GENDER, EARNINGS AND EMPLOYMENT IN POST-APARTHEID SOUTH AFRICA

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By

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DECLARATION

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. I confirm that an external editor was not used. It is being submitted for the degree of Master of Development Studies in the School of Built Environment and Development Studies, 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.

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Date

Table of Contents

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Abstract

This study looks at gender earnings differentials in post-apartheid South Africa. The main aim of this study is to illuminate the broad employment patterns of both men and women in South Africa's labour market. This study then extends the analysis to consider the gender earnings differentials within formal wage work and self-employment as well as in informal wage work and self-employment using the National Income Dynamic Study (NIDS). NIDS is a nationally representative survey with 28 255 individuals and 7 305 households.

This study found that a higher percentage of women than men are found within informal types of work. Women were found to be over-represented in low paying occupations such as in elementary work, in clerical jobs and in private households where they are likely to be employed in domestic work. This study then estimated the mean earnings for both men and women within these different sectors of work and it found that women on average earn less than men even after adjusting for hours of work. A greater gender wage differential was found to exist in informal types of work than in wage employment. In trying to explain this differential, there are a number of factors that may be used and one of such factors could be different human capital endowments between men and women. This study also found that the gender wage differentials can also be explained by where women work as well as the number of working hours women spend at work in comparison to men. However this study only managed to explain part of the gender wage differential. Due to self-selection and unobservable differences, part of the gender wage gap remains unexplained as the characteristics that cause women and men to select certain types of employment is beyond the scope of this study.

LIST OF TABLES

List of figures

CHAPTER ONE: INTRODUCTION

1.1 Introduction

The international literature has identified the existence of a gender wage gap in many countries and South Africa is no exception. A number of studies in South Africa have provided evidence for the existence of a gender wage gap in the labour market. This study seeks to contribute to the growing body of literature on gender earnings differentials in South Africa. To get an understanding of these gender earnings differentials it is important to understand where women work in South Africa. This dissertation identifies the broad employment patterns of men and women in different sectors of work and occupations. The dissertation will then explore the earnings differentials for all employed individuals in these occupational categories. The last part of the dissertation presents the results of a regression analysis which attempts to explain some of the factors associated with a gender earnings differential in South Africa. The study of gender earnings differential apart from being an interesting subject of enquiry is important in influencing policy to address issues causing unequal wages and participation in the labour force. This chapter will give a brief background and motivation of this study before introducing the broad research objectives and questions. It will close by outlining the structure of this dissertation.

1.2 Motivation and background of the study

A large body of scholarship has identified a feminisation of the labour force in many countries throughout the post-second world war era (Horton 1999; Ozler 2000; Standing 1999). South Africa in the second half of the 20th century has also experienced an increase in female labour force participation yet women in South Africa on average continue to earn less than their male counterparts (Casale 2004; Lee 2005; Standing et al. 1996). In the international literature, some of the reasons identified for the existence of wage differences in the labour market are attributed to different human capital endowments, culture, tradition and overt discrimination which combine to form unfavourable occupational distribution and unequal earnings between male and female workers within the same occupation (Oaxaca

1973). Muller (2008:4) distinguishes between two types of discrimination[1]; when women are segregated into occupations that pay lower wages (occupational discrimination) and when women get paid less wages than men within a given job at equal levels of productivity (wage discrimination).

Despite the rise in female labour force participation, the literature on earnings differentials in South Africa has been more concerned with racial differences and this has, to some extent, overshadowed the gender aspect in wage differentiation such that gender differences in earnings have not been given the same prominence as in other countries (Bhorat and Goga 2012; Gruen 2004; Hinks 2002; Muller 2008; Ntuli 2007 and Rospabe 2001).

In the post-apartheid period, South Africa has passed a comprehensive set of labour and equity legislation which, on paper, protects women in the workforce. There are a number of protective labour laws that have been passed in South Africa to address racial and gender inequalities in job access and pay. Such legislation includes the Labour Relations Act of 1995, the Basic Conditions of Employment Act of 1997 and the Employment Equity Act of 1998. This might suggest that women in lower income, less formal and less protected work might experience a greater earnings disadvantage relative to men compared with women in higher earnings groups. However, statistical discrimination might mean that, despite progressive labour legislation, women in the formal sector and in higher earning jobs may continue to face wage based discrimination. Statistical discrimination "occurs when distinctions between demographic groups are made on the basis of real or imagined statistical distinctions between the groups" (Dickinson and Oaxaca 2005:1).

In South Africa there is existing evidence of both a gender wage gap, (Bhorat and Goga 2012; Casale 2004, Muller 2008 and Ncube and Tregenna 2013) and limited access to formal employment for women (Casale 2004; Heintz and Posel 2008 and Winter 1999). Casale (2004) found that despite the increase in women's labour market participation in South Africa, this increase has mostly been experienced in informal and low paying employment. This increased participation of women within informal employment in South Africa can be

[1] Discrimination against women in the labour market is said to exist whenever the relative wage of males exceeds the relative wage that would have prevailed if males and females were paid according to the same criteria (Oaxaca 1973).

partly explained by the 'low labour absorption capacity of the formal economy in the face of large increases in labour supply' (Casale 2004,5).

A number of reasons have been given to try and explain the gender earnings differentials in South Africa's labour market. Makgetla (2004) in explaining this gender pay gap found that women are dominantly primary caregivers to children such that they have to split their time between paid labour market work and unpaid household work which tends to drive down their average earnings when compared to men. Part of the gender earnings gap may also be explained by where women work. Ncube and Tregenna (2013) found that more women are likely to be employed in clerical and technical occupations which are low paying occupations.

Muller (2008) argues that gender differences in skills and qualifications can also be used to explain the gender earnings gap in South Africa's labour market. Mincer and Polachek (1974) argue that if women due to household commitments anticipate shorter and discontinuous working lives they may invest less formal education and on-the-job training resulting in lower human capital investment which in turn reduces their earning capability when compared to men. Thus part of the gender wage gap in South Africa's labour market can be explained by different human capital endowments which result in women earning less than men. This study will look at the employment patterns for both men and women to try and understand the gender earnings differential.

This dissertation seeks to explore where in South Africa's labour market the largest gender wage gap exists. Recent literature on gender earnings in South Africa argues for the existence of a larger gender wage gap at the lower parts of the wage distribution (Ncube and Tregenna 2013; Ntuli 2007). This study will look at the gender wage gap in formal wage work and self-employment as well as in informal wage work and self-employment.

1.3 Objectives and key research questions

This study seeks to contribute to the small but growing literature on the gender wage differential in South Africa using a relatively new source of household survey data, the National Income Dynamics Study (NIDS) of 2008. This study is a contribution to empirical

analysis of NIDS data and it also seeks to give a theoretical analysis of wage differentials in different sectors of work. The proposed study will extend the existing work by looking at the gender earnings gap among both formal and informal workers. The study will further extend this knowledge by also focusing on gender earnings differentials among the self-employed and wage workers in both formal and informal work.

This research seeks to address the following broad objectives;

i. To identify the broad employment patterns for men and women in South Africa.

ii. To explore gender differences in earnings for both formal/informal work and wage earning/self-employed work.

This will be achieved by investigating the following questions:

i. In which types of work are women more likely to be concentrated? Are earnings differences between men and women wider or narrower at different skills and occupational levels? What factors might explain this?

ii. Are gender earnings differences greater among formal or informal workers? Among the self-employed or regular wage workers?

iii. Are earnings differences still significant after controlling for factors such as level of education, sector of employment, hours of work, occupation, marital status, race and location?

1.4 Limitations of the study

One of the main limitations in the study of gender earnings differentials is that of self-selection and it may affect the interpretation of the entire study. Self-selection occurs when women or men choose to work in certain occupations or sectors of work that suit their lifestyles (Bhorat and Goga 2012). As a result this may underestimate degree of discrimination when estimating earnings differentials. This is one of the limitations faced in this study and will be discussed in more detail in Chapter Three. Another limitation in this study is the imprecise definition of casual work[2] that is used in NIDS which leaves it vague.

[2] When compared to other surveys in South Africa NIDS is the only survey that has a separate undefined category of casual work. As a result, it is not clear how including casual workers would affect my findings

As a result this study will look at other sectors of work besides casual work. A detailed discussion of the limitations faced in this study will be presented in Chapter Three.

1.5 Structure of dissertation

Chapter 2 presents a review of relevant literature to this study and a discussion of the major theoretical frameworks related to the study. The theoretical frameworks discussed in this chapter seek to explain gender differences in earnings and wage differentials and contextualise the possible drivers of gender earnings differentials in post-apartheid South Africa. This chapter will also give a detailed literature review on gender earnings and employment starting with the international literature and narrowing down to the South African context.

Chapter 3 provides a description of the data source that will be used in this dissertation as well as the methods that will be used to investigate gender and earnings differentials in South Africa's labour market.

Chapter 4 presents the results of the descriptive data analysis. The analysis seeks to identify the broad employment patterns of men and women in South Africa's labour market using descriptive statistics. The data analysis in this chapter will also explain whether the gender pay gap is higher in formal or informal work and whether earnings are higher for self-employed individuals or for regular wage workers. Descriptive statistics will also be used to explore gender earnings differences by occupational sector, type of employment and position in the earnings distribution. The main objective of this chapter is to show where women work, and how much they earn in comparison to men. This chapter will also show the representation of women in the different occupational categories identified in this study.

Chapter 5 will present the results from the regression analysis which controls for a number of factors that may be used to explain these earnings differentials between men and women. The main objective of these regressions is to try and capture the unexplained part of the gender wage gap that remains after controlling for a number of variables. This chapter will also have a discussion of these results especially on how they support the findings made in Chapter 4.

Chapter 6 is a conclusion of this study and will also discuss the recommendations that will seek to address the problems identified in this study.

CHAPTER TWO: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to give a detailed theoretical framework and literature review on gender, earnings and employment. This chapter will start with a discussion of some of the broader theoretical frameworks that have been used to explain gender earnings differentials. This theoretical review seeks to contextualise the possible drivers of gender earnings differentials in post-apartheid South Africa.

2.2 Theoretical framework

There are a number of theoretical frameworks that have been used in trying to explain gender differentials in employment and earnings. This chapter will not discuss all theories that have been developed to date relating to gender earnings differentials but, will focus on a few which will help in the understanding of the debate on the gender earnings differentials. The human capital theory, the labour market segmentation theory and the dual labour market theory will be discussed as some of the major theories that have been used in trying to explain the gender differentials in employment and earnings in the labour market**.**

2.2.1 Human Capital Theory

The human capital theory is viewed as one of the most important theoretical frameworks in understanding gender wage differentials (Dickens and Lang 1992,1). This theory argues that education or training raises the productivity of workers by imparting useful knowledge and skills, resulting in a rise in the future incomes of employees (Xiao 2001). Human capital is defined as 'all the acquired characteristics of workers that make them productive' (Filer, Hamermesh and Ress 1996,16). The human capital theory differentiates individuals by their schooling as well as training investment, which can be used to explain the differences in productivities between different age cohorts (Mlatsheni and Rospabe 2002). In his explanation of the same theory, Polachek (2003) states that the human capital theory links an individual's incentive to invest in training to the time they expect to work in their lifetime which in turn determines earnings potential. The human capital theory in short argues that

the more years one works and the more knowledge they acquire about a skill, the greater the opportunity to reap the benefits of higher earnings. Mincer and Polacheck (1974) using the human capital theory state that gender wage gaps exist as a result of endowments differences in individual characteristics. In their argument Mincer and Polachek (1974) state that women invest less in their own human capital because they anticipate career breaks which they will take throughout their working life. The human capital theory can be used to explain the gender gap in earnings in South Africa by predicting that men have more employment experience than women (Muller 2008). As a result we expect women to earn less than men on average since they are likely to have less working experience than men.

2.2.2 Dual labour market theory

The dual labour market theory identifies primary and secondary jobs with men tending to hold primary 'good jobs' with the greatest stability and promotion potential and women tending to hold secondary or 'poorer jobs' associated with lower stability and lower wages (Kelly 1991). This theory originated in the United States and emerged during the late 1960's and early 1970's as a result of increasing poverty and unemployment amongst minority groups (Doeringer and Piore 1971; Piore 1969). Its emergence postulated the existence of two separate labour markets which were defined by a set of general features; a primary sector that was made up of the privileged members of society and the secondary sector that consisted of jobs that did not require much skill specificity (Uys and Blaaw 2006). The former sector was characterised by relatively high wages, good working conditions, job security, union protection as well as good promotion prospects compared to the latter where there was little union protection, unfavourable job conditions and relatively low wages (Uys and Blaaw 2006).

The existence of this dual market has led to the classification of these two sectors as the core and periphery where firms in the core offer better wages and job security consistent with the conditions in the primary sector and the secondary sector offering less favourable conditions (Uys and Blaaw 2006). The core periphery argument in South Africa is also supported by Bhorat (2001) whose arguments distinguish three distinct groups. The core consumer industry consists of 'high wage modern industries' whilst the marginal modern sector consists of low wage sectors in commercial agriculture as well as domestic services and the last sector is made up of the peripheral labour force which is the most vulnerable sector (Bhorat et al. 2001).

In South Africa there is evidence of the existence of a dual sector (Bhorat et al 2001; Braude 2005; Smit 1996; Uys and Blaaw 2006, Van der Berg 1992. Van der Berg (1992) identified a dual economy in South Africa characterised by a high-wage modern sector as well as low productivity sectors characterised by unfavourable working conditions. Smit (1996) also found two distinct sectors in South Africa's manufacturing industries; one characterised by high wages and capital intensive production and the other associated with low wages and labour intensive production. Uys and Blaaw (2006) conclude that the South African labour force is fragmented and shows a clear presence of the characteristics consistent with the sectors identified in the dual labour market theory. Within this dual economy, women are more likely to be concentrated within the low-productivity sectors where the wages are relatively lower than in the high wage modern sector where men are likely to be more concentrated. As a result of these labour market characteristics consistent with a dual labour market the expectation is that women earn less than men since they more likely to work in the low productivity sector characterised with low wages and unfavourable working conditions than men.

2.2.3 Labour market segmentation theory

The labour market segmentation theory is yet another major theory that has been applied in work which explores gender wage differentials. It was developed in the 1970's by a number of authors as an alternative to the human capital theory (Dickens and Lang 1992.) It was however, viewed by some scholars as an alternative theory to the human capital theory but in the early 1990's it was given equal standing with the human capital theory (Dickens and Lang 1992,2). The main argument in this theory is that the labour market is segmented and as a result of this it consists of sub-groups which may result in men and women receiving different wages for the same type of occupations (Dickens and Lang 1992).

There are two crucial elements of the labour market segmentation theory; the first defines the labour market as being made up of a number of segments with different rules for wage determination and employment policies; the second is concerned with limited access to jobs as people seek for core jobs that are not currently available (Dickens and Lang 1992). One central aspect of the labour market segmentation theory is that early scholars identified limited mobility as a crucial aspect of the theory arguing that there is a hierarchy of sectors with access to the highest paying as the most difficult (Dickens and Lang 1992).

There is an acknowledgement however, that questions the distinct segments discussed in the labour market segmentation theory which are difficult to define (Dickens and Lang 1992). This was evidenced by a period in the 1960's during the economic expansion in the United States when blacks were more likely to move into high wage jobs than whites as evidence against reduced mobility (Schiller 1977*).* Smith (1989) revives this argument by showing that earnings increase more rapidly with experience among blacks than among whites. Leigh (1976) finds substantial and comparable earnings growth for blacks and whites and suggests that this refutes the dual market hypothesis. On the other hand, Rosenberg (1976) and Carnoy and Rumberger (1980) found that minority workers are more likely to begin their career in the secondary sector and, having started there, are less likely to leave than are whites. These authors argue that this differential mobility supports the dual market theory. Thus authors on both sides confounded lack of mobility with barriers to entry. However, in the extreme, no mobility between sectors could be consistent with complete barriers to entry or no barriers at all. Despite the work which has critiqued this theory as failing to differentiate between labour market segmentation and standard human capital theory, Dickens and Lang (1992) argue that this theory remains a good alternative to the human capital theory and deserves an equivalent position in the economist's toolbox.

The dual labour market theory and the labour market segmentation theory are not conflicting theories. They both view the labour market as consisting of sectors that result in different groups of people receiving different wages. However, whereas the dual labour market theory focuses on only two sectors (primary and secondary sectors), the labour market segmentation theory provides a broader classification with several distinct labour markets. Both theories provide a context that explains the possible drivers of gender earnings differentials. They are conclusive that the labour market is segmented such that women become more likely to be employed in the peripheral sectors and as a result earn relatively less compared to men who are more likely to work in the primary sectors where earnings are higher.

2.3 International literature on gender, earnings and employment

International literature has shown that there is a gender wage gap in many countries but that it has narrowed over time (Blau and Kahn 2007; Brainerd 2000; Manning and Robinson 2004). It is also consistently and widely observed in the international literature that women earn less than men (Blau and Kahn 1992, 1997, 2000, 2007; Bernhardt et al 1995, Brainerd 2000;

Hersh 1991; Manning and Robinson 2004; Muller 2008; Polachek and Xiang 2009). A wide and growing literature has paid a lot of attention in explaining this wage gap because discriminatory wage practices have been found to lead to inefficient resource allocation (Polachek and Xiang 2009). Investigating gender wage differentials and gender discrimination has become a key area of study in the international labour market literature (Muller 2008,1).

The gender wage gap can be defined as the difference in earnings between men and women, which is usually calculated by using the male earnings as a benchmark (Ncube and Tregenna 2013). In the various studies on gender earnings differentials that have been conducted to date in both international and South African literature, there has been use of different datasets as well as various estimation methods and employee subgroups, but there is still a debate on the underlying causes of the gender wage gap (Weichselbaumer and Winter-Ebmer 2003). Blau and Kahn (1992) found that despite some dramatic reductions that have been witnessed in the male-female pay gap since the 1950's, gender differentials persist in all industrialised countries, but these differentials vary.

The international literature on the gender wage gap shows that the gap declines after adjusting for observable differences between men and women, but a substantial portion of the pay gap (up to 40 per cent) remains unexplained and this could partly be attributed to discrimination (Blau and Kahn 2000). The gender wage gap continues to exist but there is a general consensus that it has declined over time in many studies that have been conducted internationally and in South Africa as well (Blau and Kahn 2000; Hersch 1991;Muller 2008; Wellington 1993).

Despite the fact that there has been extensive research on gender earnings gaps on an international scale, there has been relatively little attention that has been paid to comparative studies across countries (Polachek and Xiang 2009). But the findings to date on the subject indicate that the gender pay gap varies across countries with Australia, Belgium, Czech Republic, Hungary, Italy, Poland and Sweden exhibiting a gender pay gap around 20 per cent over the 1970-2000 period and other countries such as Austria, Canada, South Korea, and Japan maintain gender pay gaps as large as 40-50 per cent based on OECD data (Polachek and Xiang 2009).

There has been extensive research on gender earnings in industrialised countries but, this is not the same in developing countries where such studies are relatively limited. Valmouri (2008) in support of this states that there is a consolidated knowledge on this issue with reference to Western countries, but the literature on the gender wage gap in transition countries is still very marginal. In a study conducted in 2005, it was found that only three per cent of all existing studies on the gender wage gap since the 1990's focus on Africa with suggestions that gender wage gaps are significant in some African countries, yet little is known about other African countries (Valmouri 2008).

2.4 South African context on gender earnings, and employment

There has been a growing interest in studying the gender earnings gap in South Africa and this has been evidenced by the growing literature on the subject. But, research on gender and earnings gap in South Africa has focused more on the racial differences in earnings and this is not surprising given South Africa's history of racial segregation. Thus racial earnings differences in South Africa have taken prominence at the expense of the gender aspect in wage differentiation (Bhorat and Goga, 2012; Gruen, 2004; Hinks, 2002; Muller, 2008; Ntuli, 2007 and Rospabe 2001). Table 2.1 below summarises the studies conducted to date on gender earnings gap in South Africa.

TABLE 2.1: Summary of gender earnings differentials studies in South Africa

Author	Data source	Time period	Focus of analysis
Isemonger and Roberts (1999)	SALDRU Survey	1993	All employed individuals
Winter (1999)	OHS	1994	Formally employed individuals
Rospabe (2001)	OHS	1999	All employed individuals
Hinks (2001)	OHS	1995	All employed individuals
Gruen (2004)	OHS	1995-1999	All employed individuals
Ntuli (2007)	LFS and OHS	1995-2004	Africans in formal sector
Goga (2008)	LFS	2001-2005	All employed individuals
Muller (2008)	OHS and LFS	1995-2006	Part time and full time employed wage workers
Ncube and Tregenna 2013)	LFS and QLFS	2001-2010	All employed individuals

Women's labour market participation in South Africa has risen significantly over the years and there is evidence of a rise in female labour force participation (Casale, 2004). Standing et al (1996) using the five yearly population census found that the female labour supply has been increasing at a much faster rate than the male labour supply, with women accounting for 23 per cent of the labour force in 1960[3] in South Africa, 36 per cent in 1985 and 41 per cent in 1991. Klaveren et al (2009) during the same period also found that in 1960 women (excluding domestic workers) accounted for 23 per cent of the labour force in South Africa (Casale and Posel 2002,158).

Lee (2005) extended the analysis to the post-apartheid period and found that, between 1995 and 2004, the percentage of women who were active in the labour force increased from 44 per cent to 48 per cent. Casale (2004) using the broad definition of unemployment found that an estimated 48 per cent of working age women were economically active in 1995, and this increased to 64 per cent in 2001. Lee (2005) also found that in March 2004, 48.0 per cent of working age women were considered to be economically active, based on the strict definition of labour force participation as compared to a 44.0 per cent female labour force participation rate in 1995. A more recent study by Leibbrandt et al (2010) found that between 1993 and 2008 female labour force participation rose by 38 per cent compared to men's 10 per cent during the same period.

This increased participation of women in the labour force however does not necessarily reflect the global trend where women are 'pulled' into the labour force as a result of an increase in demand of female labour (Casale 2004). Instead the feminisation of South Africa's labour force, in the post-apartheid period has coincided with an increase in women's unemployment (Casale 2004, Lee 2005). Increased labour force participation has, therefore, not actually 'bought' women much since women have moved largely into unemployment and low paid informal work (Casale 2004:1). Casale and Posel (2002) found that there has been an increase in female labour force participation from 32 per cent in 1970, 34 per cent in 1995

[3] Census data in South Africa before 1994 is not representative of all races. Casale and Posel (2002) note that the census during this period did not capture all the race groups in South Africa. The figures given by Standing therefore only depict an indicative trend of an increase in women's participation in the labour force.

and 41 per cent in 2000. Between 1970 and 2000, excluding domestic workers, female employment increased by 46 per cent, from about 7.5 million to over 11 million for women as compared to an increase of 33 per cent for men during the same period (Casale and Posel 2002). Casale and Posel 2004; Casale 2004 also found that between 1995 and 2001 an estimated 3.2 million women became economically active using the broad definition, some in wage work but more than 50 per cent of them were 'making work' for themselves in the informal sector.

The gender wage gap varies depending on race, sector of employment and many other factors that affect earnings. Ncube and Tregenna (2013) using a combination of the Labour Force Survey (LFS) from 2001 to 2007 and the 2010 Quarterly Labour Force Survey (QLFS), found that over these years the gender wage gap has decreased slightly, but this has not been a sustained decrease across the different sectors of employment. Ntuli (2007), on the other hand found that South Africa has experienced an increase in the gender wage gap among formally employed Africans between 1995 and 2004. Thus the gender wage gap continues to exist in South Africa's labour market and whilst it may have narrowed for some categories, it may actually have increased for African females on the whole. There is also evidence, however, that the gender wage gap is greater amongst Whites with a gender wage differential estimated at 35 per cent as compared to Africans whose wage differential is estimated at 34 per cent even though the difference is insignificant (Rospabe 2001).

A growing body of literature also shows that women are concentrated at the bottom of the occupational distribution in South Africa (Muller 2008; Ncube and Tregenna 2013; Ntuli 2008; Parashar 2008; Rospabe 2001; Winter, 1999). Winter (1999) using the October Household Survey of 1994 found that almost 68 per cent of women who were employed in the same year worked in the service sector. Out of this percentage, 28 per cent were in administrative and clerical work, 24 per cent were in labouring and vending related occupations, and general services recorded 15 per cent (Winter 1999). Males during the same period recorded relatively lower percentages in the same categories and tended to be concentrated in service related occupations (30.9 per cent), craft and trade occupations (18.6 per cent) and in plant and machine related occupations instead (17.2 per cent).

A more recent study by Parashar (2008) also shows that women are concentrated in the bottom range of occupational groups. Parashar (2008) found that across eight major non-

agricultural occupational groups, 56 per cent of all female workers, compared to an estimated 28.8 per cent of men were employed in either clerical or elementary work. Rospabe (2001) came to the same conclusion, she found that women are still confined at the bottom end of the skills categories and that a great part of the disparity in employment by occupation could be explained by discrimination in access to employment. Thus irrespective of race, women occupy 43 per cent of the employed labour force, but they still remain largely underrepresented in some occupations and are more concentrated at the bottom of the occupational distribution (Parashar 2008).

Ncube and Tregenna (2013) also extended on this research and concluded that, not only are women more likely to work in low-skill occupations, but that the wage gap is greater at the lower parts of the occupational distribution. Previous research also shows that gender earnings differentials are widest at the lower end of the occupational distribution. For instance, Ntuli (2007) found a larger gender wage gap at the bottom of the occupational distribution and this reflects what Muller (2008) and Ncube and Tregenna (2013) term a 'sticky floor'. Ncube and Tregenna (2013,2) define a 'sticky floor effect' as a situation that exists when the gender wage gap widens at lower levels of the wage distribution which suggests that females enter occupations with low pay and few advancement opportunities.

Research on gender earnings differentials also shows different patterns by race, age, location, education and other demographic characteristics. Apart from women occupying the lower end of the occupational distribution, African women tend to be dominant in these positions more than other races in South Africa. However, Hinks (2002) found that white women experience the greatest degree of earnings discrimination when compared to other races. Part of the reason could be the under-representation of low-paid female domestic workers in the October Household Survey of 1995 used in this study (Hinks 2002).

Parashar (2008) found that African women are overrepresented in the lower occupational distribution as compared to other races. Parashar (2008) also found that the majority of White, Indian and Asian women are employed in higher paying managerial and professional positions. A similar conclusion was also reached by Winter (1999) using the OHS of 1994, she found that most South African females work in a few occupations and African women tend to be employed more as domestic helpers, teachers and nurses, whilst Indian, Asian and White women have more privileged positions in managerial and professional positions. This suggests that African women on average tend to be more concentrated at the bottom of the

wage distributional gap more than the other races in South Africa. However, this does not necessarily mean that the gender gap is largest amongst Africans in South Africa.

Rospabe (2001) using the October Household Survey of 1999, concluded that women suffer from a disadvantage in the entry to the labour market, stronger in wage employment than in self-employment, and African women seem to suffer the most from gender hiring discrimination. Makgetla (2004) found that women in South Africa were more disadvantaged than men in accessing education and resultantly they had the lowest levels of education and consequently ended up with the lowest-paying jobs. The end of apartheid has witnessed many women increasing their education levels but this has not resulted in a significant narrowing of the gender wage gap. The post-apartheid period has been marked by an increase in earnings for all women in South Africa on average, however, gender wage inequalities still persist even though they may have decreased slightly (Ncube and Tregenna 2013).

There is also evidence that despite the fact that women continue to earn less than men, their earnings have increased internationally. For instance Lee (2005) found that women are gradually becoming better represented at all levels across a wide range of occupations but they continue to face greater prospects of unemployment and to earn less than their male counterparts even when they do find employment. This has been explained as being a result of 'occupational crowding' defined as a scenario whereby women are over-represented in certain occupations resulting in excess labour supply which drives down the wage rate (Lee 2005). Women also continue to earn less than their male counterparts because they are still the primary care givers in the home meaning that they have to split their time between labour market work and household work for which they are not paid (Makgetla, 2004).

2.5 Where do women work in South Africa?

As indicated in the previous section there is a growing body of literature shows that women are concentrated at the bottom of the occupational distribution in South Africa (Muller 2008; Ncube and Tregenna 2013; Ntuli 2008; Parashar 2008; Rospabe 2001; Winter, 1999). Lee (2005) also found that women who are employed in South Africa are generally confined to jobs in the social services whilst men have more occupational choices in a variety of occupational fields. Most women are still confined in the service sector working mostly in health, education and domestic jobs where job security and wages are generally low (Lee

2005). Lee (2005) also found that women are more likely to be employed in the public sector than men and this is due to the type of jobs that are found in this sector (for example teaching and nursing) which have been largely viewed as 'caring' jobs as well as in secretarial jobs and food services. Woolard (2001) in Lee (2005) also found that, as in the public sector, women's representation declines with seniority of post in the private sector, implying that women's disadvantage in the public sector is not their share of total employment but rather of quality of employment (Woolard, 2001).

2.5.1 Formal and informal work

More women in comparison to men are employed in informal work than in formal employment in South Africa. The increased participation of women in the labour force in South Africa has seen most enter low paying and less secure forms of employment in the informal sector (Casale 2004). Casale and Posel (2002) in their research conclude that between 1995 and 1999, the number of both men and women in self-employment more than doubled but the increase has been significantly higher for women. Casale and Posel (2002) also found that women are over-represented in informal work depicting a trend where women are 'making work' for themselves in the informal sector. Klaveren et al (2009) found that in 2007 21.5 per cent of all employed males as compared to over 34 per cent of all employed women were in informal work. There is evidence however that between 2000 and 2007 there has been a slight increase in the share of women working in the formal sector to slightly above 40 per cent and this has also resulted in a slight decrease in women's share of employment in the informal sector (Klaveren et al 2009).

Klaveren et al (2009) also found an increase in the female share of employed individuals within the formal sector in all industries except in manufacturing as well as in community, social and personal services, where the female share did not change. The changes that have occurred in the informal sector are mixed, with a greater increase in those working in agriculture, fishing, communication and storage and a moderate increase construction and community related services (Klaveren et al 2009). Sectors such as manufacturing, finance and other business and notably in private households have recorded a decrease in the female share of employment, while the female share remained constant in wholesale and retail trade (Klaveren et al 2009).

Within formal work Klaveren et al (2009) found that the female share of employment between 2000 and 2009 increased especially in higher and middle income categories (managers, legislators, professionals) and to a lesser extent among trades work and plant and machine operators. The highest increase in labour force participation was experienced amongst women with degrees between 1995 and 2005 (Klaveren et al 2009).

2.5.2 Full time and part time work

In South Africa several studies (Muller 2008, Posel and Muller 2007, Ncube and Tregenna 2013) have investigated the gender earnings gap within full time and part time work. Muller (2008) using the 1995 and 1999 October Household Surveys and the 2001 and 2006 Labour Force Surveys, explored the trends in the gender wage differentials among part-time and full-time employees. One of the findings from this research is that a gender wage gap exists in South Africa and is more pronounced among part-time workers. Muller (2008) concluded that from 2001 to 2006 the gender wage gap in South Africa declined marginally among both full-time and part-time workers.

However, this decline was greater for part-time employment. Muller (2008) also found that the mean gender wage gap increased from 1995 to 1999 and it decreased between 2001 and 2006. Ncube and Tregenna (2013) argue that the increase in the gender wage gap between 1995 and 1999 found by Muller could be a result of a depression in wages for part-time workers. At the same time they found that the increase in the gender wage gap observed for full-time workers during this period could be partly due to a depression in wages. But the decrease in the gender wage gap between 2001 and 2006 was a result of both an increase in women's productive characteristics and to a reduction in differential returns to men and women's characteristics – in other words, a decrease in discrimination.

2.6 Conclusion

This chapter has shown the existence of a gender wage gap in South Africa and in other countries. A number of reasons have been suggested to try and explain this gap but there remains an unexplained part which has been attributed to overt discrimination. It is also

evident that there is less comprehensive literature on the gender earnings gap in developing countries and given the increased participation of women in the labour market this becomes an important subject of inquiry. In South Africa, this gap may be explained by the fact that more women than men work at the bottom end of the occupational distribution with evidence of underrepresentation in certain occupations. There is also evidence that more women are employed in the informal sector as compared to the formal sector with recent literature showing an increase in the women's participation within the formal sector. But despite this, women continue to dominate the share of employment within the informal sector. This is explained by the fact that more women are entering the labour market in South Africa but are forced to create work for themselves in the informal sector. Further research in South Africa also shows a greater gender wage gap within part time work as compared to full time work but given the fact that more women than men are involved in part-time work shows the vulnerable position of women in South Africa's labour market.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The main objective of this chapter is to provide a concise description of the methods that will be used in this study to investigate gender, earnings and employment in post-apartheid South Africa. This study will use descriptive statistics and multivariate analysis to determine if the differences in earnings for women and men in South Africa's labour force are statistically significant. These tools will be used for informal and formal work for both the self-employed and wage earners. The study will also extend to investigate earnings at the bottom and top of the income distribution in South Africa. This chapter will start with a description of NIDS, Version 4.1. Then there will be a discussion on the income data and the description of the variables that will be used in this study. This chapter will also provide a definition and explanation of the research design and lastly it will also discuss the expected limitations and problems of the study.

3.2 Description of NIDS Version 4.1

The data for this research will be drawn from the 2008 National Income Dynamics Study (NIDS). NIDS was commissioned by the Office of the Presidency and is conducted by the Southern African Labour and Development Research Unit (SALDRU) at the University of Cape Town. It is a nationally representative panel survey which captures information on 28 255 individuals from 7 305 households (SALDRU 2008). The first wave of NIDS commenced in February 2008 and the subsequent waves are undertaken every two years (Hall and Wright 2010).

This study uses NIDS data to explore gender earnings differentials because it collects comprehensive information on employment characteristics such as hours spent at work, job

type, work security, and benefits. In addition, the module on employment allows for a number of different definitions of informal wage work and self-employment. Previous work on the gender wage gap in South Africa has utilised the October Household Surveys and the bi-annual Labour Force Surveys but, to date, none have used NIDS to investigate gender differences in earnings in South Africa. The advantage to using the NIDS dataset is that information is collected at the individual level (rather than from a household proxy) and the section on earnings and employment are more detailed than in other household surveys. For example, the Labour Force Surveys only include information on respondents' 'main job' while the NIDS questionnaire also includes a section on the 'second (or next) most important wage job'.

The weighting procedure used for the NIDS dataset of 2008 was weighted using a two stage process (Witternburg 2009). The first stage involved the calculation of design weights which used the Horvitz-Thompson estimator of 1952;

$$w^i = \frac{1}{\pi^i}$$

Where $w^i =$ weight

$\pi^i =$ Inclusion probability of i-th unit

The weights were then calibrated using post-stratification in the second stage to adjust the weights of the survey so that the application of those weights resembles the population (Witternburg 2009).

3.3 Employment information in NIDS

Employment information in NIDS is found in Section E titled 'Labour market participation'. The data in this section captures various employment sources inclusive of part time and full time work. These categories include: regular wage work, casual work, subsistence agriculture and self-employment. Employment information in NIDS that identifies regular wage workers is identified by question E1 "Are you currently being paid a wage or salary to work on a regular basis for an employer (that is not yourself) whether full time or part time?" Self-employed individuals are identified by question E28 "Have you engaged in any self-employment activities during the last 30 days?" Subsistence farmers are identified by question E45 "In the last 30 days did you do any work on your own or the household's plot, farm, food garden, cattle post or kraal, or help in growing farm produce or in looking after

animals for your household?" Lastly, question E40 "Have you done any casual work to earn money in the past 30 days?" identifies all casual workers. However, question E40 provides an imprecise definition of the casually employed. Casual employment in NIDS is defined as any work that is irregular and short term or any additional work any individual may be involved in. The problem with this definition is that there is no way of distinguishing between formal and informal types of casual work. As a result the casually employed will be excluded from this study. Instead this study will focus on those individuals who are self-employed, or in informal/regular wage work as well as those in subsistence agriculture.

NIDS also distinguishes between primary and secondary occupations meaning some people in the sample will have more than one job. In this sample there are 6008 individuals who are employed, with a majority (3825) employed in wage work, 888 in subsistence agricultural work, 874 self-employed and 750 in casual employment.

3.4 Earnings data in NIDS

Data that focuses on earnings in NIDS is also found in Section E. There are a number of questions where income data will be derived from and these can be categorised as follows;

i. Income earned from full time and part time work
ii. Income derived from primary and secondary occupations
iii. Income data from casual work
iv. Income earned from subsistence agriculture

The variable used to measure individual monthly earnings for every individual will be attained by adding all the income sources in NIDS section E for every employed individual to come up with a total monthly earnings (from employment) variable. This variable captures the total monthly earnings for all employed individuals in NIDS 2008. Weekly earnings are then derived by dividing the total monthly income variable by four to get the weekly wage. An hourly wage is calculated by dividing the weekly earnings by the reported weekly hours of work.

Deriving the hourly wage in estimating gender differentials in earnings helps to control for the differences in the hours that men and women work. Men could be earning more than women because they may be working for more hours than women. As a result, this study calculates earnings according to the weekly hours for both men and women.

3.5 Description of Indicators

3.5.1 Definition of formal work

Formal wage employees are defined as people who are employed with either a written contract or who receive paid leave and a pension contribution from their employer (Heintz and Posel 2008). UNDP (2003,60) defines formal work as those workers who fall 'within the scope of the industrial relations regulations, including recognition of trade unions and collective bargaining, the right to strike, protection against dismissal, and minimum standards concerning hours of normal and overtime work, minimum wages and minimum leave provisions'. In this study there are two types of formal work that will be identified; formal wage work and formal self-employment. Formal wage workers in NIDS are identified as individuals who are currently being paid a wage or salary to work on a regular basis for an employer whether part-time or full time and have a written contract[4]. Formal self-employed individuals in this study are defined as those individuals who are engaged in self-employment activities in registered enterprises. Registered enterprises are identified by question E37 "Is the business registered for income tax and/ or VAT?"

3.5.2 Definition of informal work

There is no universally accepted definition of informal work (Yu 2010; 2012). The term 'informal economy' was formed by Keith Hart in the early 1970's and was used to describe a range of subsistence activities of the urban poor in Ghana and since then it has been a subject of debate (Skinner 2002,4). In its traditional form, it was used to depict three scenarios; first it depicted survivalist strategies from individuals who have deficient human capital and as a result have slim chances of finding employment in the formal sector or secondly those who leave the formal sector voluntarily to balance home and income raising responsibilities, and lastly it also showed entrepreneurs who prefer to operate in the informal sector to avoid regulations and tax imposed in the formal sector (Anderson 1998; Kershoff 1996; Palmade and Anayiotos 2005; Perry et al. 2007). Yu (2012) argues that there is little consensus on how to define the informal economy in international as well as in South African literature. But in all these arguments there are three main approaches to defining this sector; the enterprise

[4] NIDS does not have information on paid leave.

definition, the employment relationship definition and the worker characteristics definition (Yu 2012).

Yu (2012,156) states that South Africa has been using the enterprise definition of the informal sector until 2007 and this has been the basis of defining informal work by Statistics South Africa, the October Household Surveys and the Labour Force Surveys during this period. This definition was proposed at the 15th International Conference for Labour Statistics (ICLS) in 2000 and it defines informal employment "comprising all jobs in informal sector enterprises, or all persons who, during a given reference period, were employed in at least one informal sector enterprise, irrespective of their status in employment and whether it was their main or a secondary job" (Hussmanns 2004, 3). Yu (2010) states that the enterprise definition defines informal work by the characteristics of the enterprises in which the activities take place; informal employment is defined as 'employment in the informal sector'.

One major weakness of this definition is that it leaves out people who are working in informal work but who may be operating outside the informal sector making it an insufficient definition of informal employment. Heintz and Posel (2008) also state that this definition fails to capture adequately the number of individuals working in other forms of employment that lack legal or social protection (Heintz and Posel 2008, 30).

The limited scope of the enterprise definition of informal work as discussed above could partly be the reason why South Africa is an outlier in terms of its relatively small sized informal sector when compared to countries within the same income bracket (Yu 2012). Given South Africa's unemployment rate and slow rate of labour absorption into the formal sector, one would expect a fairly large informal economy comparable to other countries in the same income bracket (Yu 2012). Of importance as well in explaining the size of South Africa's informal economy are barriers to entry that exist in this sector. Rogerson 2004; Kingdon and Knight 2004 in Yu (2012) state that such barriers to entry include crime, lack of access to finance, infrastructure and training as well as lack of government support in the promotion of microenterprises and the informal sector. As a result of the inadequacies of the enterprise definition discussed above, other alternative methods of defining the informal sector have been proposed.

One such approach is the worker based definition which defines informal employment in terms of worker characteristics. This definition was proposed at the 17th International Conference of Labour Statisticians a (ICLS) and defines the informal economy as consisting of both employment and self-employment in informal enterprises and in formal enterprises. It focuses on worker's earnings, education, occupation among other worker related characteristics in defining the informally employed (Yu 2012). This definition gives a broader definition of informal employment than the enterprise definition.

This takes us to the employment relationship based definition of the informal sector. In South Africa, the employment relationship based definition has been used by Devey, Skinner and Valodia 2006; Heintz and Posel 2008 and Yu 2010. This approach still considers the enterprise definition but also considers the nature of the employment relationship to allow for the inclusion of individuals who display informal characteristics (lack of social and legal protection) but are working outside the informal sector (Hussmanns 2005).

There is no consensus as to which definition best captures South Africa's informal economy and this has resulted in scholars combining the above mentioned definitions. For instance Devey, Skinner and Valodia 2006; Essop and Yu 2008 combine the enterprise definition and the employment relationship definition. However, based on the definition above there has been a distinction that has been made between the 'informal sector' and the 'informal economy'. Budlender et al. (2001) and Devey, Skinner and Valodia (2006) suggested that the former is associated with the enterprise definition whilst the latter is associated with the worker based definition of informal work.

This study identifies two types of informal employment; informal wage work and informal self-employment. Informal wage workers are those workers who are currently being paid a wage or salary to work on a regular basis for an employer (whether full time or part time) but have no written contract. On the other hand the informally self-employed are those workers who are engaged in self-employment activities in unregistered enterprises. A summary of the definitions of the four categories of work that will be used in this study are briefly summarised in Table 3.1 below.

Table 3.1: Definitions of the four categories of work used in this study

Category of work	Definition
Formal wage work	Employed individuals currently being paid a wage or salary to work on a regular basis for an employer whether full time or part time and who have a written contract or who receive a pension contribution
Formal self-employment	Employed individuals in self-employment activities employed in registered enterprises
Informal wage work	Employed individuals currently being paid a wage or salary to work on a regular basis for an employer whether full time or part time and have no written contract[5] and do not receive a pension contribution
Informal self-employment	Individuals in self-employment activities in unregistered enterprises

3.6 Descriptive analysis and a broad description of the multivariate model

This study will utilise descriptive statistics to explore gender earnings differences by sector, type of employment, position in the earnings distribution and other variables that are related to earnings between men and women. The study will then estimate a multivariate model to identify whether the earnings differential is still significant after controlling for marital status, location, race, sector of employment, and other variables related to earnings.

3.7 Limitations and problems of the study

The main methodological problem when estimating earnings differentials is that of self-selection and in this study it is one of the major limitations. Kunze (2008) argued that men and women move into different occupations and this shows that to an extent they self-select into certain occupations and jobs that are suited to their lifestyles especially as far as family responsibilities and child care are concerned. Filer (1985) suggested that women for instance, may choose to work in occupations that give them lower pay as long as the working

[5] Addition of the pension condition i.e defining formal wage workers as employed individuals with a written contract or receiving a pension contribution, in the definition of formal wage work increases the percentage of formal wage workers from 49.03% for men to 54.52%; and from 39.76% for women to 42.61%. However, in informal wage work an addition of the pension condition (i.e defining informal wage workers as individuals with no written contract and receiving no pension contribution) reduces men's percentages from 21.89% to 16.4% and for women there is a decrease from 23.79% to 20.94%.

conditions suit them. It is beyond the scope of this study to control for self-selection. But, this study acknowledges that self-selection is a major limitation in this study.

Another major limitation in this study lies in the imprecise definition of casual work in NIDS. Question E40 “Have you done any casual work to earn money in the past 30 days?” provides a vague understanding of the term such that little is known of what constitutes casual employment in NIDS. The definition does not allow for the distinction between casual work in formal work or informal work. There are 729 individuals who are casually employed in NIDS. As a result of this imprecise definition, the casually employed will not be used in this analysis. Instead, focus will be on the other sectors of work.

The last limitation found in this study is in the way one of the key variables in this study is captured. Years of working experience is one of the key human capital variables that are expected to be used in this study to explain the earnings differentials between men and women in South Africa. Yet, the way the variable is captured does not reflect the total number of years an individual has been working in their lifetime. The question used in the questionnaire to identify years of work ‘When did you start this job?’ omits all the other years an individual may have worked elsewhere. As a result of this inadequacy, years of working experience will not be used in the regressions. Instead, the only human capital variable that will be used in the regressions is education. Despite this omission it should be noted that years of working experience is an important human capital variable that can be used in understanding the gender earnings gap.

3.8 Conclusion

This chapter has outlined the methodology that will be used in this study. As mentioned above, this study will use descriptive statistics and multivariate analysis to determine the gender earnings differentials that exist in South Africa’s labour market. This chapter has also given a description of the dataset that will be used in this study as well as the limitations and problems in this study. A discussion of the income variables that are key in this study have also been highlighted. There are four main sectors of work that have been introduced in this sector that will be key in this study. These are informal wage employment and self-employment as well as formal wage and self-employment. Of importance as well in this chapter is the definition of informal employment. This study will not only focus only on

informal workers found within the informal sector, rather this study will explore both informal wage employment and informal self-employment.

CHAPTER FOUR: Employment, earnings and the gender wage gap in South Africa

4.1 Introduction

This chapter will present and discuss the results of data analysis using descriptive statistics on the broad employment patterns for both men and women. It will extend to look at the gender differentials in earnings within the formal and informal sectors as well as for wage earners and the self-employed. This chapter will also try to identify whether the gender earnings gap is higher in formal or informal work and whether the gender earnings differential is higher for self-employed individuals or for regular wage workers. Descriptive statistics will also be used to explore gender earnings differences by occupational sector, type of employment and position in the earnings distribution. The representation of women in the different occupational categories will also be identified in this chapter.

4.2 Descriptive Data

4.2.1 Where do women work?

There are a total of nine occupational categories identified in NIDS and these are shown in Table 4.1 below. All the percentage differences between men and women within the nine occupational categories in this section are statistically significant at the 1 per cent level of significance except for the category of legislators. According to Table 4.1, women are more concentrated in elementary occupations than men. About 30.55 per cent of working women are employed in elementary occupations as compared to only 12.19 per cent of men. Of note within these elementary occupations is, therefore, the over-representation of women in this sector.

There is also a higher concentration of women in clerical jobs than men with a percentage of 16.41 as compared to only 6.34 per cent for men. Table 4.1 also shows that a higher percentage of women work in professional occupations than men. As represented in Table 4.1 20.64 per cent of employed women work as professionals as compared to 8.56 per cent of men.

However, women are less concentrated within semi-skilled occupations with only 2.5 percent working in plant and machinery occupations as compared to 14.56 per cent for men. There is also a higher concentration of men in craft related occupations (24.25 per cent) compared to women's 4.12 per cent. Thus such sectors remain male dominated and women tend to be more concentrated in jobs that require fewer skills such as those found in elementary occupations and also as clerks where there is a low skill requirement and generally low pay.

Table 4.1: Occupation by gender %

Occupational code in primary occupation	Gender		Total
	Male	Female	
Missing	2.92	1.12	2.13
	(0.65)	(0.32)	(0.39)
Legislators	6.09	4.93	5.59
	(0.99)	(0.83)	(0.67)
Professionals	8.56	20.64***	13.80
	(0.95)	(1.57)	(0.89)
Technicians	3.67	6.95***	5.09
	(0.58)	(1.21)	(0.62)
Clerks	6.34	16.41***	10.71
	(0.91)	(1.39)	(0.80)
Service workers	15.26	9.91***	12.94
	(1.29)	(0.98)	(0.85)
Skilled agricultural and fishery workers	6.16	2.82***	4.71
	(0.77)	(0.36)	(0.47)
Craft and related occupations	24.25	4.12***	15.53
	(1.52)	(0.66)	(0,95)
Plant and machinery	14.56	2.55***	9.35
	(1.14)	(0.55)	(0.70)
Elementary occupations	12.19	30.55***	20.15
	(1.00)	(1.65)	(0.94)
Total	100.00	100.00	100.00

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Notes Standard errors in brackets; the data are weighted.

Whereas Table 4.1 above shows the different occupational categories for both men and women, Table 4.2 below shows the gender distribution across the Standard Industrial Classification (SIC) industrial sectors. A higher percentage of women (28 per cent) are employed in private households compared to men (9.35 per cent). This difference is statistically significant. This is likely reflecting a large share of female employment which consists of domestic work showing that more women are employed in domestic work than men. Of note within private household work is domestic work which is one of the most

common elementary occupations for women. This reinforces the findings from recent literature that shows that elementary occupations such as domestic work are largely performed by women. There is also a higher concentration of women in communication related employment (30.97 per cent) as compared to men's 15.60 per cent. The rather low percentages in agricultural participation for both men and women in South Africa can be partially explained by the fact that South Africa unlike other Sub-Saharan African countries has no dominant subsistence or small scale farming[6].

Table 4.2: Industrial occupation by gender %

Industrial code in primary occupation	Gender		Total
	Male	Female	
Missing	10.68	6.90	9.04
	(1.26)	(0.94)	(0.83)
Private Households	2.36	16.97***	16.94
	(0.42)	(1.39)	(5.83)
Agriculture	8.92	5.09	7.28
	(0.86)	(0.58)	(0.56)
Mining	7.99	0.91***	4.93
	(0.96)	(0.26)	(0.56)
Manufacturing	18.06	9.89***	14.52
	(1.34)	(1.05)	(0.89)
Construction	7.13	1.68***	12.96
	(0.81)	(0.40)	(0.82)
Wholesalers	12.24	13.90	12.96
	(1.13)	(1.21)	(0.83)
Transport	5.49	2.09***	4.02
	(0.78)	(0.49)	(0.49)
Finance	10.59	11.17	10.84
	(1.17)	(1.41)	(0.90)
Communication	15.60	30.97***	22.25
	(1.17)	(1.72)	(1.02)
Total	100.00	100.00	100.00

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Notes: Standard errors in brackets; the data are weighted.

Turning now to an analysis of gender and informal types of work, Table 4.3 begins by showing the four broad categories of work as categorised in NIDS. Most men (70.92 per cent) and women (63.55 per cent) are employees' i.e they are identified in NIDS as regular wage workers. This table shows both men and women are more likely to be employed by other people in wage work rather than self-employment but there is a higher percentage of men (70.92 per cent) in wage work then women (63.55 per cent).

[6] This is one of the remnants of the Land Act of 1913 which resulted in 90 per cent of arable land being owned by white farmers in 1994 (Klaveren et al 2009,38).

As shown in Table 4.3 women and men have similar proportions in self-employment since the percentages recorded in this category are statistically insignificant. However, a higher percentage of women (13.71 per cent) are more also likely to work in subsistence agriculture than men (8.32 per cent). The fact that there are a greater percentage of women in self-employment and subsistence related activities is no coincidence. Casale and Posel (2004) came to the same conclusion they found that the increased involvement of women in post-apartheid South Africa's labour market reflects the increased unemployment of women which has resulted in them creating work for themselves in self-employment. There is also an over-representation of women in subsistence agriculture.

Table 4.3 : Men and women in different sectors of employment %

Sector	Male	Female	Total
Wage workers	70.92	63.55***	67.52
	(1.26)	(1.36)	(0.93)
Self-employment	14.64	16.55	15.47
	(1.06)	(1.05)	(0.75)
Casual Work	12.23	11.01	11.67
	(0.88)	(0.94)	(0.64)
Subsistence Agriculture	8.33	13.71***	10.80
	(0.73)	(0.80)	(0.54)

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Notes: Standard errors in brackets; the data are weighted.

Table 4.3 above also shows that there are similar proportions of men (12.23 per cent) and women (11.01 per cent) in casual employment since the differences were not statistically significant. However, as identified in the previous chapter, this study will focus on wage work and self-employment (with some references to subsistence agriculture) since more information is captured about these categories of work in NIDS.

Table 4.4 disaggregates further the self-employed and wage workers into categories of formal and informal work. Within these categories of work[7] there are a greater percentage of women than men in informal wage work (23.79 per cent) and informal self-employment (13.56 per cent) compared with men who have 21.89 per cent and 10.24 per cent respectively.

On the other side, a higher percentage of men are in formal wage work and formal self-employment than women. This reflects the finding discussed above that men have higher percentages within formal wage work than women and on the other hand women have a

[7] This study identifies four working categories, informal self-employment, informal wage work, formal self-employment and formal wage employment and a summary of their definitions is in Table 3.1 in Chapter 3.

higher percentage in informal wage work and informal self-employment than men. A greater percentage of women are however employed in formal wage work than in the other categories.

As shown by the small percentage of the overall workforce in informal employment as compared to the formal sector, South Africa has a relatively small informal sector. South Africa has a high unemployment rate and the expectation is that of a rather large size of the informal economy as more people are expected to attempt create work for themselves. The assumption as well would be more women working within informal types of work than in unemployment. Barker (1999) in Casale (2004) argues that South Africa has been experiencing rising unemployment rates coupled with jobless growth. Thus the expectation is that these increased unemployment rates would result in more employment in the informal sector. But as shown in Table 4.4 below there is rather a relatively smaller percentage of women than expected working in informal self-employment and this is a reflection if South Africa's relatively small size of the informal sector. Table 4.4 shows the total percentages of men and women employed in the four broad categories of work used in this study. It also shows the overall totals for men and women in wage work and self-employment.

Table 4.4 Men and women in wage work and self-employment %

Sector	Male	Female	Total
Informal wage work	21.89	23.79	22.77
	(1.15)	(1.18)	(0.83)
Formal wage work	49.03	39.76***	44.76
	(1.40)	(1.44)	(1.02)
Total for wage work	**70.92**	**63.55**	**67.52**
	(1.26)	**(1.36)**	**(0.93)**
Informal self-employment	10.24	13.56	11.27
	(0.84)	(0.92)	(0.62)
Formal self-employment	4.30	2.97	3.69
	(0.72)	(0.59)	(0.47)
Total for self-employment	**14.54**	**16.55**	**15.47**
	(1.06)	**(1.05)**	**(0.75)**

Source: Own calculations from NIDS 2008. Working categories exclude casual and subsistence work.
*** p<0.01, ** p<0.05, * p<0.1 level
Notes: Standard errors in brackets; the data are weighted

4.2.2 Gender and the earnings differential

There are a number of factors that might explain why women on average earn less than men and one of these factors is the number of hours that women work in comparison to men.

Table 4.5 below shows the weekly average working hours for men and women in different sectors of work. As expected, women on average work fewer hours than men in all the occupational categories listed in the table. In wage work, the average working hours for women is 36.33 hours compared to men's 39.60. The same is true in self-employment where women work for an estimated 22.57 hours a week whilst men record 31.96 hours a week. In subsistence agriculture women only work for 11.96 hours a week compared to men's 12.45 hours a week. This study also estimated the average working hours for all employed individuals excluding casual work. As anticipated, the average working hours shows more working hours for men with an estimated 33.59 hours a week compared to women's 28.19 hours a week. These findings are conclusive that women on average work for fewer hours than men. Bhorat and Goga (2012) came to the same conclusions for the studies they conducted in 2001, 2005 and 2007.

Table 4.5: Average working hours by gender

Type of occupation	**Average working Hours**	
	Men	Women
Wage work	39.60	36.33***
	(0.64)	(0.58)
Self-employment	31.96	22.57***
	(0.64)	(0.58)
Subsistence agriculture	12.45	11.96
	(0.94)	(0.89)
All employed individuals	33.59	28.14***
(excluding casual workers)	(0.64)	(0.62)

Source: Own calculations from NIDS 2008. Working categories exclude casual work
*** p<0.01, ** p<0.05, * p<0.1 level
Notes: Standard errors in brackets; the data are weighted.

This study, apart from estimating the mean earnings for men and women in the different occupational categories, will also show a section in each table with earnings adjusted for hours of work. This will show the actual wage gap corrected for hours of work. Table 4.6 below shows the broad overall mean and median monthly earnings of both men and women. This gives a broad picture of what all employed men and women in South Africa roughly earn on average. As shown in the table women on average earn less than men with their mean monthly earnings at R3093,75 compared to men's R4584,22. The same applies to the median earnings with women earning R1053,99 in comparison to men's R1520,83. The female-to-male ratio for the median (0.69) also suggests the existence of a gender wage gap.

After adjusting for hours worked, the gender earnings gap for all employed individuals declines. The gender earnings gap between men and women declines significantly from a monthly mean earnings female-to-male ratio of 0.67 to 0.81. This shows that there is a gender wage gap between men and women in wage work, self-employment and subsistence agriculture, but this gap is partly explained by the fact that women on average work for fewer hours than men. As a result, after adjusting for the hours of work this gap declines. But, the remaining wage gap is still significant.

Table 4.6: Total mean and median monthly earnings for all types[8] of work by gender

Earnings (Rands in 2008 prices)	Male	Female	Relative Earnings (Ratio of female-to-male earnings)
Monthly mean earnings	4584.22 (305.86)	3098.75*** (175.55)	0.67
Adjusted hourly mean earnings	34.11 (2.28)	27.53*** (1.56)	0.81
Median earnings	1520.83	1053.99	0.69
Adjusted hourly median earnings	11.32	9.36	0.83
N	5 712 880	4 630 590	

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Standard errors in brackets; the data are weighted

Table 4.7 below shows the monthly mean and median earnings for men and women employed in wage work and self-employment. The table shows that women earn less on average in both wage work and self-employment. However, as shown in the table, there is a greater gender wage gap in self-employment than in wage work even after adjusting for hours of work.

[8] This excludes casual work.

Table 4.7: Monthly mean and median earnings in wage work and self-employment

Earnings	Male	Female	Relative earnings (Ratio of female to male earnings)
	Wage work		
Monthly mean earnings	4785.34 (255.23	3836.85*** (229.83)	0.80
Adjusted hourly mean	30.21 (1.61)	26.40 (1.58)	0.87
Monthly median earnings	1907.58	1400	0.73
Adjusted hourly median	12.04	9.63	0.80
	Self-employment		
Monthly mean earnings	6386.03 (1537.88)	1816.59*** (226.81)	0.28
Adjusted hourly mean	49.95 (12.03)	20.12*** (2.51)	0.40
Monthly median earnings	1343.41	500	0.37
Adjusted hourly median	10.51	5.54	0.53

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Standard errors in brackets; the data are weighted

Moving on to more specific sectors of work, Table 4.8 below shows the monthly mean and median earnings of men and women within formal wage work and formal self-employment. Within formal self-employment men earn more on average than women, earning R14 139.63 on average as compared to R4 264.31 for women. Men also earn more in formal wage employment than women; R5926.30 as compared to women's R5130.31. The female-to-male ratio for mean earnings in wage work is 0.80 and it increases to 0.87 after adjusting for hours of work. This suggests that part of this gap can be explained by the number of hours of work for men and women.

Table 4.8 also shows that there is a higher gender wage gap within formal self-employment than in formal wage work although formal self-employment makes up only three percent of total female employment. This is evidenced by a lower ratio of female-to-male ratio of earnings which are relatively lower in formal self-employment showing a higher gender pay gap. But the gender pay gap is lower in formal wage employment. Table 4.8 below shows that the female-to-male earnings ratio in formal wage employment is 0.87 for mean earnings and 0.86 for median earnings. In other words, female earnings in this group are about 86 per cent of male earnings, compared with only 31 per cent (at the mean) in formal self-employment. This means that the gender pay gap is lower in formal wage employment and female earnings are closer to male earnings.

The differentials in the monthly mean earnings and monthly median earnings in both formal self-employment and formal wage work declines after controlling for hours of work. This decrease in the gender wage gap however, is more pronounced in formal self-employment than in formal wage work. This may be explained by the differences in the hours of work for both men and women within these categories. The female-to-male ratio of average working hours[9] for men is greater in formal wage work (0.92) than in formal self-employment (0.71). This suggests that the differences in the number of working hours for men and women are greater in formal self-employment. As a result, after adjusting for hours of work, the gap changes decreases more for in formal self-employment than in formal wage employment.

Table 4.8: Mean and median monthly earnings among formal workers, by gender

Earnings	Male	Female	Relative Earnings (Ratio of female-to-male earnings
		Formal self-employment	
Monthly mean earnings	14139.63 (3504.47)	4264.31*** (1025.41)	0.31
Adjusted hourly mean	110.60 (27.41)	47.23*** (11.36)	0.43
Monthly median earnings	5000	2000	0.40
Adjusted hourly median	126.26	55.05	0.44
N			
		Formal wage employment	
Monthly mean earnings	5926.30 (350.56)	5130.31 (334.70)	0.87
Adjusted hourly mean	37.41 (2.21)	35.30 (2.30)	0.94
Monthly median earnings	2800	2398.28	0.86
Adjusted hourly median	17.68	16.50	0.93

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Standard errors in brackets; the data are weighted

The conclusion that can be drawn from Table 4.8 above is that women on average within formal self-employment and formal wage employment earn relatively less when compared to men. The median earnings for self-employed men with formal enterprises is more than twice that of women showing a greater gender wage gap than the one in formal wage employment. The gender earnings gap in formal wage employment is much narrower when compared to the one in formal self-employment. The female-to-male earnings ratio in formal wage

[9] This is calculated by dividing the female average working hours with men's average working hours found in Table 4.5.

employment for both the mean and the median is also closer to one showing a smaller earnings gap between men and women in formal wage employment. Thus the gender earnings gap in formal wage employment is smaller as compared to the one found in formal self-employment which is more significant. This is because of the differences in working hours between men and women within these categories. As discussed above, after adjusting for hours of work, the gender earnings gap declines and as expected this decline is more pronounced in formal self-employment than in formal wage employment since there is a greater difference in the hours of work for men and women in formal-self-employment than in formal wage work.

There is also evidence of a gender wage gap within informal work. Table 4.9 below shows the mean and median earnings for both men and women in informal self-employment and informal wage employment. As expected, men earn more than women within these two categories of work. In informal self-employment men on average earn R2968.61 per month (in 2008 prices) as compared to women earnings at R1243.13. This is the same pattern within informal wage work where men earn R2228.85 as compared to women whose earnings on average are R1691.37. The median monthly earnings for both informal self-employment and informal wage employment are also higher for men than women, at R800:R380 and R1185:R883 respectively. There is a higher gender earnings gap in informal self-employment with a female to male ratio of 0.42 in mean earnings and 0.48 in median earning respectively than in informal wage employment where the female to male earnings are slightly higher 0.76 for mean earnings and 0.75 for median earnings. This means that there is a higher gender earnings gap in informal self-employment than in informal wage employment.

After adjusting for hours of work, the gender wage gap declines as shown in the table. As expected the decline as more significant in informal self-employment than in informal wage employment. This is also explained by the huge differences on average working hours for men and women within these categories of work.

Table 4.9: Monthly earnings among informal workers by gender

Earnings	Male	Female	Relative Earnings (Ratio of female-to-male earnings)
		Informal self-employment	
Monthly mean earnings	2968.61	1243.13***	0.42
	(1079.17)	(182.65)	
Adjusted hourly mean	23.22	13.77***	0.59
	(8.44)	(2.02)	
Monthly median earnings	800	380	0.48
Adjusted hourly median	6.26	4.21	0.67
N			
		Informal wage employment	
Monthly mean earnings	2228.85	1691.37***	0.76
	(131.33	(125.04)	
Adjusted hourly mean	14.07	11.64	0.83
Monthly median earnings	1185	883.33	0.75
Adjusted hourly median	7.48	6.08	0.81
N			

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Standard errors in brackets; the data are weighted

Table 4.10 below shows the earnings in the subsistence agricultural sector for men and women. Earlier, in Table 4.3 it was established that there is a greater percentage of women in subsistence agriculture (13.71 per cent) compared to men's 8.32 per cent. As shown in the table below, women have higher mean earnings (R1101.28) than men (R1045.02) in subsistence agriculture but this difference is statistically insignificant with a female-to-male ratio of 1.05. However, this gender wage gap in subsistence agriculture increases significantly after adjusting for average working hours for men and women. Thus, it is only after adjusting for working hours that the earning differentials between men and women becomes significant. This suggests that men are more likely to be working part time in this sector such that before you control for hours of work, the gender wage gap in invisible. There is also a significant difference in the median earnings for men (R400) and women (R108.33) in subsistence agriculture.

Table 4.10 Earnings for men and women in the subsistence agriculture sector

Earnings	Male	Female	Relative Earnings (Ratio of female-to-male earnings)
		Subsistence agricultural sector	
Monthly mean earnings	1045.02 (442.44)	1101.28 (759.60)	1.05
Adjusted hourly mean	92.05 (6.14)	64.77*** (3.67)	0.70
Monthly median earnings	400	108.33***	0.27
N	5 707 088	4 623 582	

Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Standard errors in brackets; the data are weighted

The data that have been presented in this chapter, thus far, has shown that women on average earn less than men in informal work as well as in formal work. The same applies in the categories of wage work and self-employment. The last table below will show the average earnings for both men and women in the different occupational codes discussed in Table 4.1.

There is a high gender gap within elementary occupations, with men earning 50 per cent more than women. But, as shown in Table 4.1, 30.55 per cent of all employed women work as elementary workers as compared to men's 12.19 per cent. Thus apart from the high gender inequality that exists within this occupational category, the majority of workers in elementary work are women.

Table 4.1 also showed that there is a higher percentage of women who work in professional occupations. 20.64 per cent of women are in professional occupations compared to men's 8.56 per cent in professional occupations. Table 4.11 above shows the category of Professional is also characterised by a higher gender earnings gap with a female-to-male mean earnings ratio at 0.66. Thus it is quite interesting that in two out of the three occupations where women report a higher percentage (Professionals, Clerks and Elementary work) there is also a particularly high gender earnings gap. Even after adjusting for hours of work, the gender wage gap still remains large within these three categories with the highest gap in elementary occupations, professional occupations and lastly clerks respectively.

Table 4.11: Male and female Occupational distribution and mean earnings

Occupation	Male monthly mean earnings	Female monthly mean earnings	Adjusted mean hourly earnings		Relative earnings (Ratio of female-to-male earnings	
			Men	Women	Unadjusted	Adjusted (hourly)
Legislators	12123.68 (2015.22) N 256 884	10049.85*** (2616.50) N 164 363	76.54	69.16	0.83	0.90
Professionals	10285.71 (1173.61) N 368 665	6746.72*** (507.14) N 682 598	64.94	46.43	0.66	0.71
Technicians	6672.91 (1570.80) N 156 563	6167.80 (769.97) N 236 221	42.13	42.44	0.92	1.01
Clerks	5269.12 (663.91) N 270 170	4211.04*** (281.18) N 545 172	33.26	28.98	0.80	0.87
Service workers	3519.76 (316.69) N 622 278	2273.90*** (227.66) N 329 336	22.22	15.65	0.65	0.70
Skilled agricultural and fishery workers	1483.93 (253.46) N 262 322	1389.25 (520.29) N 91 229	9.37	9.56	0.94	1.02
Craft and related occup	3907.18 (330.20 N 1 057 333	2787.92*** (661.00) N 132 992	24.67	19.20	0.71	0.78
Plant and machinery	3247.58 (266.73) N 626 687	1978.14*** (219.26) N 83 658	11.72	13.61	0.61	1.16
Elementary occupations	2138.59 (152.64) N 526 907	1078.73*** (37.76) N 992 998	13.50	7.42	0.50	0.55

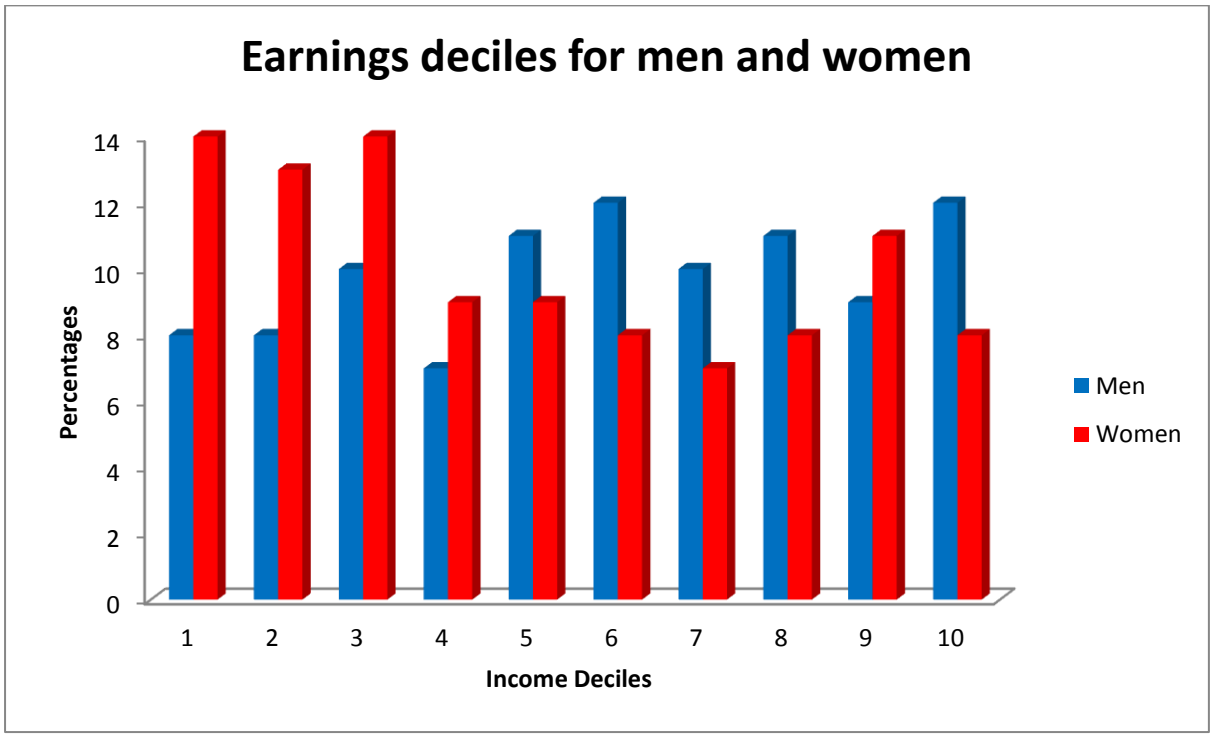
Source: Own calculations from NIDS 2008
*** p<0.01, ** p<0.05, * p<0.1 level
Standard errors in brackets; the data are weighted; N=Number of cases)

Interestingly in Table 4.11 above, the gender wage gap after adjusting for hours of work for technicians, skilled agricultural and fishery workers as well as plant and machinery operators actually closes. According to the ratios for adjusted mean hourly earnings given in Table 4.11 above, women earn an estimated 0.01 per cent, 0.02 and 0.16 more than men in the respective categories mentioned above after adjusting for hours of work. This figures are however relatively small when compared to the gender earnings differentials shown in the other occupational categories. The rest of the occupational categories still support the existence of gender wage gap which shows that women on average still earn less than men even after adjusting for hours of work.

4.2.3 The earnings distribution and gender wage differentials

Another way of exploring the gender earnings gap is by disaggregating the monthly income earned by individuals into 10 per cent quantiles (deciles). This shows who is concentrated within the lowest earnings deciles. The poorest 10 per cent as shown in Fig. 4.1 below are dominantly women (14.04 per cent of employed women) with 7.74 percent of all working men among the poorest 10 per cent quantile. Women are also over-represented in the bottom four deciles in terms of earnings. However, there is a greater percentage of men than women from the fifth decile to the 10th decile.

Figure 4.1 : Earnings deciles for men and women % (monthly earnings)

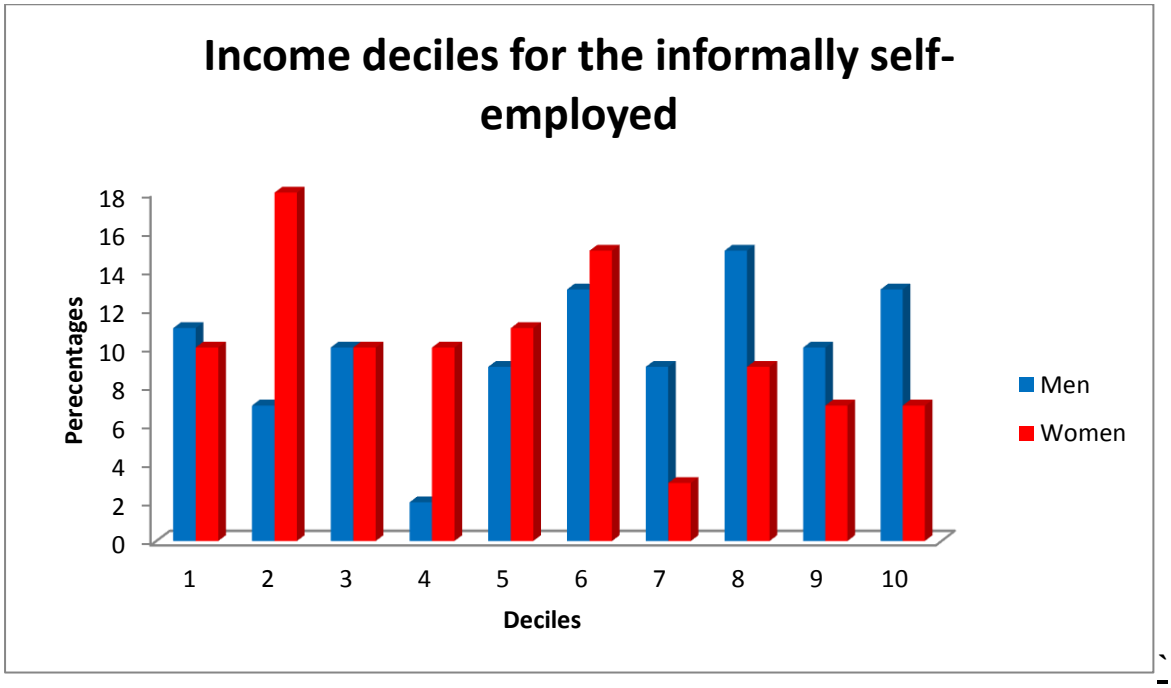


Source: NIDS 2008; Own calculations
The data are weighted

Among all employed adults, women are largely concentrated in the first decile to the fourth decile (poorest deciles) and men have a higher percentage from the fifth decile to the tenth decile, except in the ninth decile where women have a higher percentage than men. Thus Fig. 4.1 above shows that the poorest 40 per cent of earners in South Africa are predominantly women and the richest 60 per cent are dominantly men.

Since the highest gender earnings gap was observed within informal self-employment and informal wage work, Fig. 4.2 and Fig. 4.3 disaggregates income into deciles for informal self-employment and informal wage work respectively to try and establish who between men and women is the poorest in terms of earnings. Fig. 4.2 below shows income distribution amongst the informally self-employed. It shows the income deciles within informal self-employment. Women are among the poorest as they have higher percentages than men from the second decile to the sixth decile except for the third decile. This supports the evidence given in tables 4.4 and 4.5. But, as shown in the table, there is a higher percentage of men (11.01 per cent) in the first decile than women (9.83). The difference of the percentages in the first decile as much as it is slightly higher for men is relatively small and insignificant.

Figure 4.2: Income quantiles for informally self-employed men and women % (monthly earnings)

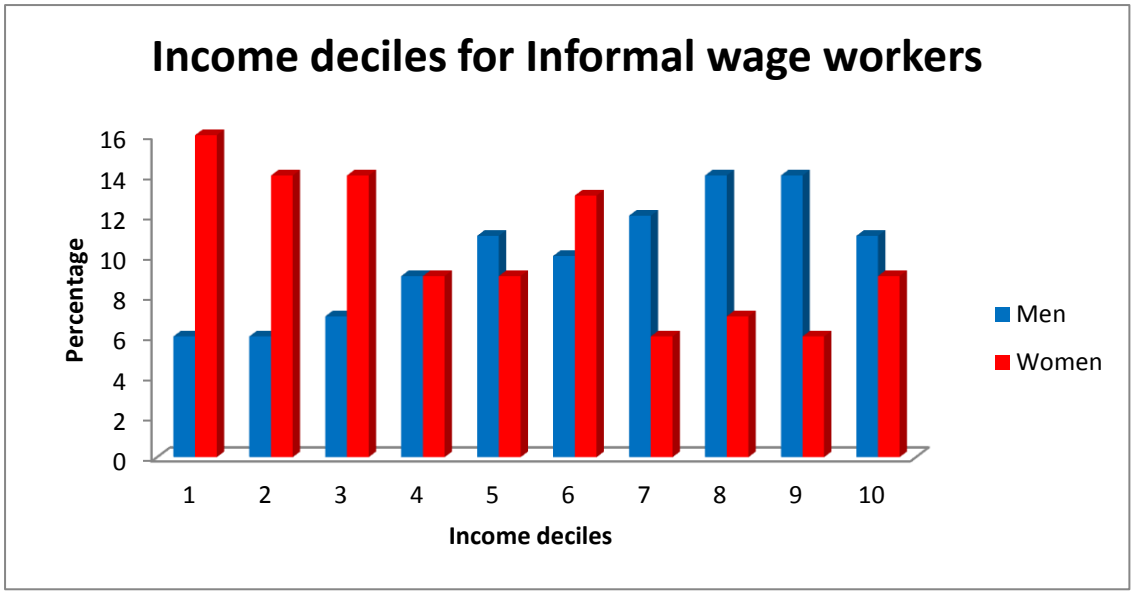


Source: NIDS 2008; Own calculations
The data are weighted

The same pattern in Fig. 4.1 and Fig 4.2 is also shown in Fig 4.3, among informal wage workers women are still among the poorest, with a majority within the first three deciles. Men on the other hand are still amongst the richest in informal wage work, dominating the 7^{th}, 8^{th}, 9^{th} and 10^{th} decile.

Thus women are over-represented in the first three deciles in both informal self-employment and informal wage work showing that they are in the poorest 30 per cent. But the difference in these deciles is more pronounced in informal wage work than in informal self-employment.

Figure 4.3: Income quantiles for informal wage work men and women %(monthly earnings)



Source: NIDS 2008; Own calculations
The data are weighted

4.3 Conclusion

This chapter has analysed the broad employment patterns of men and women in South Africa. There are nine primary occupational codes identified in NIDS and within these categories women are mostly employed in professional occupations, as clerks and in elementary occupations. The study also extended to industrial sectors and women were over-represented in occupations in private households and communication related jobs. The concentration of women within these occupations might explain the gender earnings gap found in this study. In fact, this study also found that the greatest gender wage differential is found in professional occupations and elementary occupations. This affects the average earnings of women and tends to drive them down since more women are likely to work within these occupations. Thus, one of the possible drivers of the gender earnings gap can be explained by where women work.

Turning now to the four sectors of work analysed in this study, it was established that both men and women are more likely to be employed in wage work than in self-employment. But there is a higher percentage of men than women in wage work. Women tend to be over-represented in self-employment and in subsistence agriculture. Previous literature established that one of the characteristics of the informal sector includes insecure job tenure and relatively low earnings when compared to the formal sector. Since there is an over-representation of women in informal employment relative to their share in total employment this might explain some of the gender earnings gap.

Focusing now on the earnings for men and women within the four categories of work used in this study, a broad comparison between wage work and self-employment found that there is a higher gender wage gap within self-employment than in wage work. In fact, the gender earnings gap in self-employment is more than twice the one found in wage work. This analysis was then extended into formal and informal wage work and formal and informal self-employment to get a better understanding of this differential. Within the two categories of formal work, there is a greater gender wage gap in formal self-employment than in formal wage employment. A greater gender wage gap was also found to exist in informal self-employment than the one found in informal wage employment. These findings suggest that self-employment is associated with a larger gender wage gap.

The last part of this chapter divided income into deciles to determine the percentages of men and women in the lowest and top deciles. The evidence suggests that women are overrepresented in the lowest income deciles for all employed individuals. The same pattern is evident in informal wage work and informal self-employment. Lastly, the data in this chapter have also shown that the gender wage gap is higher in the majority of occupations (2/3) where women report a higher percentage than men. The evidence in this chapter shows the existence of a gender wage gap in the four sectors of work identified in this chapter. This gap slightly declines after adjusting for hours of work. The gap also closed after adjusting for hours of work in some occupations suggesting that part of the gender wage gap can be explained by the number of hours that women work in comparison to men Part of this gender wage gap can be explained by where women work. Women tend to be more concentrated within low paying occupations than men which drive down their average earnings. It can also be explained by the fact that women work for lesser hours than men which tends to drive down their average earnings.

Chapter 5: Factors that explain earning differentials between men and women in South Africa

5.1 Introduction

The findings in Chapter 4 showed that women earn less than men on average in formal and informal self-employment as well as in formal and informal wage employment. This chapter will present and discuss the results of multivariate analyses that were conducted to understand the relationship between earnings and a number of independent variables that are discussed in this chapter. The main objective of these regressions is to explore some of the main factors which are associated with the gender pay gap and to try and identify the unexplained part of the gender wage gap that remains after controlling for some of these key variables. The regressions that will be conducted in this chapter will analyse the gender earnings differentials within each of the four main work categories[10] considered in the previous chapter.

Within these four main categories of work, Chapter Four also showed that a higher percentage of women work in formal wage work (39.76 per cent of the female work force) than in the other three categories. About 24 per cent of women with work are in informal wage employment and a considerably smaller percentage (13.56 per cent) are in informal self-employment. Lastly the lowest percentage is found in formal self-employment where there was only 2.97 per cent for women. The regressions will attempt to measure the gender pay gap after controlling for a number of factors within these four categories of work. Of note are the work categories where high gender wage differentials were established. The greatest gender earnings differentials were identified within formal self-employment and informal self-employment where the female to male mean earnings ratios were 0.31 and 0.42 respectively, after adjusting for hours of work. This is relatively lower when compared to the gender earnings differentials found within formal wage employment and informal wage employment which was 0.87 and 0.76, respectively Thus the multivariate analysis will also focus on the gender earnings differentials that exist within self-employment categories of work where gender wage differentials have been established to be the highest.

[10] The four main work categories identified in this thesis are formal wage work, informal wage work, formal self-employment and informal self-employment.

5.2 Empirical framework

There are a number of empirical studies that have been conducted in an attempt to understand gender earnings differential internationally and in South Africa. This study will use multiple regressions (classic Ordinary Least Squares (OLS)) to understand this link using a number of independent variables that are identified below.

5.3 Regression model

$$\mathbf{Y = a + b_1*X_1 + b_2*X_2 + ... + b_p*X_p + \in}$$

Where;

Y = dependant variable (Log of hourly earnings)

a = the constant

X_1 = the key independent variable of interest (gender)

$X_2 \ldots X_p$ = a vector of control variables

$\in$ = the error term

In this regression, log of hourly earnings (Y) will be regressed on a number of independent variables that are represented by $X_1 \ldots X_p$ in the equation. The other variables that affect earnings will be held constant and will be the control variables represented by X_2. The independent variables for this regression are discussed below.

5.4 Broad description of variables

5.4.1 Dependent Variable

The main research interest in this study concerns the factors that can be used to explain the gender earnings differential that exists between men and women in South Africa's labour market. As a result, the variables that will be used in the regression are those that affect the earning potential for both men and women. The dependent variable for which this regression seeks explanation is the log of hourly earnings.

5.4.2 Control variables

The control variables that will be used in this regression can be grouped into the following categories;

1. Human capital

Human capital refers to 'income producing skills, knowledge and training acquired by a person during their working lifetime' (Polachek 2003). One's incentives to invest in training are directly proportional to the time one expects to work over one's lifetime (Polachek 2003). Years of education will be used in this study as a variable to denote human capital.

Level of education

Education under the human capital theory is viewed as an investment that increases one's ability to get higher earnings. We expect that a higher level of education will result in relatively higher earnings. Thus education is expected to have a positive impact on earnings. In the regressions, 6 dummy variables were created for education. Educcat0 denotes individuals with no schooling, Educcat1 denotes individuals with primary education, Educcat3 represents individuals with matric, Educcat4 represents individuals with certificates and diplomas, Educcat5 has the highest level of education representing all individuals with degrees and higher degrees. The omitted variable in this category is the 'no schooling variable', Educcat0.

Years of tenure is another important human capital variable and under the human capital theory, the assumption is that earnings are dependent on the number of years one spends in the labour market such that the more years one works the higher the possibility of getting higher earnings. But due to limitations in the way this variable is captured in NIDS, it will not be used in this study.[11]

2. Spatial variables

Spatial variables can also be used to explain the gender earnings gap. Part of the reason for the gender earnings gap could be a result of where men and women live. Thus geographical

[11] Years of working experience in NIDS are measured by the number of years an individual has worked in a position. The problem with this is that it leaves out the other years an individual may have worked elsewhere. As a result, the variable for years of working experience will be omitted from the regressions. However, it should be noted that even though this study will not use years of working experience as a variable in the regressions, it remains an important factor in explaining the gender earnings gap. For example, women are likely to pay a wage penalty for taking time out of the workforce for motherhood.

variation can also partly explain the gender earnings differential. In this study, there are five spatial variables identified in NIDS and these are listed below. However, this study has collapsed these five categories into two broad categories (urban and rural).

i. Urban
ii. Rural
iii. Urban-formal
iv. Urban-informal
v. Rural-formal

3. Demographic variables

i. Race

Race is a demographic variable that can also be used to explain part of the gender earnings differential. In NIDS this is identified by the population group an individual belongs to. The race variables that will be used in this regression are White, African, Indian and Coloured. The omitted variable in this category of variables is White.

ii. Age

Age can also be used in understanding the gender earnings gap in South Africa. The gender earnings gap might be higher for certain cohorts as compared to others and this can be attributed to different human capital endowments, marital status among other factors that could make one cohort earn more than the other.

iii. Marital status

A wide range of literature shows that marital status can be used to explain part of the gender earnings gap. Polachek and Xiang (2009) state that there is a relatively small gender wage gap for single males and females especially among the not married as compared to married men and women (Blau and Kahn 2007). Part of this is due to the fact that married women with children may invest less in human capital than men since they anticipate taking breaks to raise children and as a result married men are expected to have higher earnings than married women (Polachek and Xiang 2006). This study will attempt to show the effect of individuals whose marital status is married and those who are not married[12]. Thus the assumption is that married women will resultantly spend less time in the labour force than men meaning they

[12] The not married individuals includes individuals whose marital status is 'Never marrried', Seperated/Divorced', 'Widow/widowed' and 'Living with partner'.

also will have less human capital since they will undertake less time in getting on the job training, thereby decreasing their wages (Becker 1985). The regressions will use two categories of marital status; the 'married' and the 'not married'.

iv. Labour market variables

Labour market variables will also be controlled for in this regression. Part of the gender earnings gap could be a result of the differences in where men and women work in the labour market. These labour market variables show the different work categories for men and women and are captured within the four working categories derived from NIDS, i.e

a) Formal self-employment
b) Informal self-employment
c) Formal wage work
d) Informal wage work

5.5 Regressions

The multivariate analysis will start with an overall regression where all employed individuals will be represented with the exception of casual workers and subsistence farmers. The analysis will then extend to more specific sectors of work. In the regression tables moving from left to right in the table coincides with the inclusion of additional control variables which come from the above mentioned groups of control variables. The primary coefficient of interest is the female variable. The expectation is that before controlling for other variables females will earn less than men in the sample, but after the inclusion of additional control variables this gap is expected to slightly decline. Regressions for formal self-employment were largely insignificant and as a result are not presented. Tables in section 5.6 show results for regressions in the other sectors of work besides formal self-employment.

5.6 Interpretation of regression results

Table 5.1 below shows an overall regression for the South African workforce [13]. As expected, the female variable in all the models in this regression has a negative coefficient showing that women on average earn less than men even after controlling for other variables that are related to earnings. This is not surprising given the results from Chapter 4 which also showed that women on average earn less than men.

Of interest in this regression are the changing values of the female coefficient as more controls are added into the regression. As shown in Table 5.1, age and marital status reduce the value of the female coefficient suggesting a reduction of the gender wage gap. This shows that part of the gender wage gap can be explained by age and marital status such that after controlling for them in the regression the gender wage gap slightly reduces.

But, as more variables are added into the regression the female coefficient starts increasing showing an increase in the gender wage gap. For instance, in Model III after controlling for spatial variables, the female coefficient starts increasing. This increase in the value of the female coefficient after the addition of the rural variable suggests that, controlling for age, marital status and urban-rural location, could be picking up the gender earnings advantages in some types of work (e.g. less domestic work in rural areas and a lower likelihood or informal retail activities). However, on the whole, women are more likely to live in rural areas than men where they are likely to work in subsistence agricultural activities where earnings are relatively low.

The addition of race variables into the overall regression for all employed individuals in Table 5.1 also increases further the value of the female coefficient but only very slightly. On the whole, the coefficients in model IV all have the expected signs with both African and Coloured workers earnings significantly less that White South Africans.

The largest increase in the value of the female coefficient is experienced after the addition of the education variable. This suggests that education is a significant predictor in explaining the gender wage gap in the overall regression in Table 5.1. The results in Model V suggest that before we control for education there is a gender wage gap that is shown by the negative female coefficient in Model IV, but the remarkable increase in its value in Model V after

[13] This excludes casual work and subsistence agriculture.

controlling for education shows that adding education into the regression actually increases the gender pay gap. This shows that employed women are more educated than employed men, such that when you control for education the gap actually increases.

However, the female coefficient1 decreases after controlling for sector of work in Model VI showing a reduction of the gender wage gap. This suggests that part of the gender wage gap is explained by where women work. Thus before controlling for sector of work, the female coefficient is higher but it decreases as the sector of work is added into the regression. This is in support of the findings made earlier in Chapter Four; women are more likely to work in informal types of work than men and as a result this drives down their earnings on average.

Moving on to an explanation of the other variables used in this regression, race variables have coefficients which are consistently negative and statistically significant. This shows that White South Africans enjoy an earnings premium (even after controlling for years of education). The highest wage penalty in the race category is paid by the Coloured race since it records the highest negative coefficients than the other races for all employed individuals. Africans pay the second highest wage penalty followed by Indians.

Staying in a rural area also affects earnings negatively. Consistently in all regression models in Table 5.1, the rural variable yielded negative values which show that living in a rural area has a negative effect for all employed individual's earnings when compared to those living in urban areas. This suggests that women are more likely than men to reside in rural areas where they are likely to be involved in subsistence agricultural work where their earnings are relatively low. This effect has been statistically significant in all regression models in Table 5.1.

The inclusion of marital status as a control variable in the regressions has shown a positive correlation with earnings. Thus married employed individuals earn more than those whose marital status is 'not married'. In trying to explain this phenomenon, previous research has shown that there is consistence evidence that shows that married men earn more than single men, but this is not the same when it comes to women (Gray 1997; Neumark 1999; Loh 1996). In fact the results have been mixed and sometimes contradictory (Budig and England 2000; Dolton and Makepiece 1987, Goldin and Polachek 1987; Hill 1979; Waldfogel 1997). Hewitt, Western and Baxter (2002) suggest that these mixed findings could be a result of the use of different statistical methods. The findings in this chapter are conclusive that individuals who are married on average earn more than those who are not and this is

consistent with the argument made by Bhorat and Goga (2002); Rospabe (2001) that uses marriage in the earnings equation as a proxy for unobserved factors such as stability, discipline and motivation. The 'Married' variable coefficients in all the regression models are statistically significant except in Model II.

The age variable has shown a minimal effect on earnings for employed individuals. However, the majority of the coefficients for this variable have remained positive in all regression models in Table 5.1 suggesting that on average older workers earn more income.

As expected, education also has a positive impact on earnings. As individuals progress to higher educational levels their earnings on average increase. This increase is statistically significant from Educcat 2 (Secondary education) to Educcat5 (Degrees and higher degrees). The findings from the education variables are consistent with the human capital theory arguments that as individuals gain more education they are also more likely to earn more. This is in support of findings made by Bhorat and Liebbrandt (2001); Rospabe (2001); Chamberlain and van der Berg (2002) who have also concluded that in South Africa education affects earnings positively for both men and women. In the regressions conducted in this model, the omitted category is 'Educcat0' a variable which represents individuals with no schooling. Thus as individuals attain education they earn more than those who have no schooling and this is consistently displayed in all tables suggesting a positive correlation between education and earnings. The highest wage penalty for employed individuals with no schooling is when they are compared with those who have degrees and higher degrees. This is supported by the fact that Educcat5 has the highest co-efficient value than the other variable coefficients for education.

The results in Table 5.1 also show regression results for earnings after controlling for sector of employment and this is presented in Model VI. The results in this model show that working in formal wage work is associated with higher earnings when compared to other 3 sectors of work. This difference is more pronounced in informal self-employment where the value of the coefficient is the highest and is negative and significant.

Table 5.1: Correlates of log of hourly earnings for all employed individuals in NIDS (excluding those in casual and subsistence agriculture)

Variable Name	I	II	III	IV	V	VI
Female	-.221***	-.165***	-.194***	-.196***	-.277***	-.249***
	(.036)	(.036)	(.035)	(.033)	(.029)	(.029)
Age		.000**	.001	-.001	.009***	.001***
		(.000)	(.000)	(.001)	(.001)	(.001)
Married		.594***	.524**	.426***	.295***	.282***
		(.039)	(.037)	(.037)	(0.33)	(.032)
Rural			-.669***	-.564***	-.348***	-.317***
			(.036)	(.035)	(.032)	(.032)
African				-.922***	-.370***	-.395***
				(.055)	(.051)	(.052)
Indian				-.213	.044	.008
				(.127)	(.113)	(.111)
Coloured				-1.049***	-.361***	-.438***
				(.062)	(.059)	(.059)
Educcat1					.002	-.008
					(.054)	(.054)
Educcat2					.356***	.329***
					(.054)	(.053)
Educcat3					.903***	.803***
					(.059)	(.059)
Educcat4					1.548***	1.415***
					(.073)	(.073)
Educcat5					1.966***	1.815***
					(.087)	(.087)
Informalself						-.419***
						(.046)
Formalself						-.209
						(.077)
Informalwage						-.302***
						(.034)
Constant	2.593**	2.324***	2.580***	3.471.***	2.006**	2.244***
	(.026)	(.627)	(.062)	(.078)	(.098)	(.099)
F-Stat	36.06	100.21	169.74	154.80	207.85	180.08
Prob>F	0.0000	0.0000	0.000	0.0000	0.0000	0.0000
.N	4053	4038	4038	4038	4038	4038

Source: Own calculations from NIDS 2008
Notes: The data are weighted. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1 level.
The reference categories are: Male, Notmarried, Urban, White, Educcat0 and Formalwageworker.

Moving on to an analysis of the gender earnings differences within specific types of work, Table 5.2 below shows the results of a multiple regression conducted for all formal wage workers. The female variable, as in Table 5.1, shows negative (but insignificant) coefficients depicting that being a female has a wage penalty. Controlling for age in Model II increases the size of the coefficient of the female variable suggesting an increase of the gender wage gap. This could be because on average, older workers earn more money and since women are

older than men on average they have an ‘advantage’. But after controlling for this advantage that women have relative to men, the gender wage gap widens slightly (although the gender wage gap is still not significant in this model).

However, after controlling for marital status in Model III, the value of the female variable coefficient decreases. Even though this reduction is statistically insignificant, is suggests that controlling for marital status in formal wage work reduces the gender wage gap.

Controlling for the urban-rural differences in this regression increases the value of the female coefficient value (but the increase is insignificant). As argued earlier, this increase in the gender wage gap suggests that women are more likely than men to live in rural areas where they likely to be involved in subsistence agricultural activities. But, since subsistence agriculture was removed from the regressions, controlling for rural-urban differences increases the gender wage gap.

The addition of race into the regression also increases the female coefficient showing an increase in the gender wage gap. But, this increase is very small and since it is insignificant it is negligible.

The greatest impact on the female coefficient is experienced with the addition of education into the regression which increases the value of the female coefficient significantly. Thus controlling for education in this regression increases the gender wage gap. As argued earlier, this suggests that employed women are more educated than employed men such that when you control for the education the gap actually increases.. Women in formal wage work do not get the same returns to education as their male counterparts.

A brief discussion of the other variables used in this regression displays the same pattern as observed in Table 5.1. For instance, staying in a rural area has a negative correlation with earnings for all employed individuals employed in formal wage work. The same effect is also experienced for the race variables that were used in this regression. As was observed in Table 5.1 the highest wage penalty is observed for Coloureds who have the largest co-efficient followed by Africans and then Indians.

Education, age and marital status show a positive relationship with earnings for all individuals employed in formal wage work as was observed in Table 5.1. All coefficients for the education variables display positive coefficients that are statistically significant except for the first education variable (Educcat1) which has a negative co-efficient but it is not statistically significant. Therefore, education tends to affect earnings positively for all

individuals in formal wage work. Of special mention in Table 5.2 is that there is no significant gender wage gap in formal wage employment until I control for education. This suggests that education is the most important factor in explaining the gender wage differentials in this sector.

Moving on to marital status, all the coefficients for the 'married' variable in models III to VI are positive and statistically significant suggesting a positive correlation between earnings and being married.

Table 5.2: Correlates of the log of hourly earnings for formal wage workers

Variable Name	I	II	III	IV	V	VI
Female	-.074	-.088	-.017	-.050	-.051	-.203***
	(.047)	(.046)	(.045)	(.044)	(.042)	(.036)
Age		.014***	.005	.006	.005	.016***
		(.002)	(.002)	(.002)	(.002)	(.002)
Married			.552***	.487***	.429***	.307***
			(.049)	(.048)	(.046)	(.039)
Rural				-.533***	-.438***	-.255***
				(.049)	(.047)	(.041)
African					-.744**	-.331***
					(.066)	(.058)
Indian					-.032	.181
					(.148)	(.125)
Coloured					-1.074***	-.451***
					(.073)	(.066)
Educcat1						-.057
						(.087)
Educcat2						.313***
						(.085)
Educcat3						.899***
						(.088)
Educcat4						1.451***
						(.098)
Educcat5						1.798***
						(.107)
Constant	2.888***	2.354***	2.426***	2.587***	3.344***	1.883***
	(.032)	(..086)	(.084)	(.083)	(.099)	(.133)
F-Stat	2.49	23.26	58.81	76.32	82.69	134.54
Prob>F	0.1149	0.0000	0.0000	0.0000	0.0000	0.0000
N	2094	2094	2081	2081	2081	2081

Source: Own calculations from NIDS 2008
Notes: The data are weighted. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1 level.
The reference categories are: Male, Notmarried, Urban, White and Educcat0.

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The regressions were also carried out for all employed individuals in informal wage work and the results are presented in Table 5.3 below. In Chapter Four, it was shown that an estimated 21.89 per cent of all employed men and 23,79 per cent of women are employed in this sector.

In the regressions conducted, the female coefficient has a statistically significant negative coefficient suggesting a negative correlation with earnings. This is in support of findings in this study that women on average earn less than men in informal wage work.

Focusing to the variable of interest in this regression, the gender variable, controlling for age increases the value of the female coefficient showing a small increase in the gender wage gap. Thus when we look at the gender wage gap in Model I before we control for age, it is slightly lower. A possible explanation for this increase in the gender wage gap is that older workers on average earn more income and since women on average are expected to be older than men, it gives them an 'advantage'. Thus this 'advantage' inflates their earnings and tends to underreport the gender wage gap that exists. But, after controlling for this 'advantage' it shows a slight increase in the gender wage gap.

Controlling for marital status decreases the value of the female coefficient significantly. This suggests that controlling for this variable actually reduces the gender wage gap. This suggests that married women are more likely to be responsible for housework and childcare and as a result spend less time on average than men in paid employment activities. As a result, controlling for this disadvantage reduces the gender wage gap that exists between men and women.

The value of the female coefficient also increases after the inclusion of spatial variables suggesting that controlling for where men and women live increases the gender wage gap. As argued earlier, this increase in the gender wage gap suggests that women are more likely than men to reside in rural areas where they are likely to be involved in subsistence agricultural work where their earnings are relatively low. However, the regressions omit work in the subsistence agricultural sector and could therefore explain the increase in the gender earnings gap if men are more likely to be involved in low paying non-agricultural work in rural areas (or if women are less likely to be involved in domestic work in rural areas).

Table 5.3 below also shows that the inclusion of race into the regression increases the value of the female coefficient, suggesting that controlling for race in informal wage work increases the gender wage gap in this sector. This suggests that between employed men and women in informal wage work within the same race categories, women pay a higher earnings penalty.

As expected based on the results from Table 5.1 and 5.2, adding education to the regression, shows the highest increase in the value of the female coefficient. The previous tables showed that education increases the gender wage gap the most in formal wage work and this finding

is also reflected in informal wage work. In line with an earlier argument, the addition of education variables in the regression results in the greatest increase of the female coefficient suggesting that employed women are more educated that employed men and when you control for education the gender wage gap actually increases.

Now moving on to a more general discussion of the other variables used in this regression. Staying in a rural area as in Table 5.1 and 5.2 has a negative impact on earnings for all employed individuals in formal wage work. White South Africans continue to enjoy am earnings premium when compared to other race categories. Age, marital status, and education variables also continue to show positive coefficients suggesting an expected positive relationship with earnings. Age has positive coefficients but only those for Models II and VI are statistically significant. This suggests that age has a positive relationship with earnings even though such an effect is minimal suggested by the small co-efficient values. The married variable continues to display statistically significant coefficients and in all models in this regression. Education also continues to display positive coefficients in all models that are statistically significant except for Model I. This has also been observed in Table 5.1 and this suggests that attainment of primary education has a minimal effect on earnings. It is only after attaining higher educational levels starting from Secondary education that having no schooling has a statistically significant wage penalty.

Table 5.3: Correlates of the log of hourly earnings for informal wage workers

Variable Name	I	II	III	IV	V	V1
Female	-.162***	-.170***	-.141**	-.187***	-.203***	-.253***
	(.051)	(.051)	(.051)	(.049)	(.048)	(.045)
Age		.004	.000	-.000	.001	.006***
		(.002)	(.002)	(.00)	(.002)	(.002)
Married			.293***	.252**	.187***	.123**
			(.059)	(.06)	(.056)	(.054)
Rural				-.517**	-.437***	-.325***
				(.05)	(.056)	(.048)
African					-1.001**	-.676***
					(.106)	(.104)
Indian					-.293	-.140
					(.267)	(.252)
Coloured					-1.044***	-.655***
					(.112)	(.111)
Educcat1						-.019
						(.067)
Educcat2						.220***
						(.067)
Educcat3						.565***
						(.086)
Educcat4						1.205***
						(.159)
Educcat5						1.806***
						(.214)
Constant	2.106***	1.956***	2.001***	2.301**	3.199***	2.431***
	(.036)	(.084)	(.085)	(.086)	(.125)	(.149)
F-Stat	10.01	6.93	12.67	37.88	37.62	37.86
Prob>F	0.0016	0.0010	0.0000	0.0000	0.0000	0.0000
N	1324	1324	1322	1322	1322	1322

Source: Own calculations from NIDS 2008
Notes: The data are weighted. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1 level.
The reference categories are: Male, Notmarried, Urban, White and Educcat0.

The last regression was conducted for individuals in informal self-employment. In Chapter Four, this sector recorded the highest gender earnings gap with the lowest ratio of male to female earnings of only 0.42. In this regression, all female variables show a negative correlation that is statistically significant in all models except in Model IV. The results of the regressions conducted in informal self-employment show a slightly different picture of the gender wage gap. The value of the female coefficient is actually lower after the addition of other variables. This is except in model II where the addition of age slightly increases the female coefficient value suggesting that controlling for age in informal self-employment increases the gender wage gap. But the reduced value of the female coefficient in the other models suggests that the variables used in this regression actually explain some of the gender earnings gap.

Getting into a more detailed discussion of the female coefficient, adding age to the regression increases the value of the female coefficient as indicated above. As argued earlier older workers tend to earn more income and women on average are older than men. Thus controlling for age removes this 'advantage' than women have when compared to men. As a result after controlling for age, the gender wage gap increases.

The addition of marital status reduces the value of the female coefficient. This is evidence of a reduction in the gender wage gap. As argued earlier, this suggests that controlling for this variable actually reduces the gender wage gap. This suggests that married women are more likely to be responsible for housework and childcare and as a result spend less time on average than men in paid employment activities. As a result, controlling for this disadvantage reduces the gender wage gap that exists between men and women.

The addition of the spatial variable into the regression reduces the gender wage gap as is reflected by the reduction in the value of the female coefficient. This is surprising considering the fact that controlling for this variable in the previous regressions increased the gender wage gap. This suggests that, within informal self-employment, women in rural areas earn less than men and this could be due to the fact that women are more likely to be involved in a range of low paying non-agricultural activities in these areas.

The addition of race variables into this regression increases the value of the female coefficient. Thus the gender wage gap that exists in informal self-employment increases after we control for racial differences. As argued earlier, this suggests that controlling for race in informal wage work increases the gender wage gap in this sector. This suggests that between employed men and women in informal wage work within the same race categories, women pay a higher earnings penalty.

As expected based on the results from Table 5.1 and 5.2, adding education to the regression, increases value of the female coefficient significantly. The previous tables showed that education increases the gender wage gap the most in informal self-employment and this finding is also reflected in informal wage work. As shown earlier the addition of education variables in the regression results in the greatest increase of the female coefficient suggesting that employed women are more educated than employed men.

Table 5.4 shows that in explaining the gender wage gap in informal self-employment, there is a slightly different explanation than the ones given in the other sectors. Controlling for some variables in this sector actually reduces the gender wage gap, whereas in the previous tables it

had increased the gap. Thus in informal self-employment we cannot explain the gender wage gap by marital status, race and as shown education is not much of a factor in understanding this differential. This sets this sector apart and also suggests that different policies are needed when addressing gender earnings differentials in this sector.

Table 5.4: Correlates of the log of hourly earnings for informal self-employed workers

Variable Name	I	II	III	IV	V	VI
Female	-.399***	-.400***	-.375***	-.322	-.343***	-.363***
	(.122)	(.122)	(.120)	(.118)	(.116)	(.113)
Age		-.001	-.008	-.006	-.008	.001
		(.004)	(.005)	(.005)	(.005)	(.004)
Married			.512***	.533***	.365***	.336
			(.127)	(.125)	(.127)	(.124)
Rural				-.581***	-.400***	-.308
				(.118)	(.123)	(.121)
African					-.977***	-.475
					(.213)	(.217)
Indian					-.2.632	-.335
					(.522)	(.508)
Coloured					-.669	-.220
					(.300)	(.303)
Educcat1						.078
						(.179)
Educcat2						.518***
						(.177)
Educcat3						.709***
						(.210)
Educcat4						1.456***
						(.281)
Educcat5						1.826***
						(.596)
Constant	2.304***	2.370***	2.389**	2.536***	3.461***	2.193***
	(.091)	(.210)	(.207)	(.205)	(.285)	(.379)
F-Stat	10.76	5.43	9.08	13.16	11.18	10.20
Prob>F	0.0011	0.0046	0.0000	0.0000	0.0000	0.0000
N	510	510	510	510	510	510

Source: Own calculations from NIDS 2008
Notes: The data are weighted. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
The reference categories are: Male, Notmarried Urban, White and Educcat0.

5.7 Conclusion

This chapter has presented and discussed the results of multiple regressions that were run to explore the gender earnings gap that exists in South Africa's labour market. One of the major findings in this chapter is that formal wage workers on average earn more than workers in

formal self-employment, informal wage work and informal self-employment. This is in line with the findings in Chapter four where the lowest gender wage gap was also found to exist in this sector. The variables used in the regressions conducted in this chapter show different effects on earnings but the most important effect was on the changes in the value of the female coefficient in the regressions as more variables were added. In the overall regression for all employed individuals as well as in the regressions conducted for individuals in formal wage work and informal wage work, education increased the gender wage gap more than all the other variables used in the regressions. This showed that for individuals employed within these sectors with the same level of education women tend to suffer more in terms of the returns to education suggesting the existence of gender wage discrimination within formal wage work and informal wage work. However, in informal self-employment education is not a big factor in explaining the gender wage gap in this sector.

This chapter also found that there are different factors that may be used to explain the gender wage gap in informal self-employment and whereas the addition of other variables into the regressions in formal wage work and informal wage work largely increased the gender wage gap, in informal self-employment controlling for other factors reduced the gender gap. This shows that in informal self-employment the gender earnings gap may not be explained by the variables used in the regressions to the same extent as in the other sectors of work.

CHAPTER 6: CONCLUSION

6.1 Introduction

This study is a contribution to a growing body of literature on the gender earnings gap in South Africa. One of the aims of this study was to identify the broad employment patterns for men and women to establish in which occupations and types of work women are likely to be concentrated. This analysis also extended to explore the gender earnings differentials within formal wage work and self-employment as well as in informal wage work and self-employment. This study also sought to try and establish which sectors of work had the highest gender earnings differential. Descriptive statistics and multiple regressions were used in analysing the gender wage differential in South Africa's labour market. This chapter will summarise the findings made in this study.

6.2 Summary of findings

The findings in this study show that a greater percentage of women (relative to men) are employed in elementary occupations, professional occupations, and as clerks. The overrepresentation of women in elementary occupations as well as in domestic work is in line with earlier research and this could explain, in part, why women on average earn less than men. This over-representation of women in private household work is nothing new, international literature as well as South African literature has also concluded that women are overrepresented in domestic work and in elementary occupations.

This study also found that a higher percentage of employed men and women are wage workers. What this shows is that both men and women are more likely to work for other people more than they are likely to be self-employed. Thus wage work in South Africa employs more people than self- employment. But, in self-employment and subsistence agriculture, there is a higher percentage of the female workforce showing that women are more likely to work within these two categories of work than men.

This study also analysed four categories of work and within these, women are more likely than men to be concentrated within informal wage work and informal self-employment. As expected, men tend to be overrepresented within formal wage work and formal self-employment. Based on these estimates, it can be concluded that when compared to men

women are more likely to be employed in informal types of work whilst men are more likely than women to work in formal work categories.

The overrepresentation of women within informal employment and subsistence agriculture is no coincidence previous studies also found that South Africa has experienced an increased labour force participation by women which has resulted in women creating work for themselves in informal types of work (Casale 2004). Casale and Posel (2004) also came to the same conclusion, they found that the increased involvement of women in post-apartheid South Africa's labour market reflects the increased unemployment of women which has resulted in them creating work for themselves in self-employment and subsistence agriculture related activities.

This dissertation also sought to establish the gender earnings differentials in formal and informal work as well as in wage employment and self-employment. The findings in this study showed that women on average earn less than men in all sectors of work used in this study. These results were significant except in formal wage work. A focus on all employed individuals in NIDS showed that women on average earn less than men even after adjusting for hours of work.

The comparison for men's and women's earnings was also extended within the nine occupational categories of work discussed earlier and in all these occupational categories women earned less than men on average. The greatest gender wage gap within these categories was recorded in elementary occupations. This shows a major inequality since more women are likely to be employed in elementary occupations than men. This also highlights the vulnerability of women in South Africa's labour market: within elementary occupations where more women than men manage to secure employment, also exists the largest gender wage differential.

However, this gender wage gap closed in technical work, skilled work as well as in plant and machinery work after adjusting for hours of work. This means that the gender wage gap in these occupations may be explained by the fact the fact that women work for lesser hours than men. As a result, after adjusting for hours of work, the gap closes.

The second part of the study on the mean earnings differentials between men and women divided income into deciles to depict the richest and poorest 10 per cent of all employed individuals in NIDS. The conclusion reached for all employed individuals is that women are

overrepresented in the bottom deciles. On the other hand, there is a greater percentage of men in the top deciles. This analysis was also extended for men and women in informal self-employment and informal wage work and the same conclusions were reached. Thus in terms of earnings women are overrepresented in the bottom deciles whilst men tend to be overrepresented in the top deciles and this supports the findings in this chapter that women earn less than men on average in all sectors of work.

There are a number of reasons that can be used to explain the gender wage differential found in this study. For instance this study has found that part of the gender wage gap can be explained by the number of hours that women work compared to men. This study has found that women on average work fewer hours when compared to men in all sectors of work analysed in this study. This has a tendency of driving down women's earnings on average and since men work for more hours their wages on average become relatively higher.

The last part of this study conducted multiple regressions to try and explain the gender earnings differential in South Africa's labour market. The variables used in the regressions included spatial variables, marital status, race, sector of employment, age and education. The regressions that were conducted analysed the gender earnings differentials within three of the work categories used in this study. The variable of interest in these regressions which denoted the gender earnings gap was the female variable and how its coefficient changed as more variables were added into the regression.

In all the regressions conducted in this chapter except for the one in informal self-employment, the addition of the education variable into the regression increased the gender wage gap more than any other variable. This suggested the existence of gender wage discrimination within these sectors of work since individuals with the same level of education are getting different earnings. Thus women in formal wage work and informal wage work tend to suffer more in terms of the return to education than men.

In the regressions conducted for all employed individuals it was established that formal wage workers on average earn more than individuals employed in formal self-employment, informal wage work and informal self-employment. Other variables used in the regressions showed a pattern that is consistent. For example age has shown a positive effect on earnings for all employed individuals even though the effect has been minimal. The same effect has been shown with education and being married had positive effects on earnings for all employed individuals as well as in the three sectors of work analysed. On the other side, race,

being female and residing in a rural area has a negative effect on earnings. The coloured race paid the highest wage penalty when compared to other races followed by the African race.

The regressions were also conducted for formal wage workers, informal wage workers and informally self-employed individuals. The results from Tables 5.1, 5.2 and 5.3 reflected the same trend. They show the existence of wage discrimination and racial discrimination and women being more affected than men. Regressions in these tables also show that the gender wage gap is also explained, in part, by where men and women live.

But in informal self-employment, the regression results show a slightly different picture. The results suggest that it is unlikely to find a significant gendered return to education in informal self-employment. However, controlling for where men and women live increases the gender earnings gap in this sector since women are more likely to be involved in a number of low paying non-agricultural activities than men in rural areas.

Based on the findings from the regressions there are a number of factors that come into play when explaining the gender wage differential. For instance the sector of work plays an important role in understanding this gap. As indicated in this study the smallest gender wage gap has been found to exist in formal wage work and the results in the regressions conducted in this chapter also show that working in this sector has a wage premium. The conclusions reached in chapter five suggest the existence of wage discrimination in formal wage work and informal wage work even though the results were not significant in former category. But in informal self-employment, since education was not a major factor in explaining the gender wage gap, the gender wage gap was partly explained by spatial variables as well as racial variables.

There were a number of limitations found in this study. One of the main limitations in this study is self-selection and as a result this study could not identify the factors that result in men and women working in certain occupations. Even though this study did not control for self-selection, it acknowledges this limitation. There was also a problem in the way of the key variables in this study were defined; the definition of casual work. The way the question that captured casual work was captured was too vague such that it remained unclear whether it constituted formal or informal work. As a result casual work was excluded from this study and focus was on those categories of work where clear definitions were given. Lastly, this study also omitted years of working experience since the variable did not capture the total

number of years an individual may have worked in their lifetime. This study however, recognises that it is one of the key variables in the study of gender wage differentials.

6.3 Conclusion

In South Africa, the growing body of literature on gender earnings differentials has utilised different estimation methods and data sets and has also focused on different sectors of work. This study investigated the gender earnings gap for all employed individuals (except the casually employed) using NIDS, a relatively new data source in this type of analysis.

This study has found that a number of factors can be used to explain the gender wage gap but that these differ across the sectors of work used in this study. For instance, in formal types of work this study established that apart from women working fewer hours than men there is existence of gender wage discrimination for men and women with the same level of education. But in informal self-employment this study concluded that it is unlikely to find a significant gendered return to education in this sector.

Of prominence as well in this study is the magnitude of the gender wage gap in the different occupations and sectors of work. This study established that the gender wage gap is more pronounced in some sectors of work and occupations than in others. For example, this study found the existence of a higher gender wage gap in female dominated occupations than male dominated ones. The gender wage gap was also more pronounced in informal self-employment than in the other sectors of work. This shows the importance of understanding and addressing the causes of the gender wage gap in South Africa. In light of these findings, it is evident that despite the existence of post-apartheid legislation that has sought to provide South African women with equal employment opportunities as well as equal earnings potential, there is still evidence of a gender wage gap in South Africa. What this suggests is the need for sector specific policies that will further allow for this differentiation to be corrected. Of special mention as well is the need to support informal types work to allow for the expansion of this sector in South Africa.

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