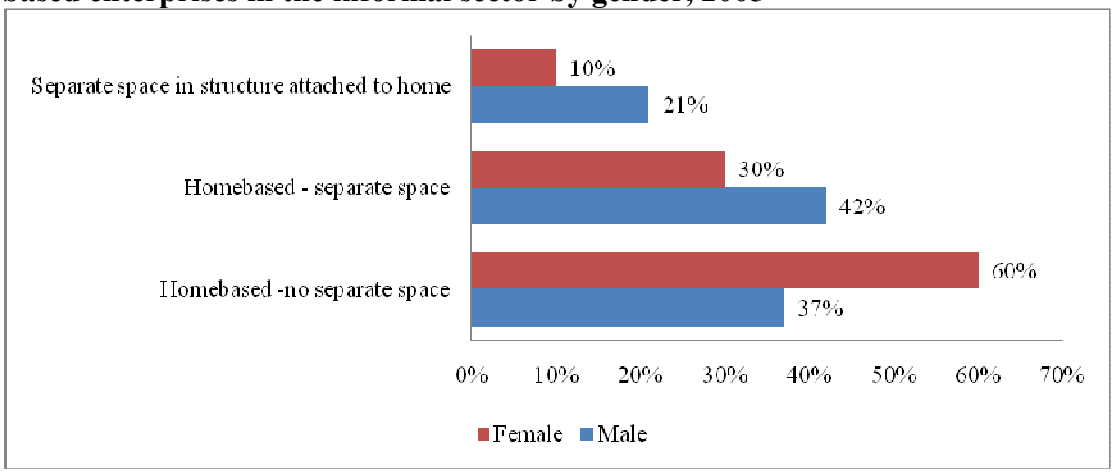
[62] The expenditure reports of NISEs indicate that formal and informal economies are linked. The findings for the source of supplies or raw material reflect that the vast majority of NISE-owners (74 percent) cited wholesalers and retailers as their main source of material. This indicates the strength of the backward linkages into the formal economy.

telecommunications. Initially however, consideration will be given to the different kinds of business spaces available to home-based NISE-owners.

6.3.1 Non-agricultural home-based enterprises and business space

In Chapter Five, it was noted that the LFS 2005:2 indicated that the majority of NISE-owners (51 percent of men and 66 percent of women) operated from home. However the LFS did not ask questions about the business space available to these home-based enterprises. Researchers, such as Napier & Lieberman (2006), consider inadequate business space an important constraint on business growth. These researchers found that sustainable and profitable home-based NISEs have a separate room(s) or an attached structure (e.g. a workshop in the backyard) for their business activities. The SESE 2005 allows this study to investigate the kinds of business space available to home-based enterprises.

Figure 12: The kinds of spaces available to non-agricultural informal home-based enterprises in the informal sector by gender, 2005



Source: SESE 2005
Notes: 1. Data are weighted. 2. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years. 3. Figure is restricted to the self-employed who indicated that they worked from home.

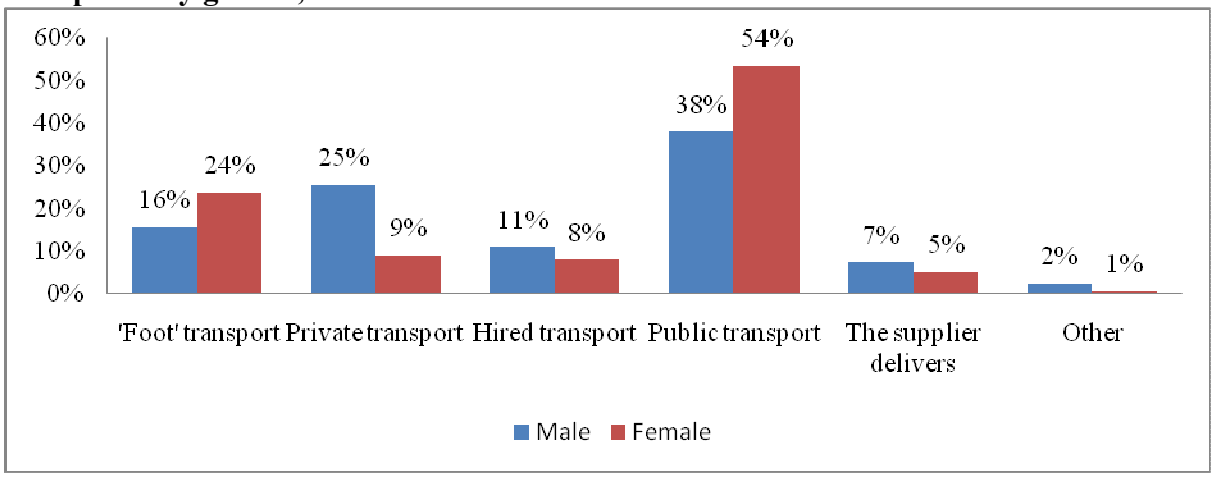
Figure 12 presents a proportional breakdown of home-based enterprises that had a separate space within the home (i.e. a separate work room), those who operated from a separate space in an attached structure, and those who did not have a separate space. Figure 12 is restricted to those NISEs that used the home as their business premises. It is evident that the majority (60 percent) of the female-owned home-based NISEs lacked their own separate space. Although it is possible that NISE-owners may

choose to operate without their own space to better combine domestic and self-employment activities, it is far more probable that this indicates the spatial limitations faced by self-employed women due to economic constraints.

6.3.2 Access to transportation

In their analysis of informal self-employment, researchers such as Cichello *et al.* (2006) argue that poor access to transportation and high transport costs can act as constraints on self-employment entry and success. This emphasises the importance of transportation for NISE-owners in South Africa, particularly given the legacy of apartheid geography. While no direct questions were asked in the LFS 2005:2 about access to transport, the SESE 2005 included questions about the types of transport used by enterprise owners to move supplies and raw materials in their business operations.

Figure 13: Modes of transport used by the non-agricultural informal sector enterprises by gender, 2005



Source: SESE 2005
Notes: 1. Data are weighted. 2. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years.

Figure 13 indicates that public and 'on foot' transport were key modes of transport for NISEs, with more than 70 percent of NISE-owners utilising these modes of transport to move supplies and/or raw materials.[63] A higher proportion of men reported using

[63] Unsurprisingly, racial disparities were noted in access to transport. Segregating mode of transportation used by population group, I found that the vast majority (80 percent) of White-owned NISEs had access to private transportation or had their supplies and raw materials delivered by

private transport compared to women. In fact, more than one in four men had access to their own transport compared to less than one in ten women. A possible explanation for these gender differences is the capacity of the male NISE-owners to spend more on transport[64], and the need to transport larger volumes than their female counterparts due to higher average expenditure on supplies and/or raw materials.

The widespread use of public and 'foot' transport by women is especially concerning, as these modes of transport can be time-consuming and may limit access to markets thereby impacting upon their economic performance. Moreover, the female dependence on public transport could hinder economic performance given the limited routes and relatively expensive nature of this mode of transport. Both 'foot' and public transport are associated with crime, and given the vulnerability of women to particularly violent forms of crime, this places female NISE-owners at greater risk than their male counterparts.

6.3.3 Access to water, electricity and sanitation

The access of the self-employed to basic services often intersects with broader issues of service delivery in South Africa. Unsurprisingly, access to services is contingent on the kind of location from which a NISE-owner operates. A proportional breakdown of access to basic services is provided in Figure 14 below. It is clear that a significant number of NISE-owners were constrained by poor service delivery. Those who operated from informal premises (such as street corners and taxi ranks) indicated relatively poor access to services such as water and electricity. This suggests that these workers endure difficult environmental conditions to gain access to consumer markets. The poor service delivery experienced by the home-based self-employed is also evident. Of the home-based NISE-owners, 45 percent lacked access to piped water, 22 percent had no electricity access, and almost 60 percent did not have access to flush sanitation.

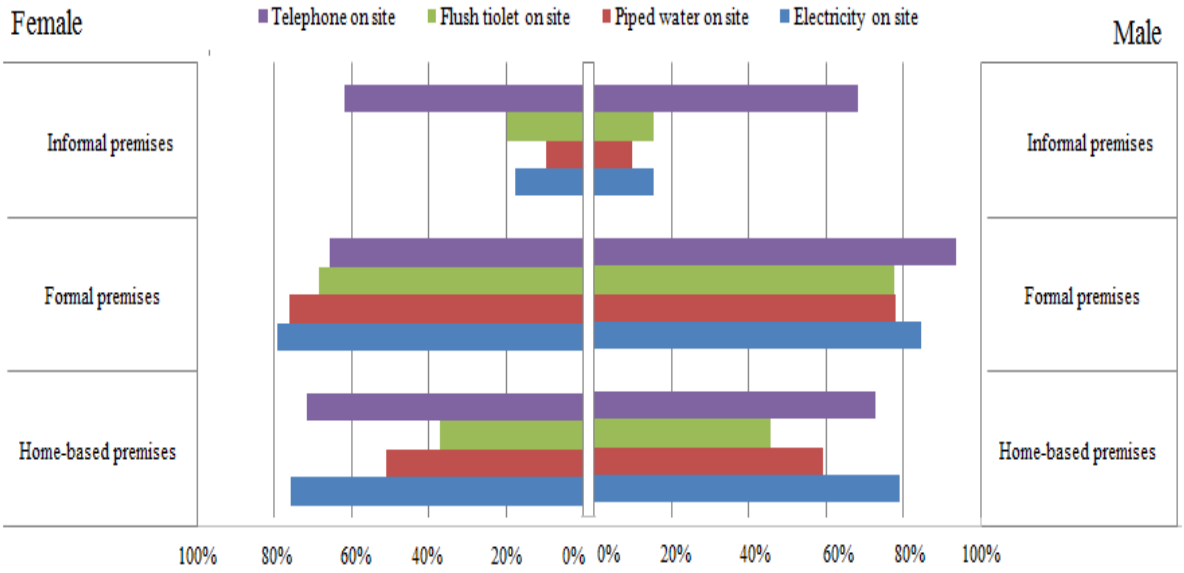
---

suppliers. By contrast, African-owned NISEs reported a greater reliance on 'foot' and public transport. This indicates the racial imbalance in resources available to NISE-owners.

[64] According to expenditure data from the SESE 2005, male NISE-owners spent on average double the amount spent by their female counterparts on transporting supplies and raw materials in October 2005.

According Figure 14, male NISE-owners had moderately better access than their female counterparts to on-site telephones and services such as piped water and flush sanitation. In particular, a higher proportion of men with formal premises reported access to on-site telephones compared to women with similar premises. Aside from this moderate disparity, the lack of access to basic amenities liked piped water and flush sanitation for female home-based NISE-owners is concerning. For women, low infrastructure access increases the time they spend on domestic responsibilities (such as fetching water) and lessens the time that they have available to spend on business activities (see Budlender 2000). This can have a negative impact on earnings.

Figure 14: Access to services for the informal non-agricultural self-employed by gender and business location, 2005



Source: SESE 2005
Notes: 1. Data are weighted. 2. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years.

The vast majority of respondents reported access to an on-site telephone. The SESE data allows a distinction to be made between cellular telephones and private landlines. Regardless of any observable characteristic (such as location, gender, age, industry, race[65] or province), it was found that the majority of NISE-owners have access to cellular telephones. The widespread use of this technology underlines the importance

[65]It is important to note that White-owned NISEs owners were less reliant on cellular telephone technology than their African counterparts. Only 48 percent of White NISE-owners reported cellular telephones as their primary form of telecommunication compared to 65 percent for African NISE-owners. Conversely, White-owned NISEs owners indicated a greater usage (42 percent) of on-site fixed landline telecommunications compared to of African NISE-owners (four percent).

of telecommunications in the day-to-day running of a South African NISE. Although these findings could reflect a preference for cellular telephones among informal business owners, it could also indicate inadequate access to fixed landline telecommunications. Furthermore, the high cost of cellular telephone services may represent a significant source of expenditure for informal businesses, and therefore present an impediment to business operations.

6.5 How to improve profitability among the informal non-agricultural self-employed?

Government and non-government actors in South Africa have recognised the need to design and implement programmes to improve the productivity and profitability of informal sector enterprises. To identify information that could inform these efforts, questions were included in the SESE concerning the forms of assistance that business owners required. Figure 15 summarises the forms of assistance identified, disaggregated by gender. [66] By far the most common forms of assistance identified in the SESE 2005 were: assistance with marketing, better access to raw materials/supplies, provision of an alternative site and better access to credit markets.

The SESE 2005 also allows this study to discern which particular form of assistance NISE-owners considered most important. Figure 16 depicts those forms of assistance identified as 'most important' by gender. [67] The results of Figure 16 should be treated with caution as almost half of the SESE sample declined to answer the question. [68] The most common forms of assistance identified were those that were also considered 'most important' by respondents. These were assistance with marketing, better access to raw materials/supplies, provision with an alternative location, and better access to credit markets. Gender differences were identified in both Figures 15 and 16. A greater percentage of men than women mentioned better access to loans, easing of

[66] The data were drawn from Question 70 in the SESE which asked respondents: 'Does the business need assistance with any of the following?' Respondents were then given a series of options and asked to answer 'Yes' or 'No' to each.
[67] The data were drawn from Question 71 in the SESE which asked respondents: 'Which of the mentioned forms of assistance is the most important?' Respondents were then given a series of options and identify the most important form of assistance that their business required.
[68] This may be due to interview fatigue (as this was one of the last questions asked in the survey) or 'disillusionment' and 'distrust' with government overtures of assistance.

government regulations, access to modern technology and assistance with marketing as 'most important'.

Figure 15: Forms of assistance identified by the informal non-agricultural self-employed, 2005

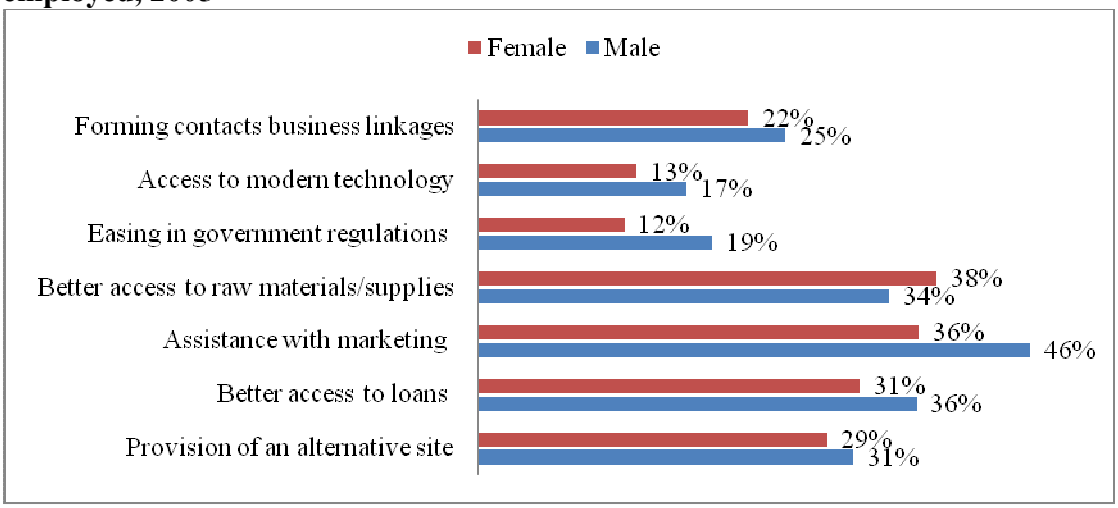
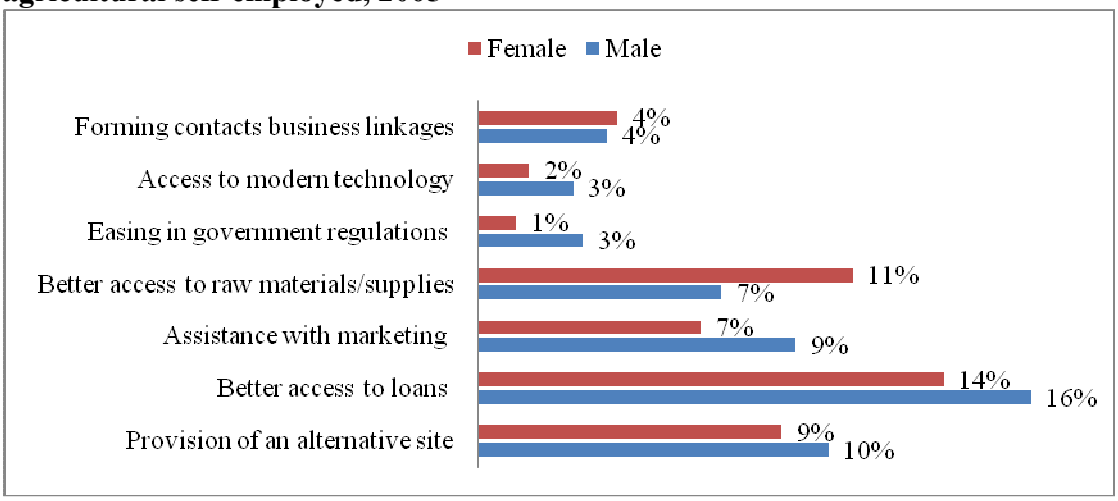


Figure 16: Forms of assistance identified as 'most important' by the informal non-agricultural self-employed, 2005



Source: SESE 2005
Notes: 1. Data are weighted. 2. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years.

In contrast, more women than men identified 'better access to raw materials/supplies' as 'most important'. These self-identified priority areas will be discussed in the subsection below. Perhaps unexpectedly, few racial differences were noted in the forms of assistance identified as 'most important' by NISE-owners. But it was evident that a larger share of White NISEs owners (13 percent) identified easing

government regulations as 'most important' compared to only four percent of their African counterparts. This could further indicate that White self-employed individuals in this sector owned businesses with more formal characteristics than the African self-employed or it could indicate that White NISE-owners have a more hostile opinion of state regulation.

6.5.1 Assistance with marketing

Caution is advised in interpreting, at face value, the response identified as 'assistance with marketing'. The identification of this priority area may be a reflection of the inability of many NISE-owners to access consumer markets for structural reasons. More men mentioned assistance with marketing as a required form of assistance than women. This may indicate that the male NISE-owners face greater challenges in gaining access to consumer markets. However, it may be more likely that the female self-employed are too burdened by affordability constraints to identify assistance with marketing as a required form of assistance. Although assistance with marketing was the most common problem mentioned overall, it was not considered the most important form of assistance required. Indeed, only seven percent of the women and nine percent of the men identified this form of assistance as 'most important'.

6.5.2 Better access to credit markets

According to Figure 15 and 16, there is a strong call for better access to credit markets. Indeed, better access to credit markets was the most common form of assistance identified in Figure 16. Approximately 14 percent of female and 16 percent of male NISE-owners indicated better access to loans as 'most important'. This is not surprising given that very few NISE-owners reported having obtained a loan or being in debt. Given these findings, this may suggest that the low level of credit usage reported is not solely due to ex-ante management strategies among the poor. These findings also signal a failure on the part of private and public institutions to provide NISE-owners with adequate access to loans and financial credit.

6.5.3 Access to raw/materials

The identification of the need for this form of assistance may indicate the poor access experienced by NISE-owners to key supply-related markets. This is further corroborated by the fact that of those who reported no activity in some months, 43 percent indicated that the main reason was a lack of funds to buy supplies and/or raw materials.[69] This indicates that factors such as liquidity constraints, a lack of market knowledge and inadequate bargaining power can cause temporary shutdowns that harm profits. [70] Transportation may also play a role, as 70 percent of those NISE-owners who indicated 'better access to raw materials/supplies' as an important form of assistance, reported using either 'foot' or public transportation to transport their supplies. Better access to raw materials and/or supplies was the most common form of assistance identified by female NISE-owners, and more women (11 percent) than men (seven percent) mentioned this form of assistance as 'most important'. It is perhaps unsurprising that the female self-employed would be more affected by liquidity and affordability constraints, given the low gross income reported by the female NISE-owners. However this could also reflect the presence of gender discrimination in input markets.

6.5.4 Provision of an alternative site

The identification of this form of assistance indicates the constraints faced by NISE-owners in their choice of business premises. Of those who indicated 'provision of an alternative site' as a required form of assistance, 35 percent were located in informal locations (such as footpaths or street corners), while 57 percent were home-based. This finding could suggest that the self-employed in these locations (especially the home-based) are dissatisfied with their current site of operations, which could be the

[69] Lack of funds to buy supplies was found to be the primary reason given for why the NISE-owners had no activity during some months in 2005. However, 'no customers' was also identified as a reason for business inactivity, with more than 21 percent pointing to a lack of customers to explain why they had no activity during some months. This may reflect limited access to consumer markets due to the costs of marketing and poor knowledge about consumer demands. This may also indicate that these NISE-owners are servicing oversaturated markets.

[70] Of the NISE-owners who identified a lack of funds to buy supplies and raw materials as their main reason for 'no activity' in 2005, 39 percent operated for less than six months during 2005, and 35 percent operated for only six months during the same period. This indicates the costly loss of operational time that can result from such constraints and inadequate market access.

result of inadequate access to markets, poor service delivery and inadequate infrastructure in those locations. More women than men in home-based NISEs (particularly those without their own space) indicated 'provision of an alternative site' as a requirement. This highlights the constraints faced by self-employed women when they operate from home and also that a significant number of women do not choose to work from home.

6.6. Conclusion

Gender differences between NISE-owners may be underestimated if more successful enterprises move into the formal sector, and if these are more likely to be male-owned businesses. However, it is evident from this chapter that there are distinct gender-based differences in the kinds of NISEs that operate in the South African labour market. Female-owned NISEs tend to be less profitable and have lower overheads than their male counterparts, which is consistent with the findings of the previous empirical chapters.

This chapter paid close attention to start-up funds used by NISE-owners, as researchers suggest that such funds play a critical role in future business performance and sustainability (see Parker 2004; Hughes 2005; Elam 2008; and Bosma & Levie 2010). Gender differences are particularly evident when start-up funding is investigated. Female NISE-owners started their businesses with considerably less capital than male NISE-owners. The findings of this chapter suggest that women in informal NASE have more limited access to economic resources than men and face greater economic constraints during the start-up phase.

This study has also placed special emphasis on home-based enterprises, as these businesses constitute a majority within NASE, particularly among the female non-agricultural self-employed. The findings of this chapter suggest that many home-based enterprises lack access to basic services such as piped-water, flush sanitation and electricity. This is a disturbing finding given that low infrastructure access can increase female domestic burdens and subsequently harm their economic activities (see Budlender 2002). Furthermore, most female home-based NISE-owners lacked a

separate space for business activities which can act as an impediment to enterprise productivity.

This chapter concluded with a discussion of possible contributions that government and non-government actors could make towards promoting the profitability of NISEs. Respondents in the SESE identified assistance with marketing, better access to raw materials/supplies, provision with an alternative location, and better access to credit markets as important forms of assistance that could improve business performance. Female NISE-owners in particular indicated that they needed assistance with gaining access to product markets. These findings will inform part of the recommendations I will make in the final chapter.

Chapter Seven: Conclusion

This dissertation has investigated self-employment in South Africa. The main research question of the study was: 'What accounts for gender-based earnings differences among the self-employed in South Africa?' In order to answer this question, three empirical chapters were presented. In Chapter Four, using the LFS data from the 2001-2007 period, I explored changes in the size and composition of the self-employed and their real earnings by gender. In Chapter Five, I identified the determinants of self-employment earnings and interrogated the gender gap. Using the LFS 2005, I described the average characteristics of the non-agricultural self-employed. The study then examined the extent to which this gap is attributable to differences in the characteristics of the self-employed, and how much derived from differences in the returns to these characteristics. This was achieved through an econometric analysis using data from the LFS 2005. Finding the LFS inadequate in describing important characteristics of the self-employed in the informal sector, in Chapter Six I subsequently turned to the SESE 2005 and used it as the basis construct in a gendered profile of the informal self-employed and their businesses.

7.1 The main findings

This study does not explicitly investigate the determinants of entry into self-employment however it does ask the question: 'Why is the self-employment rate so low despite high levels of unemployment?' The findings of this study indicate that self-employment does not act as a 'free entry zone' in South Africa. As a result, it seems likely that barriers to self-employment entry must exist. This finding is consistent with other South African literature on the subject (see Kingdon & Knight 2007). However, the study found gender parity in self-employment entry despite evidence of significantly higher female unemployment rates. This finding begs the question: 'If entry barriers into self-employment were the same for men and women, what accounts for this discrepancy?' The answer may be that entry barriers into self-employment are more severe for women than men.[71]

[71] The presence of low returns to NASE could be a factor in explaining low female self-employment rates, particularly if self-employment is riskier or generates less secure income than wage employment.

In Chapter Four, I disaggregated self-employment by sector and demonstrated that females are disproportionately over-represented in the informal sector and tended to be 'crowded' into service sector work, particularly the wholesale and retail trade industry. Although the feminisation of self-employment has continued during the 2001-2007 period, I found little evidence to suggest that this skewed composition was changing. Indeed the observed trends in self-employment seemed to have only cemented gender inequality within self-employment.

In Chapter Four, I also tracked changes in the size of the earnings gap between men and women in NASE. The focus of this analysis was an exploration of the observed gap in order to identify determinants. A partial explanation could be the gender difference in hours worked, with men working significantly longer hours than their female counterparts. This is consistent with the hypothesis advanced by Hundley (2001a, 2001b) who argues that women devote less time to their self-employment activities due to domestic burdens and, as a result, have lower earnings. The concentration of the female self-employed in the informal sector may also offer an explanation, as the informal non-agricultural self-employed earn substantially less than their formal sector counterparts. However, even after controlling for hours worked and the sector of employment, I still identified a clear gender gap in returns to NASE.

In Chapter Five, I examined characteristics of the non-agricultural self-employed using multivariate econometric techniques, and probed the determinants of NASE earnings among men and women. The estimated coefficients in these earnings regressions showed that being male is associated with higher returns, even after controlling for a series of demographic employment-related and human capital variables. Indeed, the findings of Chapter Five, suggest the presence of gender discrimination either in the form of consumer discrimination or 'statistical discrimination'. The estimates also reveal that working in the informal sector has a significantly negative impact on returns.

In order to provide clarity on this issue, this study notes the suggestion by Steenkamp (2008:98), and similarly suggests that an in-depth investigation of 'reservation wages' is required.

I also investigated different determinants of NASE earnings disaggregated by gender. While differing returns to human capital variables were not found to explain adequately the observed gender gap, key differences were noted when examining race, location and employment sector. Unlike other econometric studies in South Africa, this study also identified location of business premises as a key determinant of earnings and found that although home-based individuals earned less than those operating outside the home, if this finding is disaggregated by gender it is evident that being home-based had a greater penalty on NASE returns for women when compared to men.

While the investigation in Chapter Five offers a partial explanation for the observed gender gap, this investigation does not touch on access to finance and basic services for those in informal NASE. Research has shown that access to these services can serve as a significant determinant of business performance (see Parker 2004; Hughes 2005; Maas & Herrington 2006; Allen *et al.* 2008; and Elam 2008). These services also play a role in explaining entry barriers to informal self-employment. In order to provide clarity on this issue, access to financial and basic services for NASE owners is investigated in Chapter Six.

Despite a clear policy directive by government as well as pledges by civil society groups to assist the informal self-employed with business start-up (see Rogerson 2008:62-70), limited access to formal credit markets or government and/or NGO grants was reported. This seems to indicate that public and private credit institutions have failed to service NISE-owners adequately, which is consistent with the findings of more localised studies (see, for example, Chandra *et al.* 2001; Skinner 2005; Cichello *et al.* 2006; and Clarke *et al.* 2006). Most of the non-agricultural self-employed utilised stockpiles of financial capital accumulated from wage employment and credit from friends and/or relatives. Given the more unfavourable position of women in the labour market, female NISE-owners reported having more limited access to these sources of capital. Facing greater financial constraints to start-up, it is unsurprising that female NISE-owners reported lower expenditures, gross incomes and net profits. In addition to inferior access to financial services, female NISE-owners reported poor levels of service delivery as well as inadequacies in location and

access to transport. These findings suggest that financial constraints and unfavourable environments hinder the economic progress of female NISE-owners and probably obstruct the entry of women into informal NASE.

7.2 Concluding remarks

Due to the historical and social context of post-apartheid society, race is often emphasised over gender in research and policy initiatives on South Africa self-employment. This emphasis has tended to underplay the importance of gender and gender differences in this type of employment. This dissertation has given strong evidence of distinct gender differences in self-employment. I have shown that the female self-employed differ from their male counterparts in industry concentration, working hours, reported profits as well as a host of other characteristics.

Although certain departments and ministers within government have progressively acknowledged that there are distinct differences between men and women in self-employment, a more focused gender perspective is needed when designing interventions to promote self-employment and improve the profitability of the self-employed in South Africa. If such interventions are to assist the female self-employed then they must target informal sector enterprises. Using the SESE 2005, I reported on a number of interventions identified by the informal non-agricultural self-employed. The most common interventions identified were: assistance with marketing; better access to raw materials/supplies; provision with an alternative location; and better access to credit markets. This study will conclude by suggesting two possible areas where gender-focused interventions may be necessary.

It is clear from the findings of this study that the location of business premises is an important determinant of NASE earnings. The findings in Chapter Six indicated that a significant share of NISE-owners were dissatisfied with their current site of operations. This discontent is unsurprising given the poor level of service delivery reported by NISE-owners who operated from home or from informal business premises, and reinforces the importance of appropriately designed programmes to subsidise and provide incubator spaces or trading stalls to NISE-owners.

Financial constraints were identified as a major obstacle for women succeeding in informal NASE. Given the constraints faced by women in acquiring access to finance for informal NASE entry, and the low level capital used by women in the start-up phase, these findings highlight the limitations of existing SMME support programmes. Government has a stated policy directive to target and promote female entrepreneurs. In the light of the findings of this study, it would seem appropriate to honour this directive by re-evaluating existing support programmes.

Appendix A

This appendix contains a comparison between the LFS 2005 and the SESE 2005 by age group, province and main industry. Appendix A supports and furthers the discussion presented in Section 3.1.4 in Chapter Three. In the tables represented below it is important to remember that the data in SESE 2005 and the LFS 2005 are weighted using separately designed weighting schemes. These different weighting systems can lead to discrepancies when comparing the results.

Table A1: A comparison of the informal non-agricultural self-employed (1000s) from the LFS 2005:2 and the SESE 2005 by gender and age group

	LFS 2005		SESE 2005		Difference (LFS - SESE)	
	Male	Female	Male	Female	Male	Female
15-24	82	68	73	53	9	15
	(8.67)	(6.75)	(8.97)	(6.04)		
25-34	222	219	227	231	-5	-12
	(15.30)	(13.33)	(16.93)	(14.67)		
35-44	166	260	186	272	-20	-12
	(11.73)	(13.13)	(13.54)	(14.25)		
45-54	157	208	172	218	-15	-10
	(11.41)	(11.10)	(12.80)	(12.50)		
55-59	49	55	52	60	-3	-5
	(6.05)	(5.43)	(6.59)	(6.21)		
60+	38	46	39	44	-1	2
	(5.33)	(5.53)	(5.83)	(5.63)		

Source: SESE 2005; LFS 2005:2

Notes: 1. Standard errors are in parentheses. 2. Data are weighted using the weights provided by Statistics South Africa specifically designed for the SESE 2005 and the LFS 2005:2. 5. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years. 4. Informal/formal definition is based on VAT registration.

It is apparent from the tables in this appendix that although the samples in the SESE 2005 and the LFS 2005 are similar, some differences are also evident. For example, in Table A1 a comparison is made between the non-agricultural informal enterprise (NISE) owners from the LFS 2005 and the SESE 2005 by age group. The sample from the SESE 2005 includes fewer young (15-24) informal non-agricultural self-employed than the LFS 2005. Furthermore, the SESE 2005 shows significantly more NISE-owners in the 'middle' age group categories (35-44; and 45-54) than the LFS

2005. In Table A2 the SESE 2005 seems to indicate that a significantly higher number of male informal non-agricultural self-employed reside in Gauteng than the LFS 2005.

Table A2: A comparison of the informal non-agricultural self-employed (1000s) from the LFS 2005:2 and the SESE 2005 by gender and province

	LFS 2005		SESE 2005		Difference (LFS - SESE)	
	Male	Female	Male	Female	Male	Female
Western Cape	47	49	50	47	-3	2
	(8.11)	(8.02)	(9.21)	(8.59)		
Eastern Cape	75	147	66	141	9	6
	(7.97)	(9.73)	(7.75)	(9.96)		
Northern Cape	5	5	6	6	-1	-1
	(1.15)	(1.31)	(1.36)	(1.50)		
Free State	49	48	56	55	-7	-7
	(5.45)	(4.68)	(6.32)	(5.30)		
KwaZulu-Natal	129	170	127	166	2	4
	(10.11)	(9.26)	(10.92)	(9.49)		
North West	54	65	61	74	-7	-9
	(6.50)	(7.00)	(7.49)	(8.53)		
Gauteng	229	159	251	167	-22	-8
	(16.65)	(13.25)	(18.93)	(14.90)		
Mpumalanga	50	73	50	73	0	0
	(4.74)	(5.53)	(5.21)	(5.88)		
Limpopo	76	141	81	150	-5	-9
	(6.63)	(8.54)	(7.15)	(9.02)		

Source: SESE 2005; LFS 2005:2

Notes: 1. Standard errors are in parentheses. 2. Data are weighted using the weights provided by Statistics South Africa specifically designed for the SESE 2005 and the LFS 2005:2. 5. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years. 4. Informal/formal definition is based on VAT registration.

In comparing the LFS 2005 with the SESE 2005, it is evident that the most considerable difference noted between the two survey instruments is found when main industry is considered. Table A3 shows that the LFS 2005 reported over 260,000 more female informal non-agricultural self-employed in the wholesale and retail trade industry during 2005 than the SESE 2005. It may be that the self-employed in these industries are the most vulnerable, and therefore the most likely to have left self-employment in the period between the LFS and the SESE. The SESE 2005 finds significantly more women are located in community/service and private household industries as well as in traditionally male-dominated industries such as construction, transport and finance. The difference may also be partially explained by the fact that

190,000 female NISE-owners did not declare their main industry in SESE 2005. This may be due to interview fatigue or inadequate knowledge on the part of respondents and fieldworkers. It could be assumed, based on a comparison with LSF 2005, that these respondents are wholesale/retail trade workers who have failed to declare themselves as such. However, I recognise that a low response rate to this question may suggest issues with the reliability of the SESE 2005 dataset. These issues are acknowledged by Statistics South Africa (Buwembo, 2010).

Table A3: A comparison of the informal non-agricultural self-employed (1000s) from the LFS 2005:2 and the SESE 2005 by gender and main industry

	LFS 2005		SESE 2005		Difference (LFS - SESE)	
	Male	Female	Male	Female	Male	Female
Mining	1	N/A	1	13	0	-13
	(0.98)		(0.68)	(5.24)		
Manufacturing	78	113	73	95	5	18
	(8.87)	(9.12)	(9.13)	(8.37)		
Electricity	N/A	N/A	3	7	-3	-7
			(1.64)	(3.47)		
Construction	103	11	85	49	18	-38
	(9.54)	(2.54)	(9.92)	(7.68)		
Wholesale/retail trade	392	630	356	367	36	263
	(17.61)	(18.17)	(19.06)	(15.77)		
Transport	51	11	52	27	-1	-16
	(6.24)	(2.77)	(6.99)	(4.49)		
Finance	34	24	33	29	1	-5
	(7.15)	(5.05)	(7.15)	(5.86)		
Community/social services	53	66	60	87	-7	-21
	(7.24)	(7.19)	(7.86)	(8.10)		
Private households	N/A	1	10	15	-10	-14
		(0.77)	(3.71)	(3.33)		
N/A	N/A	N/A	74	190	-74	-190
			(7.67)	(11.43)		

Source: SESE 2005; LFS 2005:2

Notes: 1. Standard errors are in parentheses. 2. Data are weighted using the weights provided by Statistics South Africa specifically designed for the SESE 2005 and the LFS 2005:2. 5. Estimates are for all informal non-agricultural self-employed individuals aged between 15 and 65 years. 4. Informal/formal definition is based on VAT registration.

References:

Allen, I.E., Elam, N., Langowitz, N. and Dean, M. (2008) "*Global Entrepreneurship Monitor Report on Women and Entrepreneurship".* Global Entrepreneurship Research Association (GERA). available at: http://www.gemconsortium.org/files.aspx?Ca_ID=224 [Accessed 26/05/2010]

Anna, A., L., Chandler, G., N., Jansen, E., and Mero, N., P., (2000) *"Women Business Owners in Traditional and Non-traditional Industries"*. In: ***Journal of Business Venturing***. Vol. 15(3):279-303

Aronson, R., L. (1991) *"Self-Employment: A Labour Market Perspective"*. Ithaca, N.Y.: ILR Press.

Banerjee, A., Galiani, S., Levinsohn, J., McLaren, Z., and Woolard, I. (2008) *"Why Has Unemployment Risen in the New South Africa?"* In: ***The Economics of Transition.*** Vol. 16 (4): 715-740.

Becker, G.S. (1971) *"The Economics of Discrimination"* 2nd edition. Chicago: University of Chicago Press.

Becker, G.S. (1985) *"Human capital, effort and the sexual division of labour".* In: ***Journal of Labour Economics***. Vol. 3 (1): 33-58.

Beller, A. (1984) *"Sex segregation in the workplace"*. Washington, D.C.: National Academy Press.

Bhorat, H., and Leibbrandt, M., (2001a) *"Correlates of vulnerability in the South African labour market"*. In H., Bhorat, Leibbrandt, M., Maziya, M., van der Berg, S., and Woolard, I., (eds.) *Fighting Poverty: Labour markets and inequality in South Africa*. Cape Town. UCT Press, pp 74-106.

Bhorat, H., and Leibbrandt, M. (2001b) *"Modelling vulnerability and low earnings in the South African labour market"*. In H., Bhorat, Leibbrandt, M., Maziya, M., van der Berg, S., and Woolard, I., (eds.) *Fighting Poverty: Labour markets and inequality in South Africa*. Cape Town. UCT Press, pp 107-129

Blanchflower, D.G. (2000) *"Self-employment in OECD countries".* In: ***Labour Economics.*** Vol. 7: 471-505.

Boden, R., J. Jr., (1999) *"Flexible Working Hours, Family Responsibilities, and Female Self-Employment. Gender Differences in Self-Employment Selection"*. In: ***American Journal of Economics and Sociology.*** Vol. 58: 71-83.

Borjas, G.J. and Bronars, S.G. (1989) "*Consumer discrimination and self-employment"*. In: ***Journal of Political Economy***. Vol. 97 (3): 581-605.

Bosma, N., and Levie, J. (2010) *"Global Entrepreneurship Monitor 2009 Report"*. In: Global Entrepreneurship Research Association (GERA), available at: http://www.gemconsortium.org/about.aspx?page=pub_gem_global_reports [Accessed 26/05/2010]

Bradley, D., E., (2004) *"A Second Look at Self-Employment and the Earnings of Immigrants"*. In: ***International Migration Review***. Vol. 38 (2): 547-583

von Broembsen, M. (2007) "*The Legal Empowerment of the Poor: Informal Business". Report for the Commission for the Legal Empowerment of the Poor*. Available at: http://www.undp.org/legalempowerment/reports/National%20Consultation%20Reports/Country%20Files/22_South%20Africa/22_3_Informal_Business_Rights.pdf [Accessed 26/05/2010]

Budig, M., J. (2006) "*Gender, Self-Employment, and Earnings: The Interlocking Structures of Family and Professional Status"*. In: ***Gender and Society***. Vol. 20 (6): 725-753

Budlender, D. (2000) *"Gender, Development and Infrastructure"*. In: Khosa, M, M., (2000) *Infrastructure mandates for change, 1994-1999*, Cape Town: HSRC Press. pp 49-63

Budlender, D. (2002) "*Women and men in South Africa: Five years on"*. Pretoria: Statistics South Africa,

Budlender, D, Buwembo, P and Shabalala, N (2001) "*The Informal Economy: Statistical Data and Research Findings; Country Case Study: South Africa"*. Document prepared for Women in Informal Employment Globalizing and Organizing (WIEGO).

Burger, R. and Yu, D. (2006) *"Wage trends in post-apartheid South Africa: Constructing an earnings series from household survey data"*. Working Papers 10/2006, Stellenbosch University, Department of Economics.

Buwembo, P. (2010) Personal Communication, Senior Statistician Household Surveys, Pretoria: Statistics South Africa, 21 June.

Carr, D. (1996) "*Two Paths to Self-Employment? Women's and Men's Self-employment in the United States, 1980"*. In: ***Work and Occupations***. Vol. 23: 26-53

Casale, D. (2004) *"What has the feminisation of the labour market 'bought' women in South Africa? Trends in labour force participation, employment and earnings, 1995-2001"*. In: ***The Journal of Interdisciplinary Economics***. Vol. 15: 251-275.

Casale, D. and Posel, D. (2002) *"The continued feminisation of the labour force in South Africa: An analysis of recent data and trends"*. In: ***South African Journal of Economics***. Vol. 70 (1): 156-184.

Casale, D. & Posel, D. (2010) *"The male marital earnings premium in the context of bridewealth payments: Evidence from South Africa"*. In: ***Economic Development and Cultural Change***. Vol. 58 (2): 211-230.

Casale, D., Muller, C. and Posel, D. (2004) *"'Two million net new jobs': A reconsideration of the rise in employment in South Africa, 1995 – 2003"*. In: ***South African Journal of Economics***. Vol. 72 (5): 978 - 1002.

Chandra, V., Moorty, L., Nganou, J.P., Rajaratnam, B, and Schaefer, K. (2001) "*Constraints to growth and employment in South Africa: Evidence from the SMME firm survey"*. Informal Discussion Paper No. 15, Report No. 2. Washington DC: World Bank.

Chen, M., Vanek, J., and Carr, M. (2004) "*Mainstreaming Informal Employment and Gender in Poverty Reduction: A Handbook for Policy Makers and Other Stakeholders"*. Commonwealth Secretariat: London.

Cichello, P. (2005) *Hindrances to self-employment: Evidence from the 2000 Khayelitsha Mitchell's Plain Survey*. CSSR Working Paper, No. 131.

Cichello, P., Almeleh, C., Mncube, L. and Oosthuizen, M. (2006) *"Perceived barriers to entry into self-employment in Khayelitsha, South Africa: crime, risk, and start-up capital dominate profit concerns"*. Paper presented at the DPRU/TIPS Conference, Johannesburg, South Africa, 18-20th October.

Clain, S.H. (2000) *"Gender differences in full-time self-employment"*. In: ***Journal of Economics and Business***. Vol. 52 (6): 499-513.

Clarke, G., Kaplan, D., and Ramachandran, V. (2006) *"The investment climate for micro-enterprises in South Africa"*. Paper presented at the TIPS Conference on Accelerated and Shared Growth in South Africa: Determinants, Constraints and Opportunities, Johannesburg, 18-20 October

Cross, C. and Preston-Whyte, E. (1983) *"The Informal Sector: Desperation versus maximisation strategies"*. In: ***Indicator South Africa***. Vol.1 (2): 9-12.

Das, B.D. (2003) *"The other side of self-employment: Household enterprises In India"*. Social Protection Discussion Paper Series 0318, Social Protection Unit, Human Development Network, The World Bank.

Deininger, J., Jin, S. and Nagarajan, H.K. (2006) *"Gender discrimination and returns to self-employment: Evidence from rural India"*. National Council for Applied Economic Research. New Delhi, India.

Department of Economic Development (DED) (2010) Economic Development Medium Term Strategic Plan 2010/11 – 2012/13, available at: http://www.info.gov.za/view/DownloadFileAction?id=118188 [Accessed 26/05/2010]

Department of Trade and Industry (DTI) (2007) National Industrial Policy Framework, available at: http://www.thedti.gov.za/nipf/NIPF_r2.pdf [Accessed 26/05/2010]

Department of Trade and Industry (DTI) (2010) Medium-Term Strategic Framework 2010 – 2013, available at: http://www.info.gov.za/view/DownloadFileAction?id=120326 [Accessed 26/05/2010]

Devey, R., Valodia, I. And Skinner, C. (2006) *"Second Best? Trends and Linkages in the Informal Economy of South Africa"*. Working Paper 06/102. Development Policy Research Unit, University of Cape Town: Cape Town.

Elam, A., B. (2008) *"Gender and entrepreneurship: a multilevel theory and analysis"*. Cheltenham, UK: Edward Elgar Publishing.

Essop, H. and Yu, D. (2008) *"The South African informal sector (1997 – 2006)"*. Stellenbosch Economic Working Papers: 03/08. Stellenbosch: Stellenbosch University.

Georgellis, Y., and Wall, H., J. (2005) *"Gender Differences in Self-Employment: Panel evidence from the former West Germany"*. In: ***International Review of Applied Economics.*** Vol. 19: 321-342.

Hamilton, B.H. (2000) *"Does entrepreneurship pay? An empirical analysis of the returns to self-employment"*. In: ***The Journal of Political Economy***. Vol. 108(3): 604-631.

Heintz, J., and Posel, D. (2008) *"Revisiting Informal Employment and Segmentation in the South African Labour Market"*. In: ***South African Journal of Economics***. Vol. 76 (1): 26-44

Herrington, M., Kew, J., and Kew, P. (2009) *"Global Entrepreneurship Monitor: South African Report, Tracking Entrepreneurship in South Africa: A GEM Perspective"*. Global Entrepreneurship Research Association (GERA). Available at: http://www.gemconsortium.org/files.aspx?Ca_ID=126, [Accessed 26/05/2010]

Hinks, T. (2002) *"Gender Wage Differentials and Discrimination in the New South Africa"*. In: ***Applied Economics, Taylor and Francis Journals***. Vol. 34 (16): 2043-2052.

Hiralal, K. (2010) *"The 'Invisible' Workers of the Informal Economy – A Case study of Home-based Workers in KwaZulu-Natal, South Africa"*. In: ***Journal of Social Science***. Vol. 23(1): 29-37.

Hoogeveen, J & Özler, B. (2006) *"Not Separate, Not Equal: Poverty And Inequality In Post-Apartheid South Africa"*. In: H. Bhorat and R. Kanbur (2006) *Poverty and Policy in Post-Apartheid South Africa*. Pretoria: HSRC Press.

Hughes, K., D. (2005) *"Female enterprise in the new economy"*. Toronto, Canada: University of Toronto Press.

Hundley, G. (2001a) *"Why Women Earn Less than Men in Self-Employment?"* In: ***Journal of Labour Research***. Vol. 22: 817-829.

Hundley, G. (2001b) *"Male/female earnings differences in self-employment: The effects of marriage, children, and the household division of labour"*. In: ***Industrial and Labour Relations Review***. Vol. 54 (1): 95-114.

Iversen, J., Jørgensen, R., and Malchow-Møller, N. (2007) *"Defining and Measuring Entrepreneurship"*. Boston: Now Publishing.

Kantor, R. (2002) *"Gender, microenterprise success and cultural context: The case of South Asia"*. In: ***Entrepreneurship Theory, and Practice***. Vol. 26 (4): 131-143.

Kingdon, G. and Knight, J. (2007) *"Unemployment in South Africa, 1995-2003: Causes, problems and policies"*. In: ***Journal of African Economies***. Vol. 16 (5): 813-848.

van Klaveren, M., Tijdens, K., Hughie-Williams, M., and Martin, N. R. (2009) *"An Overview of Women's Work and Employment in South Africa: Decisions for Life MDG3 Project Country report No. 3"*. Amsterdam Institute for Advanced Labour Studies (AIAS), University of Amsterdam: Amsterdam.

Le, A. T. (1999a) *"Empirical Studies of Self-Employment"* In: ***Journal of Economic Surveys***. Vol. 13 (4): 381-416.

Le, A. T. (1999b) *"Self-employment and earnings among immigrants in Australia"*. In: ***International Migration***. Vol. 37 (2): 383-412.

Leung, D. (2006) *"The male/female earnings gap and female self-employment"*. In: ***Journal of Socio-Economics***. Vol. 35: 759-779.

Loscocco, K. A., Robinson, J., Hall, R. H., and Allen, J., K. (1991) *"Gender and Small Business Success: An Inquiry into Women's Relative Disadvantage"*. In: ***Social Forces***. Vol. 70 (1): 65-68.

Maas, G. and Herrington, M. (2006) *"Global Entrepreneurship Monitor: South African Report 2006"*. Global Entrepreneurship Research Association (GERA). Available at: http://www.gemconsortium.org/files.aspx?Ca_ID=126, [Accessed 26/05/2010]

Mandelman, F., S., and Montes-Rojas, G., V., (2009) *"Is Self-employment and Micro-entrepreneurship a Desired Outcome?"* In: ***World Development***. Vol. 37 (12): 1914–1925.

Mincer, J. (1974) *"Schooling, Experience and Earnings"*. New York: National Bureau of Economic Research.

Muller, C. and Posel, D. (2004) *"Concerns with measuring informal sector employment: An analysis of national household surveys in South Africa, 1993-2001"*. In: ***Journal of Studies in Economics and Econometrics***. Vol. 28 (1): 1-20.

Naidoo, S., Hilton, A. and Melzer, I. (2006) *"Access to finance for women entrepreneurs in South Africa: challenges and opportunities"*. In: Rogerson, C. (2008) *"Tracking SMME Development in South Africa: Issues of Finance, Training and the Regulatory Environment.* In: ***Urban Forum***. Vol. 19: 61–81.

Napier M, and Liebermann, S. (2006) *"Resource Report 4: Literature Review on Home-based Entrepreneurs"*. Pretoria: Shisaka Development Management Services (Pty) Ltd. in association with CSIR Built Environment, 1-79.

National Planning Commission (NPC) (2009) *"Together Doing More and Better Medium Term Strategic Framework: A framework to guide government's programme in the electoral mandate period (2009-2014)"*. Available at: http://www.thepresidency.gov.za/docs/pcsa/planning/mtsf_july09.pdf [Accessed 26/05/2010]

Ntuli. M. (2007) *"Exploring Gender Wage "Discrimination" in South Africa, 1995-2004: A Quantile Regression Approach"*. IPC Working Paper Series Number 56. Ann Arbor: University of Michigan.

Oaxaca, R. (1973) *"Male-Female Wage Differentials in Urban Labour Markets"* In: ***International Economic Review***. Vol. 14 (3): 693-709.

Parker, S. C. (2004) *"The Economics of Self-Employment and Entrepreneurship"*. Cambridge, UK: Cambridge University Press.

Pietrobelli, C., Rabellotti, R. and Aquilina, M. (2004) *"An Empirical Study of the Determinants of Self-Employment in Developing Countries"*. In: ***Journal of International Development***. Vol. 16: 803-820.

Portes, A. and Zhou, M. (1996) *"Self-employment and the Earnings of Immigrants*". In: ***American Sociological Review***. Vol. 61 (2): 219 - 230.

Posel, D. and Casale, D. (2005) *"Who replies in brackets and what are the implications for earnings estimates? An analysis of earnings data from South Africa"*. Paper presented at the Economic Society of South Africa (ESSA) Conference, September 2005.

Posel, D., and Muller, C. (2008) *"Is There Evidence of a Wage Penalty to Female Part-Time Employment in South Africa?"* In: ***The South African Journal of Economics***. Vol. 76 (3): 466 – 479.

Rogerson, C. (2008) *"Tracking SMME Development in South Africa: Issues of Finance, Training and the Regulatory Environment"*. In: ***Urban Forum***. Vol. 19: 61–81.

Rospabé, S. (2001) *"An Empirical Evaluation of Gender Discrimination in Employment, Occupation Attainment and Wages in South Africa in the late 1990s"*. Paper presented at the DPRU's first Conference on Labour Markets and Poverty in South Africa, Johannesburg.

Skinner, C. (2005) *"Constraints to Growth and Employment in Durban: Evidence from the Informal Economy"*. SoDS Research Report 65: University of KwaZulu-Natal.

South African Women Entrepreneurs' Network (SAWEN) (2005) *"SAWEN - South African Women Entrepreneurs: A burgeoning force in our economy – A special Report 2005"*. Available at: http://www.dti.gov.za/sawen/SAWENreport2.pdf [Accessed 26/05/2010]

Statistics South Africa (Stats SA) (2005*) "Survey of Employers and the Self-employed, September 2005"*. Pretoria: Statistics South Africa

Statistics South Africa (Stats SA) (2009) *"Labour Force Survey, Historical Revision, September Series - September 2001 to September 2007"*. Pretoria. Statistics South Africa

Steenkamp, F. K. (2008) *"The returns to self-employment in South Africa: An analysis of household survey data"*. Unpublished Masters Dissertation, University of KwaZulu-Natal, Durban.

Still, L. V. (2006) *"The constraints facing women entering small business ownership"*. In: Fielden, S. L. and Davidson, M. (eds.) (2006) "*International Handbook of Women and Small Business Entrepreneurship"*. Fourth Edition. Cheltenham, UK: Edward Elgar Publishing.

Veitch, N. (2007) *"Racial Differences in Returns to Education in Post Apartheid South Africa: Employees versus Self-Employed"*. Paper prepared for the CSAE Conference 2007, 19th-20th March. UK: Oxford.

Verheul, I. and Thurik, R. (2001) "*Start-Up Capital: 'Does Gender Matter?"*". In: ***Small Business Economics***. Vol. 16: 329 - 345.