A gender-based investigation of the determinants of labour market outcomes in the South African labour market

Odile Mackett

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Faculty of Commerce, Law and Management

School of Economic and Business Sciences

University of the Witwatersrand

Johannesburg, South Africa

Supervisor: Professor Daniela Casale

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Abstract

In this report, the individual and household circumstances which influence the probability of a person having a certain labour market outcome, and how these outcomes differ by gender, will be investigated. While a number of similar studies have been conducted, this report contributes to the South African literature by investigating, using more recent data from the National Income Dynamics Study, what the determining factors are that drive women and men to the labour market, and determine employment outcomes. Furthermore, the investigation is extended by exploring whether these factors differ for men and women by age cohort. The main hypothesis of the study is that the determinants, which impact labour market outcomes and a successful transition from being not economically active or unemployed in a given period, to becoming employed in another period, differ for males and females; with factors such as education, labour market experience, and other household factors like marital status and children in the home being more important for women than for men. The results of the econometric analysis suggest that education is important for both sexes, but is of particular importance in determining the labour force participation and employment probabilities of women and the youth cohort. Furthermore, the location in which an individual resides is an important determinant of the labour market outcomes of women, with women in urban areas having the most favourable labour market outcomes. Having pensioners in the home has an adverse effect on the employment probabilities of men, while it is positively related to the employment probabilities of young women. Children in the home reduce the labour force participation of both men and women, but have a negative effect on the employment probabilities of women.

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CHAPTER 1: INTRODUCTION

Why do men and women make different labour market decisions or experience different labour market outcomes? This is a question that has been posed for decades. While, men have traditionally held the role of breadwinner and women the role of homemaker, women started entering the labour market gradually, and began to engage in wage employment towards the end of the twentieth centry (Smith & Ward, 1985). This process took place in both developed and developing countries, as well as capitalist and socialist regimes, taking place in some more rapidly than others (Folbre, 1994). In an ideal world, this transformation would have meant that women and men could share in housework and childcare responsibilities in order for them to perform their duties in the formal economy, however, this has, instead, had differing consequences for men and women in different societies. The entry of women into formal employment thus not only had economic consequences, but also had an impact on the social relations between the sexes.

Although countries differ in terms of the customs and traditions to which they provide a home, having a large labour force is beneficial to the economy, and policymakers would thus want as many people actively participating in the economy as possible. However, for governments to induce individuals to supply their labour, it is useful for them to have knowledge of the factors which act to encourage or hinder labour market entry, as well as to be cognisant of the ways in which these factors affect men and women differently. Studying these factors is an exercise in need of pursuit on a regular basis, due to the changing nature of the labour market and social relations in society.

A distinguishing feature of the South African labour market over the years has been its persistent gender and racial inequalities (Ranchhod, 2010). Studies have found that gender inequalities in labour markets have a negative effect on economic growth (Kabeer, 2012; Klasen & Lamanna, 2009) and it is thus of vital importance for policymakers to have a strategy in place to reduce gender inequality where it occurs. To do this, it is important to understand the factors which encourage or impede individuals from entering the labour market and gaining employment. These factors are likely to differ for men and women.

In this report, the individual and household circumstances which influence the probability of a person having a certain labour market outcome receives consideration. Although this phenomenon has been investigated in a number of previous studies which also focused on developing countries (see for example, Bbaale and Mpuga (2011), Bridges and Lawson (2008) and Bridges, Lawson and Begum (2011) on Uganda and Bangladesh), this report will build on the existing literature, by exploring this topic for the South African labour market. Although, in South Africa, numerous authors have also contributed to this topic (see for example Dinkelman and Pirouz (2002) and Ntuli (2007)), this report will contribute to South African literature by investigating, using more recent data, those determining factors driving women and men into the labour market, and which determine employment outcomes. Furthermore, the investigation is extended by exploring whether these factors differ for men and women by age cohort.

Purpose of the study

The report will thus explore gender differences in the factors determining labour market outcomes[1] in South Africa. In addition to this, the study will investigate whether these factors are different for men and women in the youth and non-youth cohorts. The purpose of the study is to determine whether there are gender differences in the factors which determine labour market outcomes, or whether someone is likely to transition from being not economically active or unemployed in one period to becoming employed in the next, and whether these gender differences are more or less pronounced amongst the youth.

Research questions

The report will seek to provide answers to the following questions:

a) Are there gender differences in the factors which determine labour force participation (LFP)?
b) Are there gender differences in the factors which determine labour market outcomes, namely entry into one of three states – employed, unemployed or not economically active (NEA)?
c) Are there gender differences in the factors which determine whether someone who is NEA or unemployed in one period is likely to become employed in a subsequent period?

[1] Labour market outcomes in this report refer to whether an individual is employed, unemployed or not economically active (NEA). These states will be discussed in detail in the rest of the report.

d) Are these factors different among the youth and non-youth cohorts?

While there has been an increase in gender studies of the labour market in the post-apartheid period in South Africa, a detailed microeconomic analysis such as the proposed study has not been undertaken for the South African labour market, using the data employed here, namely the National Income Dynamics Panel Study (NIDS).[2]

Hypotheses of the study

Based on the findings of previous studies, which are extensively discussed in the literature review, this study hypothesises that the determinants which impact labour market outcomes differ for males and females, respectively. Furthermore, the factors which determine a successful transition from being inactive or unemployed to becoming employed from one period to another are also likely to differ by gender. It is possible that education and labour market experience will be more important for women than for men, if employers value signals of productivity differently by gender. In addition, household factors (like marital status and children) might differentially affect the probability of joining the labour market and finding employment. Given the changing gender norms over time, and improved labour legislation in the post-apartheid period, it is possible that differences in the factors determining labour market states between men and women are likely to be less pronounced among the youth cohort, when compared to the non-youth cohort.

Research methods

The research questions posed will be investigated, making use of longitudinal data from the National Income Dynamics Study (NIDS). The data will first be utilised to determine how socio-economic and demographic characteristics of an individual impacts upon their LFP decisions[3] or outcomes, whereafter it will then be utilised to determine how the same factors impact the likelihood of an individual being in one of three labour market states (NEA, unemployed or employed), and lastly, how these characteristics assist or impede the chances of an unemployed or NEA individual obtaining employment in the future. All the regressions in the report are disaggregated by gender so as to determine how these factors impact the labour market outcomes of men and women differently, and where sample size allows, the

[2] NIDS is a survey conducted by the Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town.

[3] The LFP decisions of an individual refer to whether an individual chooses to supply their labour to the labour market or whether they choose to be NEA.

data is further disaggregated to explore how these differ between the youth and the non-youth cohorts of the population.

Outline of the report

The report consists of six chapters, with Chapter One providing the introduction to the study. This is followed by Chapter Two, which provides discussion of the literature which is relevant to the topic. It also introduces a number of theories which are related to the determinants of LFP, particularly for women. Chapter Three provides a description of the data that were utilised to investigate the research questions and the analysis techniques applied to interpret the data. This chapter also describes the variables used in the regressions and the limitations of the research. Chapter Four consists of a discussion of the descriptive statistics of the variables used in the analysis, while Chapter Five provides the results of the regressions. Lastly, Chapter Six will provide a summary of the findings of the report, make recommendations and identify areas for future research.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

An individual's labour market state has a number of implications - not just for that individual, but also for his or her family, community, and country. These labour market states include either being employed, unemployed or not economically active (NEA). For the individual, being in a particular labour market state is likely to influence his or her bargaining power in society, and have consequences for his or her family, and it might result in other members of the family being able to choose a different labour market state, or being compelled into a particular state.

For the community and the country, labour market states have both macroeconomic and microeconomic consequences (Escudero & Mourelo, 2013). When it comes to the macroeconomic, there are implications for economic growth and the employment rate (Tsani, Paroussos, Fragiadakis, Charalambidis & Capros, 2012). Whatever the consequences may be for the individual actor in the labour market, there is consensus that any given country would aim to keep its labour force participation (LFP) rate as high as possible (Klasen & Lamanna, 2009). Although there are many measures that might be taken by policymakers in an effort towards increasing the LFP rate, there are individual circumstances in which citizens may find themselves that prevent them from entering the labour market, just as there are circumstances which may compel them to be part of the actively participating labour force. A theoretical literature review will be followed by an empirical literature review on those factors likely to influence individual labour market states, the way in which these factors influence labour market states, and how they are likely to differ by gender and age.

2.2. Theoretical literature review

The debate around women's LFP has changed in the last few decades, and has become particularly important as high female LFP has proven to be highly beneficial to a country's economic growth (Bbaale & Mpuga, 2011; Tsani et al., 2012). Neoclassical economists view the LFP decision as a choice between work and leisure time, and this is based on the assumption that the individual making the decision is rational and, as a result, will choose to engage in the activity which has the lowest opportunity cost. The rationality of the individual

has been described as "the ability of individuals to order their preferences (their likes and dislikes) in a manner that is logically consistent and then, given that preference structure, to make choices that maximise their self-interest" (Barker, 1999b: 571). This decision is influenced by a number of factors, such as an increase in the wage an individual earns, which could lead to an increase in leisure time, as individuals are given the opportunity to work fewer hours and earn the same wage (income effect), or an increase in working hours as the opportunity cost of leisure time has become too high (substitution effect) (Becker, Murphy & Tamura, 1994).

Feminist economists, however, reject the rigidity of the neoclassical model, the perceived rationality of human beings, and the scarcity framework under which society is assumed to live. They claim that the choices people make every day are neither value-free nor gender neutral, where these decisions cannot simply be viewed through a utility maximising and self-interested lens, but instead involve complex interests, which are not necessarily self-reflective, but may involve considering the consequences of a community or a family as well (Barker, 1999b). Women and men fulfil multiple roles in society, some of which are not captured in the simplistic work/leisure trade-off model presented by the neoclassical school. Mjoli-Mcube (1998: 208) refers to this phenomenon as "gender contract[s], 'which are the invisible social contracts within which men and women act in the belief that this is what societies expect of them' (Schlyter and Zhou 1995, 5)". Furthermore, these decisions often differ for men and women as a result of this gender contract, and the patriarchal structures that have been perpetually enforced by society (Folbre, 1994). According to the neoclassical assumptions of rationality and individuality, each human being thus has the ability to maximise his or her utility, and would choose a labour market outcome that might provide him or her with the greatest utility. This has lead to the development of the human capital theory.

2.2.1 Human capital theory

Van Der Merwe (2010: 107) posits that "a core thesis of human capital theory is that education renders people more productive, that is, it raises the marginal productivity of an educated worker relative to one not so educated". This theory, which is based on "*individualism, perfect knowledge, rationality, private property rights* and *market economy (competition*)" (Van Der Merwe, 2010: 108), makes no distinction between the returns which women and men may face, but rather assumes that everyone, if given the opportunity to be

educated, could expect the same returns from their increased knowledge and skills. In addition, "human capital theory assumes that individuals have perfect foresight about future earnings for every level of education" (Lam, Leibbrandt & Mlatsheni, 2008: 3). The human capital theory implies that differences in wages between workers, both men and women, are attributable to differences in the level of education, the number of years of experience, and the level of skill a person acquires. Human capital theorists have claimed that a wage gap may exist between men and women, as women generally invest in human capital that does not have a monetary return as high as the human capital in which men invest (Jacobsen, 1999). Where an individual is married, the partner with the ability to earn a higher salary spends more time in the labour market, while the other partner allocates more time to taking care of housework (Delaunay, 2010). However, in reality, there exists a wage differential between certain groups, which cannot be explained by the postulates of the human capital theory. Lips (2013) suggests that this earnings gap is attributable to discrimination in labour markets.

Human capital theorists further ignore the role that customs and traditions play in the labour market, and simply emphasise the increasing number of working opportunities for women which accompany a growing capitalist system (Seguino, 1997). There is an assumption that everyone can freely choose the type of human capital they will invest in, and how this human capital will be utilised (Jacobsen, 1999). Workers who expect greater returns from the labour market would thus be more likely to be economically active, and actively engage in searching for a job if they were to be unemployed. By the same token, it would therefore be logical to conclude that certain women may be less optimistic about their labour market returns, due to the presence of labour market discrimination. While Marxists and neoclassical economists agree that the expansion of a capitalist system provides more working opportunities for women as more labour is demanded, there are differences in the way in which they view how these opportunities affect women (Seguino, 1997). Neoclassical economists believe that employers are rational beings who will employ the labour which is cheapest, while Marxists believe that this only serves to exploit the class relations which exist between the working class and the capitalist class. However, a criticism that feminist economists have posed to Marxists is that "production for exchange, typically men's work, takes precedence over production for use or reproduction, typically women's work" (Albelda, 1999: 539).

2.2.2 Reproductive labour

Reproductive labour, which is generally not included in the gross domestic product (GDP) of countries, is defined as "the work of managing a household, cooking, cleaning, keeping home, clothing and domestic equipment in good repair, and caring for family members and friends and neighbours" (Bakker, 1999: 85). The division between productive and reproductive work is known as the sexual division of labour (Barker, 1999a). Men are typically engaged in work for which one would receive monetary remuneration, whereas women are typically involved in reproductive work. The reason for this, according to neoclassical theorists, is because "women simply have a greater preference for family life than men, and are therefore willing to sacrifice more [for it]" (Folbre, 1994: 98). However, others argue that the expectations which society has of men and women in terms of work makes a women's decision about whether to participate in the labour force or not a more complex issue than it is for men (Coleman, 1999). The debate on reproductive labour has come to the forefront, with the development of feminist theories, and the large influx of women into the labour market. Although the International Labour Organisation (ILO) defines economically active individuals as "all persons of either sex who furnish the supply of labour for the production of goods and services during a specified time-reference period" (ILO, http://www.ilo.org), reproductive work is just as important in ensuring that the 'productive' side of the economy functions well. A burgeoning literature has developed around the importance of reproductive labour, especially in debates involving class and race (Lewis, 2001), however, the heavy burden placed on women by housework responsibilities maintains segregation in productive occupations (Folbre, 1994). As a result of this 'responsibility' placed on women, "the labour supply decision of women is based on a complex of needs including financial necessity, social goals for well-being, gender determined non-market responsibilities and personal interest" (Coleman, 1999: 503). Lim (2002: 204) further adds to this and states that "the conflict between women's productive and reproductive roles significantly raises the opportunity cost of having children" and the longer this conflict persists, the more likely we are to witness a decrease in fertility rates, especially as women become more educated.

2.2.3 Reservation wage

A reservation wage is defined by Walker (2003: 4) as "the highest wage" at which a person will choose not to work, thus, a reservation wage will be lower for poorer individuals and will

tend to be higher for those who are wealthier (O'Higgins, 2001). An individual's reservation wage has been found to be a significant determinant of that person's labour market state and has a positive relationship with an individual's unemployment duration (Walker, 2003). The reservation wage, according to Wittenberg (2002: 4) should be "set not just to cover the cost of leisure foregone, but also, the opportunity cost of foregoing additional search", as searching for a job does cost money. While the determination of wages is not a supply-side issue, it does have a determinate effect on the individual decision to supply labour or not. The marital status of an individual is said to be a significant factor in determining a person's reservation wage. Other individual characteristics, affecting the reservation wage are whether or not an individual is the head of a household, how many employed individuals reside within the household, as well as the level of education which an individual possesses (Walker, 2003). As these tend to differ by gender, it is expected that there would be gender differences in the reservation wages of individuals, and thus gender differences in the decisions people make as to whether or not they will be an active participant in the labour market. Furthermore, a NEA housewife, for instance, who has the support of a husband's wage (which is sufficient to support the whole household), may have a higher reservation wage than an unemployed male who lives in a household with inadequate income available. Changes in the household may thus change a person's reservation wage, and give rise to effects such as the added worker effect.

2.2.4 Added worker effect

Another phenomenon which has had an impact on the labour market decisions individuals make, is the 'added worker effect'. The added worker effect is defined by Fernandes and De Felício (2005: 887) as "the effect of a job loss of a husband on the labor supply of his wife, which encompasses both an increased labor force participation rate (LFPR) as well as increased hours of work for those wives who are already in the labor force". The added worker effect can be extended to other individuals in the household, such as children of working-age, who may need to enter the labour market once the breadwinner is no longer able to provide for everyone. While women tend to be NEA when married, their entrance into the labour market after the loss of a husband's job indicates the effect which a women's marital status has on her reservation wage, as a wife will only enter the labour market if the possible income to be earned is larger than her reservation wage, which increases once she is married (Serumaga-Zake & Kotze, 2004). The reservation wage should thus be an important

factor for policy-makers, especially those who wish to encourage entry into the labour force of educated individuals.

2.2.5 Youth

Youth unemployment, which is a global issue, has, in many countries, become as pervasive as gender inequality. While the youth generally have fewer employment prospects due to factors such as a lack of skills and inexperience relative to older adults, there are certain factors which may aggravate this issue. In times when economic growth is slow, employers, who are apt to minimise costs, are likely to hire fewer workers or likely to lay off some who are already employed. As many young workers are employed on a contractual basis, it is easier for employers to lay off young workers than workers with permanent contracts and many years of experience. Another factor which may impact youth employment negatively is the number of young people entering the labour market at any given time, as the more people searching for employment, the more employment opportunities need to be made available, which is difficult in times of economic distress (Escudero & Mourelo, 2013; Mlatsheni & Rospabé, 2002).

This may be particularly true for females, who are often employed under precarious conditions, and are more likely to have less work experience and fewer skills than men, due to intermittent absences from the labour market, especially during their peak childbearing years (Escudero & Mourelo, 2013; Lim, 2002). This has been confirmed by O'Higgins (2001), who found that while youth unemployment is a problem in both developed and developing countries, the problem is even more severe for young women who have fewer employment opportunities than their male counterparts.

Age has proven to be a significant factor in determining which labour market state individuals find themselves in, with the youth being more likely not to engage in economic activity when compared with adults (Escudero & Mourelo, 2013). Young people tend to be supported by their families, and thus, the cost of being unemployed tends to be lower for a young person with negligible responsibilities than for an adult who may be responsible for an entire household (Knight & Kingdon, 2000). Furthermore, young people are more likely to be furthering their education, should they have the resources to do so, thus accounting for their concentration in the NEA part of the population. In addition, job security may be more valuable to an older adult, who may have particular minimum requirements for wages and job benefits, whereas young people may find it easier to obtain an entry-level job from the

numerous firms who are likely to be advertising such jobs. Thus, young people will have a higher likelihood of being unemployed or NEA, or be more comfortable to move from employment into unemployment than older individuals might, and are likely to have a lower reservation wage than might an older individual (Knight & Kingdon, 2000).

Changing gender roles and norms may result in young men and women making decisions differently from older men and women. As young women have parenting responsibilities, they have traditionally been more likely to be NEA, when compared to their male counterparts. In addition, like older women, young women are traditionally more likely to engage in unpaid housework (Colman, 1998). However, with perceptions changing about the value of housework and, in some instances, those who can afford it, employing domestic labour to take care of housework and childcare responsibilities, there is an expectation that young women may enter the labour force in larger volumes than before. Thus, although there are still young women who choose the traditional path in terms of their responsibilities as mothers and wives, others may be making decisions differently. Therefore, should the changing norms have become entrenched in society, there is an expectation that the gender differences between young men and women will be less pronounced than those between older men and women; otherwise, we would expect to see the same pattern which has been displayed over the years, with women leaning towards their parenting and housework responsibilities, and engaging less in productive work.

2.3. Empirical literature review

In a number of countries, women are found to have jobs which are generally insecure and precarious, while they also experience higher unemployment rates when compared to their male counterparts (Lim, 2002). Thus, while the neoclassical theorists could have been correct in saying that employers – as rational beings – hire the cheapest labour that they can find, the Marxists predicted that the nature of the employment relationship would most likely turn out to be exploitative, hence the precarious and insecure nature of women's work. Many Asian countries have increased their competitiveness by making use of female labour in their export industries, although it has also been found that the labour conditions under which these women operate are exploitative in some cases (Seguino, 1997). However, while many women are being exploited globally, employment has allowed some women to gain bargaining power within their homes, and some have even managed to mobilise efforts in the workplace in the form of collective bargaining, overcoming the traditional barriers which have been placed on

them as women in their countries (Klasen & Lamanna, 2009; Seguino 1997, 2000). Though women may find strength in their collectivism, it is their individual circumstances which would ultimately determine whether or not they would be willing and able to supply their labour, and whether they find work. Knowing what these individual characteristics are would prove to be useful to policymakers if they are to create an environment in which people can supply productive labour and manage reproductive work simultaneously. While there are many variables that will affect an individual's labour market decisions and outcomes, the ones which are most likely to display gender differences are discussed below.

2.3.1 Education

Educational attainment is expected to increase the LFP rates for both sexes, as the higher the educational attainment of an individual, the higher the opportunity cost of choosing to be NEA (Ntuli & Wittenberg, 2013). Although it has been found that the gender pay gap for women who are highly educated is smaller than for women who are not, the pay gap still exists, which is contrary to the hypothesis of the human capital theory, which states that no pay gap should exist between those with the same education levels and skills (Addabbo, Favaro & Magrini, 2012). Educational attainment has generally been found in a number of studies to have a positive effect on women's LFP as well as their probability of finding a job (see for example Bbaale and Mpuga (2011) for Uganda and Siphambe and Motswapong (2010) for Botswana). Furthermore, an increase in educational attainment for women has been found to be related to a decrease in fertility (Duflo, 2012), which is significant, as the number of children in the household also affects the labour market outcomes of females (discussed below). Having gender inequality in education not only reduces human capital capabilities, but also means that employers are forced to choose from a less talented labour force (Duflo, 2012; Klasen & Lamanna, 2009). While these negative consequences may stem from gender discrimination in education, increased educational attainment has proven to reduce fertility levels and child mortality rates, as well as to prompt an increase in women's bargaining power at home and in the workplace (Lim, 2002).

In South Africa, both men and women are more likely to be employed the higher their level of education, and more likely to be NEA the lower their level of education (Ntuli, 2007; Ranchhod, 2010; Van Der Westhuizen, Goga & Oosthuizen, 2007). Increased levels of education, particularly amongst African women, have been a key driving factor in the rapid

increase of female LFP rates in the country (Casale & Posel, 2002; Maja & Nakanyane, 2006; Ntuli & Wittenberg, 2013). High levels of educational attainment, such as the possession of a Matric certificate or a degree from a higher education institution, are of particular importance in driving women to enter the labour force, while unemployed individuals mainly consist of those individuals with very low educational levels, or no education at all (Naudé & Serumaga-Zake, 2001; Van Der Westhuizen et al., 2007). For the younger demographic, Yu (2013) confirms that youth who are more educated have a higher likelihood of being employed and also have a higher likelihood of being amongst the searching unemployed, than the non-searching unemployed. However, Mlatsheni and Rospabé (2002: 10) have found that a young male is more likely than a young female to be in employment or self-employment, than to be unemployed.

Youth entering the labour market at an early and young age with little educational attainment is a serious concern for the South African labour market, and significantly contributes to the high youth unemployment rates in the country. Lam et al. (2008) state that limited access to resources to further education or an obligation to supplement the family income, especially where younger children are present in the household, are some of the various reasons why many young people cease completing their education and actively search for work. They further go on to challenge the assumption of perfect knowledge in the human capital theory, as certain groups, such as the youth, are uncertain about their future prospects, their returns to education, and prospective employment when they make a decision to further their education. Education thus generally affects the youth in the same way that it affects the adult cohort of the population, with those who have higher levels of education being significantly more likely to find employment than those who leave school early to search for employment (Lam et al., 2008).

2.3.2 Marital status

Single women who head households in Uganda are more likely to be in employment than married women who live in a household headed by a male (Bbaale & Mpuga, 2011), while similar evidence was found in Botswana (Siphambe & Motswapong, 2010). Men are typically more likely to be employed when married, while women may be more economically dependent on their husbands, as opposed to a woman who has never been married or who is divorced or widowed (Ntuli, 2007). Furthermore, without a husband to provide necessities,

there may be more of a need for women to be in employment if they are responsible for an entire household.

Evidence found by Delaunay (2010: 36) for cohabiting and married couples in Portugal indicated that men spend more and women less time in productive labour. In addition, Naudé and Serumaga-Zake (2001) found that being married increases the probability of male employment, while Ntuli and Wittenberg (2013) found that being married significantly reduced the probability of an African woman being employed; however they add that the decision not to participate in economic activity, where being married may be endogenous (confirmed also by Dinkelman and Pirouz (2011)). The reason why an individual's marital status could be endogenous in an analysis of labour market outcomes is that individuals may be in a particular labour market state due to their marital status, such as a woman leaving her job and becoming NEA once she becomes married. However, being in a certain labour market state could also induce an individual to enter into a marital state, such as an employed male having the financial resources to get married. In South Africa, this is of particular importance, where African men are required to make a dowry payment (or bride wealth) if they wish to get married, indicating that those who are employed or have the financial resources to do so will probably be more likely to get married than those who do not (Casale & Posel, 2010b).

2.3.3 Presence of children, pensioners and working-age adults in the household

Women and men's labour market decisions are influenced by the composition of the household, particularly the number of young children in the household. It is for this reason that there is an increasing number of countries implementing legislation that compels certain employers to provide childcare facilities to workers, along with maternal and paternal leave, as well as flexible working hours where possible; likely addressing the 'conflicting' relationship between reproductive and productive work for both men and women (Lim, 2002). In Kenya, having young children in the household was not significant in determining the likelihood of being employed or NEA for the youth, however, it had a significantly negative impact among the non-youth cohort of the population (Escudero & Mourelo, 2013). In Uganda, women who are more educated were found to have fewer children, thus increasing the likelihood that they are to enter the labour market, showcasing the combined effect which education and the presence of children can have on the LFP decision of a woman (Bbaale & Mpuga, 2011; Duflo, 2012).

Using the South African October Household Survey to determine the factors which influence the participation of married women in the labour market, Serumaga-Zake and Kotze (2004) found that the presence of young children in the household had a negative impact on the participation rates of married women. This is further substantiated by Ntuli & Wittenberg (2013), who found fertility to have a negative effect on the LFP rates of women, however, the results differed between those who were broadly[4] unemployed and those who were strictly[5] unemployed. It was consequently concluded by Ntuli & Wittenberg (2013: 367) that "the presence of young children in the household increases the prospects of wanting to work, but not actively searching for work". Using a panel to analyse the effects that certain factors have in determining whether an individual will move from regular employment to non-employment/subsistence agriculture or vice versa, Cichello, Leibbrandt and Woolard (2014: 79) found unexpectedly that women are more likely to move from non-employment into regular employment when there are young children in the home, and men are more likely to stay in non-employment/subsistence agriculture.

While the decision to be in the labour market or not, with children in the household, could be one of preference, particularly for married individuals, the presence of a child could also mean that someone is a recipient of a childcare grant from the government. Ranchhod (2010) finds that recipients of childcare grants are 7.4 percent less likely to be employed, whereas other individuals living in the same household are more likely to be NEA. Having this income stream in the household could allude to some form of income distribution in the household, which is likely to increase the reservation wages of the individuals belonging to it.

The number of working-age adults who reside in a household may also affect the income levels within that household, and might be expected to influence the reservation wages of its members. It has been found that the larger the number of working adults present in the household, the higher the reservation wage of individuals living in the household (Dinkelman & Pirouz, 2011; Walker, 2003). Having working adults in the home allows for a distribution of income to those individuals who are unemployed or NEA, and also provides some sort of security for these individuals. Although having a high number of unemployed or NEA

[4] The definition of broad unemployment in South Africa includes everyone who is without work and reports wanting to work, regardless of whether they have been searching for work or not (Leibbrandt, Woolard, McEwan & Koep, 2010).

[5] The strict definition of unemployment "only considers as unemployed those who have actively searched for work in the last 4 weeks and are able to accept a job within the next week. All other 'discouraged' workers (who would like to work but are not actively seeking work) are classified as not economically active" (Leibbrandt et al., 2010: 9).

working-age adults in the home could dilute the effect this income distribution is likely to have, as there are more mouths to feed.

Having a pensioner in the household has been found to reduce the likelihood of a young person being employed, as opposed to being a non-searching unemployed person (Yu, 2013). Ranchhod (2010) substantiates this with findings that show households receving government grants, such as child care grants and pensions, are more likely to include individuals who are NEA. It was found that adults living with a pensioner are 7.9 percent less likely to be employed, having the same effect as having an employed individual in the household. For women, however, this meant that they were able to enter the labour market, as grandparents could potentially provide supervision for their children, but could possibly also provide them with the financial resources with which to undertake a job search (Aassve, Arpino & Goisis, 2012; Posel, Fairburn & Lund, 2006).

2.3.4 Location

The geographical location of an individual is equally important when considering labour market outcomes. Individuals who reside in urban areas are expected to be more likely to be employed than unemployed, and are more likely to be unemployed than NEA, due to the increased number of working opportunities within urban areas where central business districts are found, and where there is a reduced job search cost. Siphambe and Motswapong (2010) found that residing in an urban area increased a women's likelihood of being employed as well as an active labour force participant in Botswana, although O'Higgins (2001) adds that in Tanzanian urban areas, young women are more likely than young men to be unemployed, and the author notes that this might lend itself to an inquiry into the types of jobs which are available to the young women in these areas. This is substantiated with evidence from India, where at first glance, the unemployment rates for young men and women do not seem to differ much, however, when disaggregated by location young women faced far higher unemployment rates in urban areas than did young men (O'Higgins, 2001). Comparing employment likelihoods between urban and rural areas, Bbaale and Mpuga (2011) found that in Uganda, women in rural areas were eight percent more likely to be economically active than women in urban areas. Evidence found for the South African labour market correlates with the findings of Siphambe and Motswapong (2010) and O'Higgins (2001). Naudé and Serumaga-Zake (2001) found that living in an urban area increased the

likelihood of being employed, where unemployment rates tended to be lower in urban areas than in rural areas for women.

Similar evidence was found by Ntuli (2007) and Cichello et al. (2014) for South African women, and Ntuli and Wittenberg (2013) for black South African women; whereas the difference in urban and rural location did not have a significant effect for men (Cichello et al., 2014). Additionally, women living in the Western Cape had a greater probability of moving into regular employment, whereas men in Gauteng and Mpumalanga had greater prospects of moving into employment across two periods. Wittenberg (2002), who undertook an analysis of the African population, found that those who reside in urban areas had a higher likelihood of being active labour force participants, however, Ntuli and Wittenberg (2013: 366) have cautioned that this variable could possibly be endogenous when undertaking an analysis of labour market outcomes, as women who are unable to find work in "urban areas may return to rural areas, where the cost of living is lower", but where job search costs may also be higher.

2.3.5 Youth

From the theoretical literature, there are numerous reasons why the youth may be more likely to be unemployed or NEA, relative to individuals in the non-youth cohort. In Uganda young people are less likely to be part of the labour force than older individuals, this might be due to the fact that they may still be schooling or have the fall-back position of a family providing for them (Bbaale & Mpuga, 2011). In Kenya, it has also been found that the youth are more likely to be NEA than the non-youth cohort of the population, with the effect being greater for the 15 to 24-year-old cohort than the 25 to 34-year-olds. These groups are also more likely to be unemployed than are individuals in the adult cohort of the population. The evidence from South Africa is no different, with the 20 to 24-year-old cohort making up the largest proportion of unemployed individuals in the country, and the second largest NEA group, after the 55 to 59-year-old cohort (Ranchhod, 2010). In more recent data, the 15 to 24-year-old cohort had the lowest LFP rate amongst the working-age population[6] (Stats SA, 2015). The low LFP rates are most likely due to the extended periods young people use to further their education.

[6] This is based on the strict definition, thus discouraged work-seekers are not considered to be part of the labour force.

In addition, an attempt to transform the South African labour market through a number of affirmative action policies[7] which have been implemented in the interest of redressing the social injustices of the past, may have an even greater impact on the South African youth and their labour market decisions. Although the effectiveness of these policies has been questioned, as it perpetuates racial identities and prejudices, and in many instances results in decreased morale amongst employees, both those who are beneficiaries thereof and those who are not (Thomas, 2002), "affirmative action, can only be meaningful in the context of individuals who are similarly qualified or skilled and where those who 'belong' to one of the 'designated groups[8]' have to be given preference over the others" (Alexander, 2006: 95). In this context, it is clear why affirmative action may not have been as effective amongst the older cohort (from the designated groups), as they come from a history of differential access to education, and are thus not expected to have the same skill levels as their white counterparts.[9] Young individuals from designated groups, however, have had greater access to opportunities to further their education than their parents and grandparents. It is for this reason that access to labour market opportunities may be more accessible for young individuals, especially those from the designated groups, and this is expected to increase the opportunity cost of being NEA. These policies may have proven to be particularly beneficial to young women from designated groups, as these policies aim not only to redress the racial injustices of the past, but also the gender discrimination which has affected women of all races (Naidoo & Kongolo, 2004).

With an increase in educational attainment amongst the youth population and affirmative action policies potentially providing greater opportunities in the labour market for the youth who are more educated than the non-youth cohort, one may expect a large supply of youth labour after the completion of studies. However, for young females, this pattern of behaviour may not be as simplistic, as they are in their peak childbearing years, possibly making them more likely to be NEA. Thus, it will be the path that the youth view as most valuable that they will choose, however, there is still an expectation that many young women will be NEA due to parenting responsibilities, particularly those who are married.

[7] Policies which have been implemented in this regard refers to the "Public Services Act, the Employment Equity Act, the Skills development Act and the Skills Development Levy Act" (Alexander, 2006: 93).
[8] Designated groups are referred to in these policies as "black people, women and people with disabilities", while the term 'black people' include "Africans, Coloureds and Indians" (Alexander, 2006: 94).
[9] While there are older individuals from designated groups who have been able to obtain the same level of education as their white counterparts, they have not been able to do so in large volumes; this is evident in the criticisms of South Africa's affirmative action policies, which is said to have benefitted a small portion of the black middle class, and as a result, perpetuated class inequalities (Alexander, 2006).

Serumaga-Zake and Kotze (2004) found that age is a significant indicator for married females, and that the probability of employment increases as an individual ages. These findings suggest that one might expect to find greater differences in the labour market outcomes of young males and females, compared to the non-youth cohort. This could be an indication of women having a reduced likelihood of being active labour force participants, due to decreased participation in their childbearing years, but that they can more easily obtain employment as they exit this phase.

2.4. Conclusion

From the existing literature, we thus expect higher LFP rates amongst women and men who have high levels of education; this is expected to be true for both the youth and the non-youth. The marital status of individuals is also expected to render important gender differences. Lower LFP rates for married women are expected, both among the youth and non-youth, while higher LFP rates are expected for married men. The presence of young children in the home is expected to result in a lower LFP rate for women, particularly among the youth who are of peak childbearing years, although increased labour market opportunities may cause some young people to choose differently. The presence of pensioners in the home may have a negative effect, if the extra income increases the reservation wage of those living in the home, making employment less attractive. While the location of a man is not expected to matter, the location of a woman may have a different effect on LFP, depending on whether she resides in a rural or urban area.

Although numerous studies on LFP have been undertaken in South Africa using different methods and data sets, this study intends to provide a more comprehensive analysis of the factors important for the LFP of men and women, using more recent data, and making use of panel data. In addition to this, a comparison is made between the youth and the non-youth cohorts disaggregated by gender.

CHAPTER 3: METHODOLOGY

3.1. Introduction

In this chapter, the methods utilised to investigate the research questions are described. The data set used and where it can be obtained will be described first, followed by a discussion of the analysis techniques applied. A description of the variables discussed in the literature review will be provided in the context of this study, and a discussion of the limitations of the study will be presented. The research questions to be answered with the methods described below are:

a) Are there gender differences in the factors which determine LFP?
b) Are there gender differences in the factors which determine labour market outcomes, namely entry into one of three states – employed, unemployed or NEA?
c) Are there gender differences in the factors which determine whether someone is likely to transition from being NEA or unemployed in one period to becoming employed in the next period?
d) Are these factors different among the youth and non-youth cohorts?

3.2. The Data Set

The data utilised in this report are from the National Income Dynamics Study (NIDS),[10] a survey conducted by the Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town. NIDS is the first South African panel study which has, up until now, collected and released three Waves of data; Wave 1 released in 2008, Wave 2 in 2011 and Wave 3 in 2012. The majority of the regressions[11] in this report make use of Wave 1 only, with the exception of the set of panel regressions which utilise Wave 2 and Wave 3 as well[12].

[10] NIDS data are freely available from http://www.nids.ac.za.
[11] The statistical package STATA was utilised to analyse the data.
[12] While the Quarterly Labour Force Survey, published by Statistics South Africa, may also have proven useful in investigating the questions, NIDS data were more appropriate due to the panel nature of the data set and the fact that NIDS tracks individuals, rather than households (Posel, Casale & Vermaak, 2014).

In Wave 1 of NIDS, 7 300 households and 28 000 individuals were interviewed. Of those who were interviewed in Wave 1, 21 098 individuals were successfully re-interviewed in Wave 2 (Brown, De Villiers, Leibbrandt & Woolard, 2012) and 23 604 of those interviewed in Wave 2 were successfully re-interviewed in Wave 3 (De Villiers, Brown, Woolard, Daniels & Leibbrandt, 2014). Wave 1 was used for the cross-sectional analyses in this report while all three Waves were utilised for the panel regressions. For the panel, only continuing sample members who were successfully interviewed in both Waves were utilised. This resulted in 21 108 individuals for the Wave 1 to 2 analysis and 21 384 individuals for the Wave 1 to 3 analysis.[13]

As NIDS is the only longitudinal study in South Africa, it provides an interesting opportunity to investigate how changing circumstances of individuals impact their labour market decisions over time. The report thus takes advantage of this by estimating panel regressions to determine how certain demographic and socio-economic characteristics of unemployed and NEA individuals can result in these individuals becoming employed in the future. For this analysis, Wave 2 and Wave 3 is utilised together with Wave 1.

The cross-sectional analysis in this report makes use of Wave 1 post-stratified weights which are thus used to "account for survey design and initial non-response" (Baigrie & Eyal, 2013). These weights have been specifically designed to take into consideration the geographic data in the 2011 Census. To analyse the panel, panel weights from Wave 2 and Wave 3 were utilised to correct for attrition bias[14] and survey design (De Villiers, Brown, Woolard, Daniels & Leibbrandt, 2013).

3.3. Analysis Techniques

A number of analysis techniques are employed in this study. The first is a set of probit regressions, to determine the likelihood of LFP for males and females in Wave 1, followed by a set of multinomial logistic regressions, which estimate the likelihood of being in a particular labour market state in Wave 1. Lastly, a set of logistic panel regressions are estimated to determine the factors that are likely to influence a person's movement from being NEA or unemployed in one period, to being in employment in the next. In addition to

[13] An analysis of Wave 2 to 3 is also included in the appendix of the report, which includes observations for 20 462 individuals.

[14] Attrition occurs when individuals which were interviewed in one wave is not interviewed in a subsequent wave. This can lead to attrition bias, when those who are no longer in the sample differ from those who remain in the sample. This phenomenon is discussed under the limitations section (section 3.6) of the report.

estimating separate regressions for men and women, the estimations are disaggregated by youth and non-youth to explore whether the gender differences are more or less pronounced amongst the youth. The youth samples are restricted to individuals between the ages of 20 and 35 years old for both sexes, while the non-youth samples are restricted to individuals aged 36 to 64 years for males and 36 to 59 years for females.[15] The regressions, which include the whole sample, include individuals between the ages of 20 to 64 years old for males, and 20 to 59 years old for females.

3.3.1 Binary probit model for labour force participation

A set of probit regressions are used to determine how likely individuals of working-age are to be labour force participants, based on a number of demographic and socio-economic characteristics which take on the following form:

$$P(Y_i = 1|X_i) = \emptyset(X_i) \quad (1)$$

Where Y_i is a binary dependent variable, which takes on a value of 0 if the individual is NEA and 1 if the individual is economically active (employed or unemployed[16]), $\emptyset$ represents the cumulative distribution function and X_i represents the observed characteristics of individual i (Woolridge, 2010). The regressions are run separately for males and females and are further disaggregated into youth and non-youth cohorts. Observed characteristics in this model include age, race, location, marital status, level of education, English language proficiency, the number children, working-age adults and pensioners in the household, perceived relative family background and difficulty in performing basic daily tasks. These regressions are run using data from NIDS Wave 1.

3.3.2 Multinomial logistic model for labour market outcomes

Generalised multinomial logistic regressions are utilised to determine the likelihood of an individual of working-age being in a particular labour market state, based on various characteristics. The outcomes of the multinomial logistic model are "disjunct and exhaustive", thus, in the context of labour market outcomes, someone can only be in one of

[15] Different age brackets are used for men and women, as men and women were eligible for social pensions at different ages at the time of data collection.
[16] 'Unemployed' includes searching and non-searching unemployed individuals.

the labour market outcomes mentioned, and there are no further categories available (Cramer, 1991: 43). The model takes on the following form:

$$P(y_i = j) = \frac{e^{\beta_j' X_i}}{\sum_J e^{\beta_j' X_i}}, j = 0,1,2. \quad (2)$$

Where y_i is the indicator variable of choices, j is equal to 0 for NEA, 1 for unemployed (searching and non-searching) and 2 for employed, X_i is the vector of independent variables and β_j is the corresponding coefficient vector (Cramer, 1991; So & Kuhfeld, 1995; Woolridge, 2010). The regressions are run separately for males and females and are further disaggregated for the youth and non-youth cohorts. The vector of independent variables includes age, race, location, marital status, the level of education, English language proficiency, the number of children, working-age adults and pensioners in the household, perceived relative family background and difficulty in performing basic daily tasks. These regressions also analyse NIDS Wave 1 data.

3.3.3 Binary logistic panel model for employment likelihood

Logistic regressions are then used to estimate panel models for two sets of periods; Wave 1 to Wave 2 and Wave 1 to Wave 3.[17] The regressions are used to determine which factors are likely to lead to the employment of an individual who was unemployed or NEA in Wave 1.[18] For example, the Wave 1 to 2 regressions estimate what the characteristics of the unemployed or NEA in Wave 1 are, and which is likely to lead to these individuals becoming employed in Wave 2. In this instance, Wave 1 is referred to as the "previous Wave" and Wave 2 is referred to as the "subsequent Wave". Both the NEA and unemployed individuals are included in this analysis, as there was an inexplicable increase in the number of NEA individuals in the NIDS data set between Wave 1 and 2 which is not consistent with statistics from Stats SA, alluding to possible fieldwork errors in classifying individuals into the searching unemployed, non-searching unemployed and NEA categories (Cichello et al., 2014; Posel et al., 2014). Both NEA and unemployed individuals are included in the Wave 1 to 3 analysis as well.

[17] These regressions are also run for the period between Wave 2 and 3, and the results are included in Appendix A 7.

[18] For the regressions which analyse Wave 2 to Wave 3, the regressions estimate which of the characteristics of the unemployed or NEA in Wave 2 are likely to lead to becoming employed in Wave 3.

The logistic model takes on the following form:

$$Y_{it+1} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \cdots + \beta_z X_{zit} \quad (3)$$

Where Y_{it+1} is a binary dependent variable, which takes on a value of 0 if the individual is unemployed in the subsequent Wave, and the value of 1 if the individual is employed in the subsequent Wave, $\beta_1 X_{1it}$ represents characteristics of the individual in the previous period, and its corresponding coefficient vector (Cramer, 1991). Individual characteristics from the previous period include: whether an individual was searching unemployed; age; race; location; marital status; level of education; English language proficiency; the number of children, working-age adults, and pensioners in the household; perceived relative family background; difficulty in performing basic daily tasks, and whether the individual has previous work experience or not.

3.4. Description of variables

To answer the research questions posed, a number of variables will be used in the models described above. Hereafter follows a description of the dependent variables and the explanatory variables that will be used in the analysis, as well as their expected outcomes.

3.4.1 Dependent variables

As the study is focused on determining which variables are likely to influence the labour market decisions and outcomes of men and women, the dependent variables consist of labour market outcomes. As mentioned, these outcomes are active in the labour force or not for the probit regressions, employed, unemployed, or NEA for the multinomial logistic regressions and either employed or not employed for the logistic panel regressions. For all the regressions, no distinction is made between searching unemployed and non-searching unemployed individuals, as it has been found that compared to non-searching individuals, those who are searching are not more or less likely to find employment in the future (Cichello et al., 2014; Dinkelman & Pirouz, 2011; Knight & Kingdon, 2000; Posel et al., 2014). The term ‘unemployment’ in this study thus refers to the broad definition of unemployment. However, a distinction is made between those who are unemployed and those who are NEA, as these groups differ markedly from one another (Dinkelman & Pirouz, 2011; Posel et al., 2014).

3.4.2 Explanatory variables

In this section, a description of each explanatory variable is provided with the motivation for including each variable in the set of regressions. The inclusion of each explanatory variable is informed by a large body of literature (discussed in the literature review) on the determinants of LFP. Given the focus on gender differences in outcomes, a discussion of potential differing effects for men and women of each variable is provided.

Age

The data are restricted to individuals aged 20 to 64 for males and 20 to 59 for females, so as to remove the effects which large numbers of young NEA scholars and NEA retirees will have on the analysis. The upper age brackets are different for males and females and are consistent with the ages at which individuals were eligible for social pensions at the time of data collection (ILC, 2011).

An individual's age is of utmost importance in determining what their labour market state will be. Ranchhod (2010) has found that each additional year of age creates a greater likelihood of someone being an active participant in the labour force (see Serumaga-Zake and Kotze (2004) for similar evidence). One would expect the probability of employment to increase as age increases, as an increase in the level of education and work experience is often accompanied by an increase in age. Furthermore, while the youth may have a fall-back position in the presence of their families, older individuals may be more likely to have a greater obligation towards finding employment, as they often have families whom they need to care for, and would thus have a lower probability of being NEA (Dinkelman & Pirouz, 2011).

Race

People from ethnic minorities are generally discriminated against, in both developed and developing countries, and it has been found that ethnic minorities often tend to have lower educational attainment, higher LFP rates and higher unemployment rates than their white counterparts. Evidence of this has been found by O'Higgins (2001) in the United States, the United Kingdom as well as in Hungary. However, women also face discrimination in the labour market, and have come from a long history of oppression, although women from

different races and classes have different labour market experiences, and experience discrimination differently.

South African designations of race are divided into four groups, namely, African, coloured, Indian and white. Race has been found to be a significant determinant, in South African and international studies, of LFP (Lim, 2002). In South Africa, Indian women, in particular, are more likely to be NEA, while coloured and white females tend to be NEA from their mid-twenties onwards. Black women tend to have higher LFP rates than women of other races in South Africa (Serumaga-Zake & Kotze, 2004). There is thus an expectation that African women and men will have greater LFP rates than men and women from other races, and that the magnitudes of the coefficients will be greater for men. In contrast, it is expected that a higher proportion of Africans will be unemployed than the other race groups and that the magnitudes of these coefficients will be greatest for African females.

Location (provinces and geographical location)

Geographical variables are classified in accordance with the Census 2011 structure. The geographical locations (urban, traditional and farms) used in this report are defined accordingly: an urban area is "a continuous built-up area that is established through township establishments such as cities, towns, 'townships', small towns, and hamlets"; traditional areas are "communally owned land under the jurisdiction of traditional leaders. Settlements within these areas are villages". Lastly, farms are defined as "land allocated for and used for commercial farming including the structures and infrastructure on it" (NIDS, 2014: 3).

The rural-urban divide plays an important role in South Africa's labour market, as well as internationally. A number of studies have found that individuals are more likely to be employed if they reside in an urban area, as opposed to a rural area (Mlatsheni & Rospabé, 2002). However, from these definitions, one would expect the employment rate on the farms to be greater than in traditional and urban areas, due to the fact that these areas have been demarcated for productive activity. It has been found that the location where one resides is especially important for women, with women having a higher likelihood of transitioning into employment if they live in close proximity to urban areas (Cichello et al., 2014).

Dummy variables are included for all nine provinces, with Gauteng used as the reference province. Studies have found that the Eastern Cape has the lowest rate of LFP (Serumaga-Zake & Kotze, 2004), while Gauteng has the highest. This is not surprising, as Gauteng is an economic hub in the country, with employment opportunities being far more plentiful in this

area than in other areas. There is thus an expectation that those who reside in the Eastern Cape will have a lower probability of being active in the labour force and a lower probability of being employed, while those residing in Gauteng have a greater probability of being active labour force participants and employed. Van Der Westhuizen et al. (2007) also noted that provinces which have areas that were 'homelands' under the apartheid regime would tend to be less economically productive and have higher unemployment rates, such as Limpopo, Mpumalanga, the North West and the Eastern Cape. While Gauteng and the Western Cape are expected to be the most productive provinces and have the highest employment rates, KwaZulu-Natal would be expected to have lower employment rates compared to these two provinces, due to the vast rural areas in this province (similar evidence is found by Cichello et al. (2014), Dinkelman and Pirouz (2011) and Yu (2013)).

Education

Education has been proven to be an important indicator of LFP for both males and females, but especially so for African females, who have been entering the labour market in large numbers (Casale & Posel, 2002). Education becomes an important variable for labour market entry, when an individual possesses a higher degree, certificate or diploma, especially for women, while possession of a Matric certificate is likely to induce men to enter the labour market (Dinkelman & Pirouz, 2011; Mlatsheni & Rospabé, 2002; Van Der Westhuizen et al., 2007). One would also expect education to increase the probability of employment for men and women, and perhaps more so for women, as women tend to be crowded into jobs where the returns to education are high.[19]

English language proficiency is included in the regressions as a dummy variable, in order to act as a proxy for educational quality. This variable indicates whether a respondent is able to read and write very well in English, as reported by the respondent. The historical challenges which face the South African education system are of a great concern to employers and higher education institutions, however, English language proficiency generally acts as a signal for the quality of education or for an individual's qualifications (Casale & Posel, 2010a). The fluency in English variable takes on a value of 1 if the respondent writes very well and reads very well in English, and 0 otherwise. English language proficiency is a significant determinant when considering labour market returns from education (see Casale

[19] King (1999: 508) suggests that these jobs are located in the "women's sector", in which returns to previous work experience are low, but returns to education are high. Women's jobs thus "do not seem to fall squarely into the primary sector, which is theorized [sic] to reward both education and experience, nor into the secondary, which is conceptualized [sic] as rewarding neither" (King, 1999: 508).

and Posel (2010a) and Mehtabul, Aimee and Nishith (2013) for a discussion on this). One might, therefore, expect those with greater English language proficiency to have a higher likelihood of being a labour force participant, or of being employed.

Marital status

The marital status of men and women has repeatedly been found to result in differential labour market outcomes for these groups; it is thus one of the most important variables to include in a set of regressions explaining differential gender effects. Being married increases the probability of a male being an active labour force participant, while it has the opposite effect for women (Dinkelman & Pirouz, 2011; Naudé & Serumaga-Zake, 2001; Ntuli & Wittenberg, 2013). Being divorced has been found to decrease the probability of LFP for African women (Ntuli & Wittenberg, 2013). These effects are likely due to the different responsibilities which men and women are perceived to have towards productive and reproductive work as well as the effect which the marital status has on the reservation wages of individuals, as discussed in the literature review.

Number of children

The number of young children in the household has been found to be a significant determinant in women's labour force participation decisions, both internationally and locally. Children in the home tend to decrease women's LFP (see Serumaga-Zake and Kotze (2004) for married women, Cichello et al. (2014), Dinkelman and Pirouz (2011), and Ntuli and Wittenberg, (2013)). This effect is expected to be especially pronounced for young females, as they are of peak childbearing age, and thus expected to be out of the labour force. Young people have also been found to have a smaller probability of being employed, due to their high propensity to have young children in the home, and there is a suggestion that being a recipient of a childcare grant matters (Mlatsheni & Rospabe, 2002; Ranchhod, 2010; Yu, 2013). The 'gender contract', as described in the literature review, would be especially relevant to this variable. However, some have found that the presence of children may also hinder men from entering the labour market (Cichello et al., 2014).

In the regressions, 'young children' in the household are defined as children who are six years and younger, while 'older children' are children between the ages of 7 and 15. As older children are more independent and do not require the intense supervision that young children do, the effects of children are expected to be less severe when there are older children present. Thus, from the evidence provided, one would expect the presence of young children

to have a negative impact on the LFP of women; however, there is also a possibility that this could be true for men. Furthermore, this variable is especially important for young females who are of peak childbearing age, and they are thus expected to be more likely to be NEA when there are children in the home. Among labour force participants, children may also negatively affect the chances of finding employment if small children hinder the job search, particularly among women.

Number of pensioners and working-age adults in the household

When considering pensioners in the household, the income which pensioners contribute to the household should be considered, as well as the potential which they provide for child supervision. Having a grandparent in the household could allow women to enter the labour market, as it provides funding for them to undertake job search and provides child supervision, where grandparents are able to offer this support (Posel et al., 2006; Aassve et al., 2012). In contrast, having a pensioner in the household could provide additional household income, and mean that people have less of a need to enter the labour market. Evidence to this effect is found by Ranchhod (2010) for the non-youth cohort of the population, as well as by Dinkelman and Pirouz (2011) and Yu (2013). Having a pensioner in the household may thus result in decreased LFP rates for individuals. In addition to this, pensioners may need to be taken care of, also reducing the chances which those who live with them have of entering the labour market, especially if they are sickly or disabled.

The same income effect as that expected when having a pensioner in the household, may be present when there are working adults in the household. However, when there are unemployed working-age adults in the home, this income effect could be diluted. Having employed working-age adults in the home could mean that unemployed or NEA individuals in the household will have greater access to information about available jobs leading to an increase in the probability of them finding work. However, when the working-age adults in the home are not employed, this benefit may not exist. The number of working-age adults in the home could thus act as a hindrance to LFP, or could compel individuals in the home to go out and search for work and potentially act as an information transmission mechanism.

Perceived socio-economic status at the age of 15

In the NIDS Adult questionnaire, participants are asked to "imagine a six step ladder where the poorest people in South Africa stand on the bottom (the first step) and the richest people in South Africa stand on the highest step (the sixth step)". The perceived socio-economic

status is based on the first sub-question in this section which asks "On which step was your household when you were 15?" Those who indicated that their households were on the first or the second step were categorised as 'lower income', those on the third or fourth step, 'middle income' and those who chose the fifth or the sixth step were categorised as 'higher income'. One must keep in mind that this is a subjective measure, and that people would have answered this question based on their perceptions, which are formed relative to the households around them. Although there is no definitive way to determine this, one might imagine that individuals who grew up in a township during the apartheid era, where they might have viewed their families as relatively more wealthy than the other families around them, would likely answer this question differently as might a 'born-free' youth growing up in a different setting. Remaining cognisant of the subjective nature of the question, one would nevertheless expect that those who grew up in households which were higher up the income ladder to have had greater access to education, or working adults in the household and thus have a greater probability of being employed, or of being a labour force participant.

Daily hardship in performing basic tasks

Daily hardship is included as a proxy for health status and reports the difficulty people experience in performing daily tasks, as good health is conducive to entering the labour market. This variable is a dummy variable and takes on a value of 1 if a respondent reported having any difficulty, or was unable to dress, bathe, eat, or make use of ablution facilities due to his or her physical state. This variable is 0 if the respondent had no difficulty in performing any of these tasks. One would thus expect people who report any difficulty in performing these tasks to be NEA, or if there is a serious need to obtain employment, it might be harder to secure a job with any of the conditions mentioned. Those who have difficulty would thus be expected to be NEA or unemployed.

Previous work experience

The number of years of previous work experience has also been found to be an important variable in determining the labour market outcome of individuals, as individuals with little or no work experience may not have as much knowledge about the labour market, or have the necessary experience to secure certain types of jobs (Dinkelman & Pirouz, 2011). In the NIDS survey, employed persons are not required to state whether or not they have any previous work experience,[20] and for this reason, this variable is only included in those panel

[20] It is assumed that an employed person naturally has work experience.

regressions which are based on a sample of individuals who were unemployed or NEA in Wave 1. Due to the fact that having work experience counts in one's favour when applying for a job, those individuals who did report having work experience in a previous period would be expected to be more likely to transition into employment in a subsequent period. This variable is expected to be more important for females as they have a greater likelihood of intermittent employment histories than men do, and would need certain skills to re-enter the labour market, should they wish to do so.

3.5. Youth and non-youth sub-samples

As society, and the cultural and traditional norms within society, have rapidly been changing, particularly gender norms, the analysis will be extended by disaggregating the samples into youth and non-youth cohorts to determine whether the expected gender differences in the variables are more or less pronounced amongst the youth. There is a possibility that gender differences in labour market outcomes may be less pronounced amongst the youth, due to greater opportunities for obtaining education for both men and women, and the affirmative action policies adopted, which are likely to attract women to the labour market (as discussed in the literature review). However, there is a possibility that gender differences may be even more pronounced, as greater labour market opportunities cannot change the fact that women are in the peak childbearing years of their youth. This has important implications for labour market outcomes, as previously discussed.

3.6. Limitations

The investigation undertaken in this report has a number of limitations, which will be discussed here.

Sample size in the sets of regressions in this study presents a great limitation. As the data is disaggregated by gender and subsequently by age cohort throughout the report, sample sizes do tend to become very small and in some instances (where indicated), results have been omitted where observations were too few or not present. This is especially evident when the data is disaggregated by age and in the panel where only continuing sample members are used in the analysis. For example, in the panel regressions when the employed individuals in Wave 1 are dropped from the sample, 81.75 percent of the Indian male sample is dropped and 86.68 percent of the white male sample is dropped (see Table 9).

Another important limitation of the study is the issue of endogeneity, which describes not being able to determine whether causality runs from the explanatory variable to the dependent variable, or the other way around. Examples of variables which are likely to be endogenous include the marital status of an individual, and the location where an individual resides. The marital status of an individual could determine whether someone is employed for example, but being employed might increase someone's chances of getting married. Similarly, one would be unable to determine whether someone resides in a certain area, because they are in a particular labour market state, or whether they are in a particular labour market state as a result of residing in that area. An example would be someone residing in an urban area having a greater likelihood of finding employment, due to the higher number of employment opportunities available. However, an individual could be living in an urban area if they had been offered an employment opportunity, and was obliged to relocate as a result of this. Coefficients of variables with a likelihood of being endogenous should thus be interpreted as correlations, rather than as indicating causality.

There is also the possible presence of unobserved heterogeneity, which is not accounted for. While there are a number of variables accounted for in the study, there are certain characteristics which could have a strong impact on an individual's labour market outcomes, but which are not accounted for in the model, as they are generally not observable or measurable in the data, such as innate ability, or motivation. This is related to the issue of sample selection, if individuals who are motivated or have higher innate ability are also more likely to enter the labour force, then the sample is not random, and this might especially be the case for women. The methods that account for these concerns are, however, beyond the scope of this dissertation. Thus, although the results from this study provide useful insights, one must be wary of potential bias introduced by unobserved heterogeneity and sample selection (Hsiao, 2014).

An additional limitation, which one faces when working with panel data, is the possibility of attrition bias. Attrition occurs when individuals who were interviewed in one period of a study are not interviewed in a subsequent period of the study.[21] In the case of NIDS data, this could occur when individuals in Wave 1 are not subsequently interviewed in Wave 2 and/or Wave 3. Attrition bias, however, occurs when those individuals who have dropped out of the sample "are behaviourally different from those who remain" in the sample (Baigrie & Eyal,

[21] There are a number of reasons why individuals and households may cease to be part of a study, such as non-contact, fieldwork errors, or refusal or death (Baigrie & Eyal, 2013: 3).

2013: 3). Panel weights are thus utilised in the set of regressions, which make use of Waves 2 and 3, as well to account for attrition bias as best as possible.

3.7. Conclusion

This chapter has described the data set, which was utilised to study the research questions under investigation, as well as the analysis techniques which were adopted, the variables which were included in the analysis, and the limitations of the study. It is clear that a number of variables and circumstances need to be considered before drawing conclusions about the labour market decisions men and women might make.

As the analysis is disaggregated predominantly by gender, the following chapter analyses descriptively the variables used in the investigation for men and women. The observed characteristics of both males and females in relation to the variables included in the analysis will assist in the interpretation of the regression results which will follow in Chapter 5.

CHAPTER 4: DESCRIPTIVE RESULTS

4.1. Introduction

The descriptive statistics presented in this chapter disaggregate the variables used in the analysis by gender, and in some cases by age. Age brackets used in these tables are 20 to 64 years for males, and 20 to 59 years for females, unless otherwise stated. The data are weighted and all the tables and weights[22] are from the Wave 1 dataset unless otherwise stated. For most of the statistical tables, the row percentages for each variable are displayed, however, when viewed with column percentages, these are equally interesting and draw a different picture from the data. All descriptive statistics with column percentages have thus been included in the appendix.

4.2. Labour market outcomes by gender

South Africa's labour market is unique in that it has been shaped by years of social injustice and has had staggeringly high unemployment rates for decades, with these rates increasing dramatically with the advent of democracy. While there has been a marked increase in the participation of women in the labour force, the participation rates of men continue to be higher (Casale & Posel, 2002; Floro & Komatsu, 2011). Table 1 suggests that for all ages, women have lower LFP rates and higher unemployment rates than men, with the difference in LFP being greatest between the older males (78.60%) and females (65.94%) and the smallest difference being observed between young men (81.61%) and young women (72.62%). Unemployment rates for women are higher than for men for all age groups with young women having the highest unemployment rate (51.76%).

Table 1: Broad labour force participation and unemployment rates by gender and age cohort (%)

	Male			Female		
	All (20-64)	**Youth (20-35)**	**Non-Youth (36-64)**	**All (20-59)**	**Youth (20-35)**	**Non-Youth (36-59)**
LFP rate	80.07	81.61	78.60	69.14	72.62	65.94
Unemployment rate	22.19	28.12	16.28	38.77	51.76	25.60

Notes:

1. *Own calculations*
2. *LFP rate = sum of employed and unemployed (searching and non-searching) individuals as a share of the working-age population.*
3. *Unemployment rate = unemployed (searching and non-searching) individuals as a share of the economically active population (employed and unemployed individuals).*

[22] The weights referred to are Wave 1 post-stratified weights, discussed in Section 3.2 of this report.

It is clear that as women become older, they become less economically active, and thus experience lower unemployment rates than do the youth (25.60 percent for older females versus 51.76 percent for young females). The same pattern is noticeable amongst the males, although the differences between the youth and non-youth cohorts of men are not as pronounced as the differences amongst females.

Table 2: Labour market outcomes by gender and age cohort (%)

	Male			Female		
	All (20-64)	**Youth (20-35)**	**Non-Youth (36-64)**	**All (20-59)**	**Youth (20-35)**	**Non-Youth (36-59)**
NEA	16.22	16.02	16.44	28.38	25.87	31.09
	(0.89)	(1.26)	(1.17)	(1.09)	(1.49)	(1.43)
Unemployed	16.93	21.94	11.49	27.28	35.79	18.10
	(1.09)	(1.58)	(1.20)	(1.18)	(1.65)	(1.14)
Employed	66.85	62.04	72.07	44.34	38.35	50.81
	(1.50)	(2.00)	(1.77)	(1.26)	(1.54)	(1.64)
Total	100	100	100	100	100	100
N	**4396**	**2153**	**2243**	**6439**	**3086**	**3353**

Notes

1. *The data are weighted, standard errors in parentheses.*

Table 2 presents disaggregated data of the percentage of labour market states that each age group occupies among working-age individuals. For both sexes, the overall group consisted mainly of employed individuals, although the percentage of employed females (44.34%) was significantly lower than the percentage of employed males (66.85%). Women had greater percentages than men of NEA individuals (28.38 percent versus 16.22 percent for males) as well as unemployed individuals (27.28 percent for females versus 16.93 percent for males). Similar patterns were observable amongst the youth and non-youth cohorts, with men having larger shares of individuals in employment than women and women having larger shares of NEA and unemployed individuals than men. It is interesting that young women at peak childbearing age have a large share of individuals who are unemployed (35.79%) and that there is a smaller share of NEA individuals in this group compared to the older females (25.87 percent for young women versus 31.09 percent for older women). While this could point to the influx of youth into the labour market at a young age, it could also be a result of increasing unemployment rates in the country as a whole, reducing the incomes that enter the households where young women are living. Although the same argument could be made for

young males, they do experience greater employment rates than young females, while the percentage of unemployed is not as high as that of the females.

4.3. Labour market outcomes by marital status

As expressed in the literature review, an individual's marital status has interesting implications for labour market outcomes, and significant differences amongst males and females are often present. As the group of individuals who had never been married are the largest group in the sample (47.40 percent of males and 41.50 percent of females), they make up the majority of individuals in each labour market state, with the exception of employed individuals, where married individuals make up the largest proportion, with 43.62 percent of males and 39.18 percent of females (see appendix A 1).

Table 3: Labour market outcomes by marital status and gender (%)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
Married	12.75	8.24	79.01	100	30.51	21.45	48.04	100
	(1.18)	(0.99)	(1.63)		(1.91)	(1.63)	(2.07)	
Cohabit	8.87	14.36	76.77	100	24.22	38.28	37.50	100
	(1.60)	(2.32)	(2.74)		(2.63)	(2.87)	(3.15)	
Widow	31.47	14.56	53.97	100	40.17	12.63	47.20	100
	(7.10)	(6.06)	(7.50)		(3.31)	(2.22)	(3.26)	
Divorced	12.56	7.89	79.56	100	15.45	10.34	74.21	100
	(3.88)	(3.29)	(5.31)		(3.62)	(2.73)	(4.70)	
Never-married	20.31	24.87	54.83	100	27.13	33.41	39.45	100
	(1.30)	(1.75)	(2.08)		(1.44)	(1.67)	(1.54)	
Total	16.24	16.90	66.86	100	28.36	27.27	44.36	100
	(0.89)	(1.08)	(1.50)		(1.09)	(1.19)	(1.27)	
N	**4390**				**6426**			

Notes

1. *The data are weighted, standard errors in parentheses.*

Turning to the row percentages shown in Table 3, the majority of married males were employed (79.01%), while 12.75 percent were NEA and 8.24 percent were unemployed. Of the females who were married, 48.04 percent were employed, while a significantly higher share was NEA (30.51%), compared to married males. The share of unemployed married females and the share of all unemployed females are similar, with 21.45 percent of married women being unemployed, and 27.27 percent of women being unemployed overall. The group which had the largest share of NEA individuals were widows; amongst the widowed

females 40.17 percent were NEA and 31.47 percent of male widowers were NEA, although a larger share of widowed males were in employment (53.97%) compared to widowed females (47.20%). The group which had the largest proportion of employed individuals were divorced individuals with 74.21 percent of divorced females employed, and 79.56 percent of divorced males employed. There are a number of reasons why this could be the case, from divorced people being more dedicated to their jobs on the one hand, to being financially vulnerable on the other, and for that reason choosing to stay in employment. This, however, cannot be determined with the given statistics.

While never-married individuals could have a lower reservation wage due to the lack of income from a spouse or partner, they could also consist of young people still residing with their families, with less of a need to work. This diverse group of people nevertheless have a higher proportion of males in employment (54.83%) than females (39.45%), indicating that even amongst those that have never been married, females are more likely to be NEA (27.13 percent for females and 20.31 percent for males).

Table 4: Labour market outcomes by marital status and gender (%) - Youth only

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
Married	3.74	7.01	89.25	100	26.52	28.43	45.05	100
	(1.30)	(1.89)	(2.06)		(3.08)	(2.83)	(3.70)	
Cohabit	6.73	11.80	81.47	100	20.30	44.59	35.11	100
	(2.34)	(2.64)	(3.58)		(3.51)	(4.14)	(4.03)	
Widow	-	22.80	77.20	100	22.80	29.08	48.12	100
	-	(17.81)	(17.81)		(8.94)	(10.89)	(11.25)	
Divorced	-	-	100	100	5.11	21.84	73.05	100
	-	-	(0.00)		(3.70)	(13.10)	(13.14)	
Never-married	20.26	26.83	52.91	100	27.37	37.03	35.60	100
	(1.49)	(2.01)	(2.31)		(1.70)	(1.98)	(1.70)	
Total	16.04	21.95	62.01	100	25.87	35.80	38.33	100
	(1.26)	(1.58)	(2.00)		(1.49)	(1.66)	(1.55)	
N	**2150**				**3079**			

Notes:

1. *Data are weighted, standard errors are in parenthesis.*
2. *The sample includes young males and females between the ages of 20 and 35.*
3. *The sample does not have any observations for widowed young males who are NEA and divorced young males who are NEA or unemployed.*

Table 4 displays labour market outcomes by marital status for the youth only. Among young married males, a larger proportion are employed (89.25%) while the statistics for young married females are even lower than the total sample of married females in Table 3 (45.05%).

It is interesting that not many cohabiting young females are employed (35.11%), but that a larger proportion of them are unemployed (44.59%). For all marital states, young females have higher shares of individuals in unemployment than do males, as well as higher shares of individuals who are NEA.

4.4. Labour market outcomes by number of children in the household

Table 5 displays the mean values, disaggregated by gender, of the number of children in the household by labour market state.The mean values for women are higher than they are for men for all labour market outcomes, and for children of all ages, because children are more likely to live with their mothers in South Africa. NEA and unemployed males and females live with a larger number of children in the household when compared to employed males and females. This suggests that children act as an impediment to employment, or that those who are unemployed or NEA, and their children, are likely to move into households where a social grant is received; indicating possible endogeneity of this variable. Furthermore, the difference in the mean number of children between the employed and NEA or unemployed individuals is larger for females than it is for males, but particularly so for young children.

Table 5: Mean values of the number of children in the household by gender

	Male			Female		
	NEA	**Unemployed**	**Employed**	**NEA**	**Unemployed**	**Employed**
Number of young children	0.53	0.59	0.41	0.88	1.01	0.69
	(0.05)	(0.07)	(0.03)	(0.04)	(0.04)	(0.04)
Number of older children	0.87	0.80	0.48	1.04	1.09	0.85
	(0.06)	(0.10)	(0.03)	(0.05)	(0.05)	(0.04)
N	**4396**			**6439**		

Notes

1. *The data are weighted, standard errors in parentheses.*
2. *The number of young children in the household is the sum of all the children in a particular household who are 6 years and younger, while the number of older children is the sum of all the children in a particular household who are between the ages of 7 and 15.*

In Table 6, the mean values of young children in the home are greater than those displayed in Table 5, while women once again have higher averages of children in the home than men. Both young men and women who are unemployed live with larger numbers of young children in the home, while those who are employed have fewer children in the home. These differences are once again larger between those females who are employed and those females who are in other labour market states than they are between the males.

Table 6: Mean values of the number of children in the household by gender – Youth only

	Male			Female		
	NEA	**Unemployed**	**Employed**	**NEA**	**Unemployed**	**Employed**
Number of young children	0.58	0.63	0.45	1.09	1.15	0.82
	(0.08)	(0.09)	(0.05)	(0.07)	(0.06)	(0.05)
Number of older children	0.89	0.81	0.39	1.07	1.07	0.72
	(0.09)	(0.12)	(0.04)	(0.07)	(0.07)	(0.05)
N	**2153**			**3086**		

Notes:

1. *Data are weighted, standard errors are in parenthesis.*
2. *The sample includes young males and females between the ages of 20 and 35.*
3. *The number of young children in the household is the sum of all the children in a particular household who are 6 years and younger, while the number of older children is the sum of all the children in a particular household who are between the ages of 7 and 15.*

4.5. Labour market outcomes by education level

The majority of males and females in the dataset have Grade 8 to 11 schooling, these groups also make up the largest proportion of NEA, unemployed, and employed individuals for both males and females (see Appendix A 2). Table 7 below shows that, of those who had no schooling amongst the men, 53.25 percent were employed, while this figure was only 35.04 percent for females; where most females with this level of education were NEA (51.3%). This pattern is also noticeable amongst the individuals with Grade 1 to 7 schooling, where 18.88 percent of men were NEA compared to 38.84 percent of females. For both sexes, the share of NEA individuals decreased as the level of education increased, although for all levels of education, men still had the highest share of employed individuals; 61.55 percent for Grade 8 to 11, 70.1 percent for Matric and 83.88 percent for a degree or diploma compared to 35.03 percent for Grade 8 to Grade 11, 49.64 percent for Matric and 71.99 percent for a degree or diploma for women. The group of individuals who had the largest proportion of unemployed individuals were those with Grade 8 to 11 for men as well as for women. The importance of higher education for female employment is clearly noticeable with the share of employment increasing from 49.64 percent for those with a Matric certificate to 71.99 percent for those with a degree or diploma. This difference is much less pronounced for men.

Table 7: Labour market outcomes by education level and gender (%)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
No schooling	32.05	14.70	53.25	100	51.30	13.67	35.04	100
	(3.69)	(2.95)	(4.03)		(2.68)	(1.53)	(2.70)	
Gr1-7	18.88	17.31	63.81	100	38.84	22.95	38.21	100
	(1.98)	(1.72)	(2.50)		(1.96)	(1.66)	(1.82)	
Gr8-11	18.75	19.71	61.55	100	29.83	35.14	35.03	100
	(1.50)	(1.85)	(2.44)		(1.60)	(1.68)	(1.42)	
Matric	12.40	17.50	70.10	100	20.27	30.08	49.64	100
	(1.97)	(1.81)	(2.84)		(1.95)	(2.06)	(2.20)	
Certificate/Degree/Diploma	5.10	11.03	83.88	100	12.14	15.87	71.99	100
	(1.16)	(2.04)	(2.38)		(2.24)	(2.47)	(2.87)	
Total	16.21	16.97	66.81	100	28.39	27.26	44.35	100
	(0.89)	(1.09)	(1.50)		(1.09)	(1.18)	(1.26)	
N	**4387**				**6429**			

Notes

1. *The data are weighted, standard errors in parentheses.*

For all the levels of education, the youth had a smaller share of employed individuals than did the full sample displayed in Table 7; while they also had a greater share of individuals who were unemployed for each level of education. When a young male is in possession of a higher degree or diploma, the share of NEA individuals drops below five percent (4.93%); while a mere 11.47 percent of young females in possession of a degree or diploma were NEA. Young females had lower shares of individuals who were NEA, than for the full sample of females in Table 7, with the exception of those with a Grade 8 to 11 schooling and those with a Matric certificate.

Table 8: Labour market outcomes by education level and gender (%) - Youth only

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
No schooling	20.17	31.59	48.24	100	52.20	27.33	20.47	100
	(6.60)	(9.49)	(9.04)		(8.18)	(6.16)	(5.58)	
Gr1-7	18.07	25.66	56.27	100	32.74	36.35	30.91	100
	(3.70)	(4.08)	(4.61)		(3.82)	(3.99)	(3.37)	
Gr8-11	20.73	22.66	56.61	100	31.14	42.24	26.63	100
	(1.86)	(2.27)	(2.82)		(2.13)	(2.10)	(1.69)	
Matric	13.63	21.19	65.18	100	21.32	34.07	44.61	100
	(2.50)	(2.27)	(3.36)		(2.25)	(2.51)	(2.86)	
Certificate/Degree/Diploma	4.93	16.55	78.52	100	11.47	21.31	67.22	100
	(1.61)	(3.62)	(3.85)		(2.03)	(3.61)	(3.78)	
Total	15.99	21.98	62.03	100	25.88	35.79	38.34	100
	(1.26)	(1.59)	(2.00)		(1.49)	(1.65)	(1.54)	
N	**2149**				**3083**			

Notes:

1. *Data are weighted, standard errors are in parenthesis.*
2. *The sample includes young males and females between the ages of 20 and 35.*

Comparing young men to young women, however, shows that women are still less likely to be employed than men, regardless of the level of education. However, the differences in the shares of employment between those with no schooling and those with a degree or diploma are greater among women than men, indicating that higher education matters more for women, even amongst the youth.

4.6. Labour market outcomes by race

Africans make up the majority of the South African population, thus, they will be the group which makes up the majority of individuals in each labour market state, with African males accounting for 79.74 percent of males in the dataset and African females 78.64 percent of females (see Appendix A 3).

Table 9: Labour market outcomes by race and gender (%)[23]

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
African	17.76	19.12	63.12	100	28.84	30.21	40.95	100
	(1.05)	(1.23)	(1.74)		(1.13)	(1.20)	(1.19)	
Coloured	10.08	15.15	74.77	100	26.70	20.46	52.84	100
	(1.73)	(3.92)	(3.76)		(2.56)	(3.14)	(3.50)	
Indian	9.03	9.21	81.75	100	29.45	10.66	59.89	100
	(4.43)	(5.90)	(6.10)		(15.34)	(3.02)	(15.11)	
White	10.53	2.78	86.68	100	25.99	14.41	59.60	100
	(2.49)	(1.18)	(2.78)		(3.85)	(4.29)	(4.73)	
Total	16.22	16.93	66.85	100	28.38	27.28	44.34	100
	(0.89)	(1.09)	(1.50)		(1.09)	(1.18)	(1.26)	
N	**4396**				**6439**			

Notes

1. *The data are weighted, standard errors in parentheses.*

Indian and white males and females generally have better labour market outcomes than coloured and African males and females. White males have a lower percentage of NEA and unemployed individuals, while Indian males have a lower percentage of NEA individuals than do coloured and African males. The same is true for the white women who have a lower share of unemployed individuals than all the other race groups (14.41%), and only 25.99 percent of individuals who are NEA. Although the racial differences are clear, the gender differences between males and females exist nonetheless; where males of all races have a greater percentage of employed individuals than do the females, as well as lower percentages

[23] Only the results which are significant in this table are reported on in the analysis.

of NEA and unemployed individuals. Thus, although labour market outcomes differ by racial lines, gender differences still persist, even amongst those who are historically more racially privileged.

4.7. Labour market outcomes by location

As expected, the largest proportion of employed individuals is located in urban areas; this is true for both males (70.38%), and females (68.30%). The proportion of NEA individuals are almost equally split between traditional and urban areas for males, 47.10 percent and 47.80 percent, respectively, and the difference for females is also small; 42.39 percent for traditional areas and 48.31 percent in urban areas (see Appendix A 4). Turning to Table 10, in traditional areas, men have higher shares of employment (45.63%) than do females (32.68%). As women in traditional areas are predominantly NEA (38.85%), this could allude to the possibility of more traditional roles which women might play in these areas. The majority of men who reside in urban areas are employed (72.74%), with a small share of NEA individuals (11.99%). Although the shares of NEA women in urban areas are smaller than those in traditional areas (22.43%), the share of women residing in urban areas who are employed is still less than half (49.54%).

The smallest portions of the population reside in commercial farm areas, with the majority of men living on farms in employment (82.84%), while just under half of women in these areas are employed (49.87%). As these areas are demarcated for commercial use, higher shares of employment are not surprising.

Table 10: Labour market outcomes by location and gender (%)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
Traditional	30.05	24.31	45.63	100	38.85	28.47	32.68	100
	(2.22)	(1.78)	(2.12)		(1.91)	(1.62)	(1.55)	
Urban	11.99	15.27	72.74	100	22.43	28.04	49.54	100
	(0.97)	(1.42)	(2.00)		(1.27)	(1.69)	(1.83)	
Farms	8.36	8.80	82.84	100	33.45	16.68	49.87	100
	(2.52)	(2.53)	(3.88)		(4.70)	(2.13)	(4.81)	
Total	16.22	16.93	66.85	100	28.38	27.28	44.34	100
	(0.89)	(1.09)	(1.50)		(1.09)	(1.18)	(1.26)	
N	**4396**				**6439**			

Notes

1. *The data are weighted, standard errors in parentheses.*

4.8. Labour market outcomes by province

The largest share of NEA males resided in the Eastern Cape (24.10%), while the smallest number of NEA males resided in the Northern Cape (2.50%). This is also true for females, with 17.83 percent of NEA females residing in the Eastern Cape, and 2.39 percent of NEA females residing in the Northern Cape. The largest share of employed men (34.38%) resided in Gauteng, where this was also true for females (27.46%) (see Appendix A 5).

Table 11: Labour market outcomes by province and gender (%)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
Western Cape	12.40	7.12	80.48	100	25.54	20.87	53.59	100
	(1.90)	(2.07)	(3.20)		(2.54)	(2.94)	(3.24)	
Eastern Cape	32.87	22.36	44.77	100	41.57	25.85	32.58	100
	(3.43)	(4.13)	(3.99)		(3.90)	(2.79)	(3.02)	
Northern Cape	16.30	14.12	69.58	100	30.51	28.21	41.28	100
	(2.84)	(2.31)	(4.07)		(2.71)	(2.61)	(2.91)	
Free State	12.59	23.99	63.42	100	24.25	32.16	43.59	100
	(1.80)	(3.23)	(4.14)		(5.71)	(3.61)	(4.65)	
KwaZulu-Natal	17.34	21.27	61.39	100	25.44	26.47	48.09	100
	(2.45)	(2.51)	(3.83)		(2.59)	(3.17)	(3.21)	
North West	13.25	20.84	65.91	100	27.27	35.38	37.35	100
	(2.89)	(3.50)	(3.65)		(5.87)	(4.34)	(3.17)	
Gauteng	8.49	13.05	78.46	100	20.65	29.96	49.38	100
	(1.34)	(2.05)	(2.92)		(2.11)	(2.92)	(3.25)	
Mpumalanga	15.51	17.14	67.34	100	23.14	29.98	46.88	100
	(2.32)	(3.28)	(4.37)		(2.53)	(3.33)	(4.07)	
Limpopo	27.41	17.38	55.21	100	46.05	20.64	33.31	100
	(5.36)	(3.48)	(7.07)		(3.13)	(2.52)	(3.49)	
Total	16.22	16.93	66.85	100	28.38	27.28	44.34	100
	(0.89)	(1.09)	(1.50)		(1.09)	(1.18)	(1.26)	
N	**4396**				**6439**			

Notes

1. *The data are weighted, standard errors in parentheses.*

The majority of men residing in each province were employed, with the highest proportion of employed men found in the Western Cape (80.48%), and the Free State having the largest proportion of unemployed men (23.99%), with the Eastern Cape having the largest share of NEA men (32.87%). The Western Cape consisted of the largest share of employed females (53.59%), the North West Province had the largest share of unemployed females (35.38%), while Limpopo had the largest share of NEA females (46.05%). While it is difficult to draw inferences from the statistics obtained by province, an investigation into the types of jobs

available to women and men in each province may shed light on the gender differences. However, this is beyond the scope of this report.

4.9. Transition matrices

The previous set of descriptive statistics was based on the cross-sectional data from Wave 1. Transition matrices are presented here to determine what percentage of individuals transitioned into different labour market states and what percentage stayed in the same labour market state over the two periods studied in the panel regression. These are presented separately for males and females.

From Table 12, it can be confirmed that women are more likely than men to move between labour market states, which is consistent with evidence found by Cichello et al. (2014); possible reasons could include women moving in between states due to marriage or childbearing responsibilities. Of those who were unemployed in Wave 1, men were more likely to transition into employment in Wave 2, whereas women were more likely to transition into being NEA in Wave 2. Of the males who were NEA in Wave 1, 23.34 percent transitioned into employment, 16.62 percent into unemployment, and 60.04 percent remained NEA. For NEA women, 18.34 percent moved into employment and a larger percentage of females moved into unemployment than men (20.81%), with 60.84 percent remaining NEA. During the two Waves, more males remained in employment, with 75.28 percent of those who were employed in Wave 1 remaining employed in Wave 2, and 65.7 percent of women who were employed in Wave 1 remaining employed in Wave 2. For both genders, most unemployed individuals transitioned into a different labour market state, with 39.83 percent of men moving into employment and 42.93 percent of females becoming NEA.

Table 12: Transition matrices of labour market states between Wave 1 and Wave 2 (%)

Male					Female				
Wave 1 status	**Wave 2 status**				**Wave 1 status**	**Wave 2 status**			
	NEA	**Unemployed**	**Employed**	**Total**		**NEA**	**Unemployed**	**Employed**	**Total**
NEA	**60.04**	16.62	23.34	100	**NEA**	**60.84**	20.81	18.34	100
Unemployed	35.47	**24.69**	39.83	100	**Unemployed**	42.93	**29.69**	27.37	100
Employed	14.71	10.01	**75.28**	100	**Employed**	24.69	9.611	**65.70**	100
Total	27.99	13.96	58.05	100	**Total**	40.68	18.55	40.78	100

Notes:

1. *The data are weighted using Wave 2 panel weights.*

The Wave 1 to 3 period paints a similar picture, although a much lower percentage of men and women remained NEA (38.49 percent of men and 50.73 percent of women) between the two Waves, compared to the period between Wave 1 and Wave 2 (60.04 percent of men and 60.84 percent of women). A similar number of males and females also remained in employment (75.35 percent of men and 64.9 percent of women) when compared to the previous table. A likely explanation for the variation in results between the two matrices could be that the transition period between Wave 1 and Wave 3 is longer than the transition period between Wave 1 and 2, allowing for more time to move between employment states.

Table 13: Transition matrices of labour market states between Wave 1 and Wave 3 (%)

Male					Female				
Wave 1 status	**Wave 3 status**				**Wave 1 status**	**Wave 3 status**			
	NEA	**Unemployed**	**Employed**	**Total**		**NEA**	**Unemployed**	**Employed**	**Total**
NEA	**38.49**	27.2	34.31	100	**NEA**	**50.73**	24.59	24.67	100
Unemployed	17.3	**33.26**	49.43	100	**Unemployed**	32.71	**31.89**	35.4	100
Employed	13.87	10.78	**75.35**	100	**Employed**	22.78	12.32	**64.90**	100
Total	19.54	18.11	62.36	100	**Total**	34.25	21.68	44.06	100

Notes:

1. *The data are weighted using Wave 3 panel weights.*

4.10. Conclusion

The descriptive statistics indicate that being NEA is a labour market state, which seems to be more attractive to females, although the regression analysis in the next chapter will likely shed light on the possible reasons for this. There are also clear differences between the youth statistics and the statistics for all ages, especially for the females who display greater LFP rates. Nonetheless, the LFP rates among young females are still lower than they are among young males, while unemployment rates are higher. Using the variables studied in the descriptive statistics, the regression analysis will likely shed more light on the ways in which the variables mentioned affect the labour market outcomes, employment probabilities and LFP rates of men and women differently, overall as well as among the youth and the non-youth cohorts.

CHAPTER 5: REGRESSION ANALYSIS

5.1. Introduction

Results for all the regressions described in the methodology chapter are displayed and analysed in this section. The first set are probit regressions, which analyse LFP, followed by the multinomial logistic regressions, which determine the probabilities of being in a particular labour market state. These regressions are split by gender and age cohort. Lastly, the logistic panel results display the probability of someone moving from being NEA or unemployed in one period to becoming employed in the next. These regressions are split by gender only, as the sample size would fall by too much with a further disaggregation by age cohort.[24]

As the purpose of this report is to investigate gender differences, the analysis in this chapter will focus only on those variables in which gender differences are expected to be present or are actually found in the results, such as the geographical location, educational attainment, marital status, the number of household members, the individual's perceived socio-economic status, and daily hardship. Variables such as age, race and the province in which an individual resides are not expected to produce significant or consistent gender differences, and they are merely included as controls. The discussion which follows on the regression results will thus not include an analysis of these variables.

5.2. Cross-sectional probit regression analysis on labour force participation probabilities

As explained in the introduction, having as many people as possible in the labour force is a desirable outcome for any economy; and it is thus useful for policy-makers to know how certain factors assist in driving men and women, young and old into the labour market. The binary probit regressions describe those individual factors that correlate with men and women being labour force participants, as well as how these factors differ between the youth and non-youth cohorts. The regression output is displayed in Table 14.

[24] All the regressions were re-run for a restricted African sample to verify that results were not driven by racial differences, however, the results obtained from this restricted sample did not differ much to the results included in this report. These regression results are thus not included in this analysis.

Men and women of all ages are more likely to be labour force participants if they reside in an urban area, compared to those who live in traditional areas. The coefficients for individuals living in urban areas are all significant, while the magnitudes are greater for the women than men, with the exception of the youth cohort. Men residing on farms are more likely to be labour force participants, while the magnitude for the older cohort of males is greater than that for the overall sample and the young males. The coefficients for females of all ages are also positive, although none of the coefficients are significant. Women and men of all ages thus have a greater probability of being in employment when they live outside of a traditional area, with women having a greater likelihood of being a labour force participant in an urban area, and men having a greater likelihood of being a labour force participant on a farm.

It is clear that education is one of the most important variables to consider when making a decision to participate in the labour force or not, as education raises the returns which an individual gains in the labour market. For women in the whole sample and the older cohort of women, the magnitudes of the coefficients for all levels of education are greater than those of their male counterparts, with the exception of Grade 1 to Grade 7 schooling, where the magnitudes for the men are greater. The results for the youth differ slightly, with young females having coefficients which are positive, significant and greater in magnitude for all levels of education compared to the coefficients for young males; while only having a higher degree or diploma was significant for young males. For women, the likelihood of being a labour force participant becomes greater with every level of education, with the effects being especially strong for young females, while for men, this in only evident among the older cohort (although the coefficient for Grade 1 to Grade 7 schooling is greater than the coefficient for Grade 8 to Grade 11 schooling). From the results, one can thus conclude that the higher the level of education which an individual possesses, the higher the likelihood of that individual participating in the labour force, however, this effect is especially important for young women. Furthermore, only amongst the women, those who reported being fluent in English (a proxy for quality) were more likely to be active labour force participants. The coefficient for this variable was not significant for any of the male regressions.

Marriage is an especially important variable, with the coefficients for males all being significant and positive and being negative for females, although none of the female coefficients are significant. Compared to those who had never been married, married men are thus more likely to be labour force participants, and women are less likely to be labour force

participants. These results are expected, as numerous studies have found that being married has a positive effect on the LFP of men and a negative effect on the LFP of women (Naudé & Serumaga-Zake, 2001; Ntuli, 2007; Ntuli & Wittenberg, 2013). The coefficients for divorced females are also highly significant and positive, indicating the greater need that women have to work if they do not have financial support from a spouse, or to re-enter the labour force if they had chosen not to participate while they were married. The coefficient for divorced young females has the greatest magnitude, while the coefficients for divorced men are all positive, but none are significant.

The number of children in the household is surprisingly not significant in any of the regressions, while the signs of the coefficients also do not produce any consistent results. The number of working-age adults in the household do have gender differences, with the signs of the coefficients being negative for males and positive for females, indicating that for each additional working-age adult in the household, a male is less likely to be a labour force participant and a female is more likely to be a labour force participant. However, only the coefficient for older males is significant with the magnitude of this coefficient also being greater for this group of males than the youth cohort of males. Having working-age adults in the household could enable women to enter the labour market if the working-age adults are unemployed individuals who are able to take care of children, but could provide the financial resources to undertake job search, if there are employed working-age adults in the home.

The number of pensioners in the household has the same effect for males, with all the male coefficients being negative, however only the older male coefficient is significant when disaggregated by age. The coefficients for females are also negative with the exception of young females who have a positive coefficient. While the coefficient for young females is not significant, it could allude to the possibility of the income from the pension facilitating job search for these young women, or the presence of a grandparent providing childcare, which enables young women to enter the labour market (Aassve et al., 2012; Posel et al., 2006). The significant negative coefficient for the older cohort of women could indicate to the possibility of a pensioner needing care, resulting in these women being unable to enter the labour market.

The perceived socio-economic status of an individual's family when they were young is particularly important for older females, with those who considered themselves to be in the

middle and higher income groups at age 15 being more likely to be in the labour force than those in the lower income groups. Only the coefficients for males of all ages and older males are significant for the daily hardship variable, the coefficients for all the groups are negative, indicating that those who have difficulty performing basic tasks on a daily basis are less likely to enter the labour force, as expected.

Table 14: Probability of labour force participation, by gender and age cohort

Binary probit model

Labour Force Participation	All		Youth		Non-Youth	
	Male	Female	Male	Female	Male	Female
Age	0.238***	0.187***	0.797***	0.449***	0.167**	0.068
	(0.02)	(0.02)	(0.15)	(0.11)	(0.08)	(0.08)
Age Squared	-0.313***	-0.247***	-1.331***	-0.724***	-0.231***	-0.118
	(0.03)	(0.02)	(0.27)	(0.21)	(0.08)	(0.09)
Race (Ref: African)						
Coloured	0.303*	-0.089	0.879***	0.234	0.027	-0.351**
	(0.16)	(0.11)	(0.23)	(0.15)	(0.19)	(0.15)
Indian	-0.241	-0.618*	0.276	-0.420	-0.518**	-0.836**
	(0.26)	(0.32)	(0.54)	(0.34)	(0.22)	(0.37)
White	0.105	-0.491***	0.672*	-0.101	-0.214	-0.793***
	(0.18)	(0.16)	(0.38)	(0.28)	(0.20)	(0.20)
Province (Ref: Gauteng)						
Western Cape	-0.417**	-0.065	-0.211	-0.184	-0.529**	0.048
	(0.19)	(0.12)	(0.28)	(0.19)	(0.22)	(0.17)
Eastern Cape	-0.730***	-0.406***	-0.771***	-0.360**	-0.758***	-0.455***
	(0.15)	(0.11)	(0.19)	(0.16)	(0.20)	(0.14)
Northern Cape	-0.401**	-0.104	-0.366	-0.228	-0.451**	0.006
	(0.16)	(0.12)	(0.23)	(0.19)	(0.22)	(0.17)
Free State	-0.194	-0.089	0.097	-0.037	-0.411*	-0.092
	(0.15)	(0.21)	(0.19)	(0.23)	(0.23)	(0.27)
KwaZulu-Natal	-0.086	0.190*	-0.022	0.280*	-0.238	0.120
	(0.14)	(0.11)	(0.20)	(0.17)	(0.19)	(0.15)
North West	-0.105	0.067	0.151	0.034	-0.389*	0.108
	(0.16)	(0.18)	(0.19)	(0.25)	(0.23)	(0.17)
Mpumalanga	-0.316*	0.065	-0.286	0.090	-0.297	0.041
	(0.17)	(0.11)	(0.22)	(0.18)	(0.26)	(0.14)
Limpopo	-0.655***	-0.484***	-0.816***	-0.766***	-0.472**	-0.060
	(0.19)	(0.13)	(0.24)	(0.18)	(0.24)	(0.17)
Geographical Location (Ref: Traditional)						
Urban	0.263**	0.280***	0.301**	0.301**	0.264**	0.283***
	(0.10)	(0.08)	(0.14)	(0.12)	(0.12)	(0.10)
Farms	0.722***	0.114	0.525*	0.022	0.929***	0.259*
	(0.20)	(0.12)	(0.29)	(0.16)	(0.19)	(0.14)
Educational Attainment (Ref: No Schooling)						
Grade 1 to Grade 7	0.343***	0.178**	0.169	0.557***	0.372***	0.088
	(0.13)	(0.09)	(0.29)	(0.20)	(0.13)	(0.10)
Grade 8 to Grade 11	0.322**	0.393***	0.150	0.698***	0.308*	0.373***
	(0.14)	(0.09)	(0.28)	(0.19)	(0.17)	(0.12)
Matric	0.506***	0.689***	0.344	1.031***	0.570**	0.695***
	(0.17)	(0.12)	(0.30)	(0.20)	(0.25)	(0.19)
Diploma/Degree	0.858***	0.971***	0.660**	1.259***	0.859***	0.969***
	(0.18)	(0.15)	(0.32)	(0.24)	(0.25)	(0.20)
Fluent English	0.118	0.173**	0.060	0.167*	0.234	0.220*
	(0.09)	(0.07)	(0.11)	(0.09)	(0.15)	(0.12)
Marital Status (Ref: Never-married)						
Married	0.395***	-0.068	0.532***	-0.119	0.397***	-0.133
	(0.09)	(0.07)	(0.18)	(0.12)	(0.13)	(0.09)
Cohabiting	0.189	0.069	0.104	0.168	0.280*	-0.151
	(0.13)	(0.11)	(0.20)	(0.15)	(0.17)	(0.14)
Widow	0.051	-0.059	-	-0.123	-0.040	-0.108
	(0.28)	(0.11)	-	(0.32)	(0.27)	(0.13)
Divorced	0.313	0.480***	-	0.879**	0.287	0.454**
	(0.20)	(0.17)	-	(0.40)	(0.21)	(0.19)
Young Children	0.067	0.006	0.069	-0.010	0.050	-0.021
	(0.05)	(0.03)	(0.07)	(0.04)	(0.06)	(0.04)
Older Children	-0.063	-0.019	-0.010	-0.024	-0.078	0.003
	(0.04)	(0.03)	(0.06)	(0.03)	(0.05)	(0.03)
Working-age adults	-0.032	0.014	-0.034	0.008	-0.069**	0.030
	(0.03)	(0.02)	(0.04)	(0.03)	(0.03)	(0.02)
Pensioners	-0.184**	-0.031	-0.058	0.103	-0.442***	-0.202**
	(0.08)	(0.06)	(0.09)	(0.07)	(0.11)	(0.08)

Perceived socio-economic status (Ref: Lower Income)						
Middle Income	-0.035	0.037	-0.169	-0.084	0.110	0.164*
	(0.09)	(0.07)	(0.12)	(0.11)	(0.13)	(0.09)
Higher Income	-0.051	0.361	-0.300	0.147	0.158	0.647**
	(0.27)	(0.23)	(0.36)	(0.36)	(0.35)	(0.31)
Daily Hardship	-0.491**	-0.295	-0.163	-0.214	-0.496**	-0.260
	(0.22)	(0.18)	(0.55)	(0.40)	(0.22)	(0.20)
Constant	-3.369***	-3.213***	-10.685***	-6.994***	-1.831	-0.493
	(0.49)	(0.41)	(1.94)	(1.57)	(1.86)	(1.96)
N	**4345**	**6375**	**2113**	**3060**	**2217**	**3315**

Notes

1. *Source: NIDS, 2008*
2. *The data are weighted, standard errors in parentheses.*
3. **** p<0.01 ** p<0.05 * p<0.10.*
4. *Age groups are restricted as follows: All male (19-64); All female (19-59); Youth male and female (19-35); Older male (36-64); Older female (36-59).*
5. *No observations for divorced and widowed young males, as sample sizes are too small.*

5.3. Cross-sectional multinomial logistic regression analysis on probabilities of different labour market outcomes

The previous set of regressions investigated what the factors were which affected the LFP of men and women differently. However, making a decision to be a labour force participant does not guarantee employment. For this reason, a multinomial logistic model was utilised to determine which of the factors, utilised in the previous set of regressions are likely to result in an individual being employed, unemployed or NEA. The base outcome used in this model is unemployed, with the first half of the regressions determining what the likelihood of someone being NEA is, relative to being unemployed, and the second displaying the likelihood of someone being employed relative to being unemployed.

Amongst those individuals who reside in farm areas, there are clear gender differences, with males residing on farms being less likely to be NEA, while females are more likely to be NEA. This could be due to the types of jobs that are available on commercial farms, and could allude to the possibility that men could be working on farms while their families live with them, possibly in remote areas, where other employment is not easily obtainable. All groups have a greater probability of being employed compared to unemployed if they reside on a farm, with older males having the greatest probability of being employed. Surprisingly, none of the coefficients for the urban variable are significant for the employed outcome, although both men and women – of all ages – are less likely to be NEA when residing in an urban area, with the results for females being significant and the magnitudes of the coefficients being greater than those of the males.

Men and women are less likely to be NEA than unemployed (i.e. in the labour force) for every level of education, compared to those who have no schooling, although the magnitude and significance of the coefficients are much stronger for women. Both men and women have a greater likelihood of being employed rather than unemployed when they are in possession of a degree or diploma. Once again, these coefficients, are stronger for women than they are for men (while the youth male coefficient is not significant), emphasising the important role which education plays in ensuring that women are not only labour force participants, but that they are also able to obtain employment. It is also interesting to note that only a post-secondary education seems to matter for obtaining employment.

Those who reported being fluent in English amongst the females, were less likely to be NEA and more likely to be employed compared to unemployed, while the men who are fluent in English were also less likely to be NEA, but less likely to be employed compared to unemployed. Although most of the coefficients for the employed and NEA outcomes for this variable are not significant, it does reflect the possibility that language proficiency is more important for the kinds of jobs women do.

Marital status is an important variable in determining whether someone is in employment or not. Married and cohabiting males are more likely to be employed relative to being unemployed, whereas married and cohabiting females are more likely to be unemployed than employed, with the exception of older females for whom there is no significant effect. This is possibly indicating the ease of engaging in employment for men, when there is a partner present to take care of reproductive work in the home. Divorced individuals are also more likely to be employed relative to being unemployed, possibly reflecting the need for divorced individuals to be financially independent, as the supporting income of a partner is not present. The coefficient for older divorced females is especially strong.

Women, apart from older females living in a home with young children, are interestingly all less likely to be NEA when there are children in the home, however, all women are less likely to be employed as well when there are children in the household. The result for this was negative and significant for females in the whole sample, as well as for young females for whom the coefficients are greater. This could indicate that there is a need for women to work, where they report being part of the labour force, but where they might have difficulty securing employment as their children require supervision. Men are also less likely to be employed, compared to unemployed, when there are older children in the household, with the result being negative and significant for men in the whole sample.

Working-age adults in the home resulted in men being less likely to be employed, with the result being negative and significant for older men in particular, while this result was negative – but not significant – for women in the whole sample and for young women, but positive for older women.

A number of studies have found that living with a pensioner reduces the employment probabilities for both males and females (Dinkelman & Pirouz, 2011; Ranchhod, 2010). Having a pensioner in the household has a negative effect on the probability of employment for all groups, with the coefficients for men being stronger than those of the women. Once

again, there is a possibility that some of these individuals may be amongst the non-searching unemployed, which would explain the convenience of remaining unemployed when there are intra-household transfers of income, or it could allude to the fact that unemployed individuals tend to relocate to households where there is a pensioner present (Dinkelman & Pirouz, 2011).

While the perceived socio-economic statuses of individuals do not necessarily display consistent results for either one of the outcomes, women are more likely to be NEA when they have difficulty performing basic tasks, particularly older women. This might indicate that difficulty in performing daily tasks, combined with being an ageing individual, could have a greater than anticipated impact on labour market outcomes. Interestingly, women who have difficulties in performing basic tasks are more likely to be employed than unemployed, again particularly women in the non-youth cohort. This may be as a result of women being able to obtain jobs which may not require a lot of physical effort, such as office jobs, whereas the same result is not found for men.

Table 15: Probability of labour market outcomes, by gender and age cohort

Multinomial logistic model

Reference outcome: Unemployed

Not Economically Active	All		Youth		Non-Youth	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**
Age	-0.382***	-0.281***	-1.286***	-0.855***	-0.558***	-0.373*
	(0.05)	(0.04)	(0.30)	(0.21)	(0.21)	(0.20)
Age Squared	0.516***	0.415***	2.182***	1.477***	0.695***	0.514**
	(0.06)	(0.05)	(0.56)	(0.39)	(0.22)	(0.21)
Race (Ref: African)						
Coloured	-0.800*	0.397*	-2.262***	-0.072	0.549	0.755***
	(0.41)	(0.24)	(0.58)	(0.34)	(0.46)	(0.28)
Indian	0.467	1.503***	-1.150	1.745***	3.817***	1.138
	(0.95)	(0.49)	(1.60)	(0.36)	(0.79)	(0.90)
White	0.993*	1.086**	0.147	0.729	1.643***	1.297***
	(0.52)	(0.42)	(1.11)	(0.64)	(0.63)	(0.48)
Province (Ref: Gauteng)						
Western Cape	1.187***	0.279	1.013	0.473	0.815*	-0.015
	(0.43)	(0.30)	(0.68)	(0.41)	(0.49)	(0.41)
Eastern Cape	0.775**	0.588**	0.808**	0.547*	0.960**	0.611**
	(0.31)	(0.23)	(0.36)	(0.32)	(0.45)	(0.29)
Northern Cape	0.731**	0.037	1.051**	0.227	0.304	-0.162
	(0.34)	(0.25)	(0.51)	(0.37)	(0.54)	(0.32)
Free State	-0.206	-0.020	-0.830**	-0.021	0.549	-0.138
	(0.29)	(0.36)	(0.38)	(0.43)	(0.50)	(0.47)
KwaZulu-Natal	-0.044	-0.170	-0.213	-0.437	0.258	0.246
	(0.29)	(0.26)	(0.43)	(0.35)	(0.42)	(0.32)
North West	-0.158	-0.328	-0.669	-0.218	0.576	-0.519
	(0.35)	(0.38)	(0.46)	(0.46)	(0.43)	(0.42)
Mpumalanga	0.283	-0.087	0.097	-0.057	0.379	-0.239
	(0.30)	(0.24)	(0.38)	(0.36)	(0.55)	(0.31)
Limpopo	0.738*	0.842***	0.948*	1.074***	0.480	0.293
	(0.40)	(0.27)	(0.51)	(0.35)	(0.50)	(0.37)
Geographical Location (Ref: Traditional)						
Urban	-0.337	-0.477***	-0.369	-0.544**	-0.312	-0.422*
	(0.23)	(0.18)	(0.30)	(0.22)	(0.27)	(0.22)
Farms	-0.372	0.345*	-0.204	0.392*	-0.251	0.252
	(0.43)	(0.19)	(0.64)	(0.23)	(0.44)	(0.28)
Educational Attainment (Ref: No Schooling)						
Grade 1 to Grade 7	-0.521*	-0.491***	-0.093	-0.864**	-0.578*	-0.325
	(0.27)	(0.18)	(0.58)	(0.36)	(0.32)	(0.22)
Grade 8 to Grade 11	-0.411	-0.915***	0.097	-1.175***	-0.615	-0.870***
	(0.32)	(0.18)	(0.56)	(0.35)	(0.40)	(0.26)
Matric	-0.610	-1.111***	-0.220	-1.454***	-0.629	-1.058**
	(0.38)	(0.25)	(0.60)	(0.36)	(0.62)	(0.46)
Diploma/Degree	-0.989**	-1.026***	-0.655	-1.385***	-0.797	-0.819*
	(0.45)	(0.31)	(0.70)	(0.44)	(0.64)	(0.48)
Fluent English	-0.235	-0.223	-0.089	-0.243	-0.674*	-0.263
	(0.19)	(0.14)	(0.23)	(0.18)	(0.37)	(0.25)
Marital Status (Ref: Never-married)						
Married	0.114	0.096	0.152	0.111	-0.138	0.232
	(0.24)	(0.13)	(0.55)	(0.21)	(0.34)	(0.18)
Cohabiting	-0.033	-0.327	0.352	-0.508*	-0.621	0.010
	(0.33)	(0.21)	(0.49)	(0.28)	(0.39)	(0.27)
Widow	-0.017	0.456	-20.905***	0.266	-0.233	0.661**
	(0.62)	(0.28)	(0.96)	(0.67)	(0.66)	(0.30)
Divorced	0.113	-0.093	0.658	-1.432	-0.250	0.199
	(0.58)	(0.38)	(0.54)	(1.03)	(0.60)	(0.41)
Young Children	-0.095	-0.054	-0.109	-0.035	-0.053	0.004
	(0.10)	(0.05)	(0.14)	(0.06)	(0.14)	(0.09)
Older Children	0.001	-0.027	-0.081	-0.031	0.091	-0.034
	(0.10)	(0.05)	(0.13)	(0.06)	(0.12)	(0.07)
Working-age Adults	-0.011	-0.028	0.026	-0.027	-0.075	-0.012
	(0.05)	(0.03)	(0.07)	(0.04)	(0.09)	(0.06)

Pensioners	0.107	-0.082	-0.041	-0.200	0.322	-0.000
	(0.16)	(0.11)	(0.17)	(0.13)	(0.24)	(0.19)
Perceived socio-economic status (Ref: Lower Income)						
Middle Income	0.174	-0.099	0.481*	0.093	-0.288	-0.366
	(0.20)	(0.15)	(0.27)	(0.23)	(0.30)	(0.23)
Higher Income	-0.277	-0.941	0.132	-0.946	-0.012	-0.477
	(0.49)	(0.60)	(0.53)	(0.84)	(1.02)	(0.78)
Daily Hardship	0.723	0.869**	0.138	0.423	0.727	1.300**
	(0.55)	(0.43)	(1.36)	(0.77)	(0.64)	(0.53)
Constant	6.564***	5.337***	17.926***	13.220***	11.113**	7.126
	(0.98)	(0.74)	(3.96)	(2.87)	(5.20)	(4.56)
Employed	**All**		**Youth**		**Non-Youth**	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Age	0.064	0.105***	0.201	-0.116	-0.356*	-0.315
	(0.04)	(0.04)	(0.27)	(0.23)	(0.19)	(0.20)
Age Squared	-0.066	-0.066	-0.280	0.375	0.385*	0.389*
	(0.05)	(0.05)	(0.50)	(0.42)	(0.20)	(0.22)
Race (Ref: African)						
Coloured	-0.334	0.407	-0.777	0.674**	0.612	0.210
	(0.37)	(0.25)	(0.52)	(0.28)	(0.38)	(0.28)
Indian	-0.047	0.483	-0.645	1.402	2.911***	-0.389
	(0.72)	(0.47)	(0.73)	(0.89)	(0.71)	(0.77)
White	1.203**	0.276	1.629*	0.902**	1.256**	-0.096
	(0.47)	(0.34)	(0.87)	(0.41)	(0.54)	(0.42)
Province (Ref: Gauteng)						
Western Cape	0.534	0.210	0.912	0.192	-0.115	0.075
	(0.42)	(0.25)	(0.64)	(0.30)	(0.45)	(0.32)
Eastern Cape	-0.743**	-0.218	-0.812*	-0.173	-0.535	-0.278
	(0.33)	(0.21)	(0.42)	(0.29)	(0.41)	(0.28)
Northern Cape	0.084	-0.274	0.611	-0.419	-0.497	-0.205
	(0.28)	(0.23)	(0.42)	(0.30)	(0.45)	(0.29)
Free State	-0.781***	-0.300	-1.004***	-0.210	-0.278	-0.410
	(0.24)	(0.22)	(0.30)	(0.29)	(0.48)	(0.26)
KwaZulu-Natal	-0.291	0.214	-0.293	0.051	-0.267	0.550*
	(0.24)	(0.24)	(0.33)	(0.26)	(0.38)	(0.33)
North West	-0.428	-0.418*	-0.467	-0.401	-0.152	-0.530
	(0.27)	(0.24)	(0.42)	(0.26)	(0.40)	(0.40)
Mpumalanga	-0.391	0.031	-0.561	0.175	-0.235	-0.238
	(0.32)	(0.25)	(0.48)	(0.30)	(0.41)	(0.30)
Limpopo	-0.652*	0.015	-0.767*	-0.489	-0.509	0.232
	(0.33)	(0.25)	(0.43)	(0.33)	(0.54)	(0.37)
Geographical Location (Ref: Traditional)						
Urban	0.201	0.002	0.239	-0.056	0.246	0.070
	(0.21)	(0.15)	(0.28)	(0.17)	(0.24)	(0.21)
Farms	1.329***	0.834***	1.168***	0.815***	1.760***	0.891***
	(0.32)	(0.21)	(0.39)	(0.27)	(0.38)	(0.29)
Educational Attainment (Ref: No Schooling)						
Grade 1 to Grade 7	0.131	-0.305	0.491	0.108	0.047	-0.258
	(0.24)	(0.20)	(0.46)	(0.42)	(0.30)	(0.24)
Grade 8 to Grade 11	0.208	-0.474**	0.698	-0.090	-0.124	-0.369
	(0.30)	(0.20)	(0.50)	(0.42)	(0.36)	(0.24)
Matric	0.397	0.151	0.767	0.559	0.385	0.205
	(0.34)	(0.25)	(0.53)	(0.45)	(0.49)	(0.43)
Diploma/Degree	0.706*	0.855***	1.038*	1.245***	0.778	0.967**
	(0.39)	(0.28)	(0.61)	(0.47)	(0.54)	(0.42)
Fluent English	-0.051	0.121	-0.058	0.108	-0.248	0.175
	(0.17)	(0.14)	(0.19)	(0.18)	(0.30)	(0.22)
Marital Status (Ref: Never-married)						
Married	1.131***	-0.025	1.517***	-0.170	0.784***	0.017
	(0.20)	(0.14)	(0.42)	(0.18)	(0.26)	(0.21)
Cohabiting	0.559**	-0.405**	0.861***	-0.469**	0.005	-0.399
	(0.24)	(0.17)	(0.30)	(0.20)	(0.33)	(0.25)
Widow	0.239	0.506**	0.289	0.092	-0.224	0.643**
	(0.59)	(0.25)	(1.21)	(0.62)	(0.62)	(0.26)

Divorced	0.843*	0.939***	21.982***	0.574	0.377	1.173***
	(0.50)	(0.32)	(0.61)	(0.83)	(0.52)	(0.39)
Young Children	0.048	-0.090*	-0.017	-0.144**	0.110	-0.048
	(0.07)	(0.05)	(0.10)	(0.07)	(0.12)	(0.07)
Older Children	-0.167*	-0.113**	-0.161	-0.189***	-0.073	-0.043
	(0.10)	(0.05)	(0.12)	(0.06)	(0.11)	(0.06)
Working-age adults	-0.112**	-0.001	-0.051	-0.009	-0.259***	0.048
	(0.06)	(0.04)	(0.06)	(0.05)	(0.08)	(0.06)
Pensioners	-0.370**	-0.247**	-0.279*	-0.041	-0.641***	-0.474***
	(0.15)	(0.11)	(0.17)	(0.15)	(0.21)	(0.18)
Perceived socio-economic status (Ref: Lower Income)						
Middle Income	0.154	-0.051	0.325*	-0.108	-0.141	-0.134
	(0.12)	(0.13)	(0.18)	(0.20)	(0.22)	(0.20)
Higher Income	-0.462	-0.414	-0.584	-1.366**	0.225	0.723
	(0.52)	(0.42)	(0.63)	(0.54)	(0.88)	(0.73)
Daily Hardship	-0.176	0.593*	-0.339	0.280	-0.217	1.070**
	(0.53)	(0.35)	(0.77)	(0.49)	(0.70)	(0.53)
Constant	-0.302	-2.177***	-2.976	0.323	9.874**	6.991
	(0.86)	(0.82)	(3.66)	(3.32)	(4.44)	(4.72)
N	**4345**	**6375**	**2128**	**3060**	**2217**	**3315**

Notes:

1. *Source: NIDS, 2008.*
2. *The data are weighted, standard errors in parentheses.*
3. **** p<0.01 ** p<0.05 * p<0.10.*
4. *Age groups are restricted as follows: All male (19-64); All female (19-59); Youth male and female (19-35); Older male (36-64); Older female (36-59).*
5. *Widowed youth males for the "not economically active" outcome, produced a large and significant coefficient. The size of this coefficient is most likely due to the small sample size of widowed youth males in the dataset. This coefficient should thus be interpreted with caution.*

5.4. Panel logistic regression analysis on employment probabilities

The panel logistic regression results, which determine the likelihood of transitioning into employment over a period, are displayed in Table 16. While the binary probit model and the multinomial logistic model presented in the last two sections gave insight into the conditions which may result in LFP and the likelihood of obtaining employment at a particular time, the panel regressions allow for an investigation into the employment probabilities of an individual across time, based on the factors used in the previous regressions.

As mentioned in the methodology chapter, the employed individuals are dropped from the sample, to determine which factors are likely to result in an unemployed or NEA individual in Wave 1 obtaining employment in Wave 2 or Wave 3.[25] As each period presents its own unique challenges and circumstances relevant to that time, many coefficients in the regression output did not render consistent results. However, the most relevant findings are discussed in this section.

The periods under consideration are Period I (2008-2010/11) and Period II (2008-2012). These regressions are not disaggregated by age, as disaggregating by youth and non-youth cohorts significantly reduce the sample sizes. The sample sizes for males of all ages were significantly reduced when the employed individuals were dropped from the sample with 66.85 percent of males and 44.34 percent of females dropped from the sample (see Table 2).[26]

An additional variable included in these regressions is a dummy variable stating whether the individual was searching unemployed,[27] or not, in Wave 1. This variable is positive and significant for males across both periods, and implies that being searching unemployed in Wave 1 was very likely to result in employment in a subsequent Wave for men. For women, the variable was only significant and positive for the Period I regression.

In Period I, women were more likely to obtain employment if they resided in urban areas or farms, compared to those who resided in traditional areas, although these coefficients are

[25] These regressions were also run for an additional period, Wave 2 to Wave 3, using Wave 2 characteristics as the base, this is included as an appendix (see Appendix A 7). Appendix A 8 provides the shares of labour market outcomes by gender for Wave 2, to accompany the regression analysis.

[26] The regressions were also run with a sample of unemployed individuals only (excluding NEA individuals) and these results are displayed in Appendix A 6. In these regressions, the sample sizes of the females especially become significantly reduced, and therefore, these results should be interpreted with caution.

[27] The searching unemployed refers to those individuals who are without work, reported wanting to work, have actively searched for work in the last 4 weeks, and are able to accept a job within the next week.

negative in Period II. The same result was obtained when the NEA individuals were removed from the sample (see Appendix A 6).

Only women with a Matric certificate in Period I or degree/diploma in Periods I and II were more likely to transition into employment, with none of the coefficients being significant for men. This is consistent with stronger coefficients obtained for females on educational variables in the cross-section regressions.

The marital status variables did not produce any noteworthy results, although cohabiting males were significantly more likely to transition into employment in Period I, while divorced males were significantly more likely to transition into employment in Period II. It is worth noting that the sample size for NEA and unemployed married males, which is the sample included for these regressions are small, likely resulting in insignificant results.The coefficients for the number of children in the household were not significant across the two periods, while the effect of having a working-age adult in the home mattered for men, who had negative and significant coefficients in both periods. Having a pensioner present in the household had the same effect, with the coefficients being significantly negative for men, and the coefficients being negative but not significant for women across both periods.

Reporting difficulty in performing basic daily tasks is correlated significantly with a reduction in the employment probabilities of males in Period II, while the coefficients for females were positive but not significant. This is consistent with results from the cross-sectional regressions, once again alluding to the possibility of women being able to obtain jobs where a lot of physical effort is not necessary.

The last effect of interest which the panel produced was that having previous work experience only seemed to matter for women, who were more likely to transition into employment if they reported having previous work experience in Wave 1 for both sets of regressions, periods I and II.

Table 16: Probability of employment across periods, by gender.

Binary logistic model				
Period	**I**		**II**	
	Wave 1 to Wave 2		**Wave 1 to Wave 3**	
Dependent Variable	**Wave 2 outcome**		**Wave 3 outcome**	
	Male	**Female**	**Male**	**Female**
Searching unemployed in Wave 1	0.353*	0.281*	0.714***	0.171
	(0.21)	(0.15)	(0.18)	(0.14)
Age	0.137**	0.152***	0.100**	0.157***
	(0.05)	(0.05)	(0.05)	(0.04)
Age Squared	-0.211***	-0.212***	-0.185***	-0.223***
	(0.07)	(0.07)	(0.07)	(0.06)
Race (Ref: African)				
Coloured	0.245	0.100	0.890**	0.554**
	(0.46)	(0.31)	(0.44)	(0.26)
Indian	0.728	-1.304	-2.723**	-1.670*
	(1.06)	(0.82)	(1.37)	(0.87)
White	-0.691	-0.301	1.128	0.030
	(0.96)	(0.46)	(0.69)	(0.40)
Province (Ref: Gauteng)				
Western Cape	-0.697	-0.028	-0.517	-0.094
	(0.61)	(0.30)	(0.47)	(0.28)
Eastern Cape	0.013	0.201	0.238	-0.389*
	(0.36)	(0.24)	(0.33)	(0.22)
Northern Cape	0.099	-0.781**	0.136	-0.712***
	(0.40)	(0.30)	(0.40)	(0.26)
Free State	0.080	-0.105	0.706**	-0.110
	(0.37)	(0.27)	(0.33)	(0.26)
KwaZulu-Natal	-0.289	-0.247	0.201	-0.298
	(0.35)	(0.25)	(0.32)	(0.22)
North West	0.108	-0.636**	0.156	-0.931***
	(0.37)	(0.30)	(0.36)	(0.27)
Mpumalanga	-0.163	-0.446*	0.411	-0.383
	(0.36)	(0.27)	(0.34)	(0.25)
Limpopo	-0.388	-0.107	0.657*	-0.310
	(0.38)	(0.28)	(0.34)	(0.25)
Geographical Location (Ref: Traditional)				
Urban	-0.332	0.290*	0.076	-0.172
	(0.23)	(0.17)	(0.20)	(0.15)
Farms	0.155	0.724***	0.453	-0.051
	(0.36)	(0.25)	(0.35)	(0.24)
Educational Attainment (Ref: No Schooling)				
Grade 1 to Grade 7	-0.139	0.340	-0.920***	-0.251
	(0.36)	(0.31)	(0.35)	(0.25)
Grade 8 to Grade 11	-0.469	0.520	-0.558	-0.113
	(0.37)	(0.32)	(0.34)	(0.25)
Matric	-0.175	0.851**	-0.187	0.436
	(0.42)	(0.36)	(0.39)	(0.29)
Diploma/Degree	0.058	1.516***	0.616	0.963***
	(0.56)	(0.41)	(0.48)	(0.35)
Fluent English	0.180	-0.058	-0.071	0.115
	(0.21)	(0.17)	(0.18)	(0.15)
Marital Status (Ref: Never-married)				
Married	-0.407	-0.056	0.268	-0.231
	(0.33)	(0.19)	(0.30)	(0.18)
Cohabiting	0.761**	0.008	0.263	0.132
	(0.37)	(0.24)	(0.40)	(0.21)
Widow	0.352	0.190	-0.802	-0.018
	(0.76)	(0.34)	(0.86)	(0.33)
Divorced	0.145	-0.544	1.425**	0.191
	(0.69)	(0.53)	(0.64)	(0.48)
Young Children	-0.104	-0.056	0.148	0.064
	(0.10)	(0.07)	(0.09)	(0.06)
Older Children	0.037	-0.049	-0.005	-0.056
	(0.09)	(0.06)	(0.08)	(0.05)
Working-age adults	-0.191**	0.061	-0.174***	-0.026

	(0.08)	(0.05)	(0.06)	(0.04)
Pensioners	-0.448**	-0.044	-0.574***	-0.164
	(0.18)	(0.15)	(0.17)	(0.13)
Perceived socio-economic status (Ref: Lower Income)				
Middle Income	-0.043	-0.213	-0.057	0.066
	(0.22)	(0.17)	(0.19)	(0.14)
Higher Income	0.030	0.744	-0.739	0.064
	(0.68)	(0.49)	(0.62)	(0.50)
Daily Hardship	-0.513	0.273	-1.399**	0.217
	(0.75)	(0.48)	(0.68)	(0.39)
Previous work experience	0.115	0.283*	-0.313	0.387***
	(0.23)	(0.16)	(0.22)	(0.15)
Constant	-1.790*	-4.531***	-1.047	-3.189***
	(1.05)	(0.89)	(0.94)	(0.78)
N	**1383**	**3001**	**1464**	**3100**

Notes

1. *Source: NIDS, 2008, 2010/11, 2012.*
2. *The data are weighted, standard errors in parentheses.*
3. **** p<0.01 ** p<0.05 * p<0.10.*
4. *Wave 2 panel weights were utilised to analyse period I and Wave 3 panel weights were utilised to analyse period II.*

5.5. Conclusion

The three sets of regressions thus all served a different purpose, where the binary probit investigates how demographic and socio-economic characteristics of men and women affect LFP differently, while the multinomial logistic regressions indicate whether these characteristics are likely to result in being employed, NEA or unemployed. Lastly, the logistic panel regressions considered the way in which these characteristics may be likely to affect the employment probabilities of a NEA or unemployed individual across time. The regressions were all run with the purpose of investigating gender differences, as well as gender differences across different age groups.

Women and men outside of traditional areas had a greater probability of being labour force participants and being employed, while women were more likely to transition into employment if they were on a farm or in an urban area. This is likely pointing to the limited economic opportunities in traditional areas.

The most noteworthy results were that education was important for males and females, but played an especially important role for women, who were more likely to be labour force participants, more likely to be employed and more likely to transition out of unemployment or inactivity, the higher the level of education. For women, the level of post-secondary education was especially important, and in addition to this, previous work experience also mattered for women in transitioning into employment.

Married men were not only more likely to be labour force participants, but they were also more likely to be employed. The opposite was true for married women, who were more likely to be NEA and less likely to be employed. Although the number of children in the home did not have the expected negative effect on women's LFP, this reduced the chances of women being in employment in Wave 1, especially young women who are of peak childbearing age. The composition of the household was especially important for men, who were less likely to be labour force participants, less likely to be employed, and less likely to transition into employment if there was a working-age adult or a pensioner in the household. While having a pensioner in the home enabled young women to enter the labour market, it hindered the participation of older women. Lastly, the daily hardship variable provided interesting results, as men were less likely to be labour force participants and less likely to transition into

employment, while women were less likely to be NEA, but interestingly, more likely to be employed, if they reported having difficulty in performing certain basic daily tasks.

CHAPTER 6: CONCLUSION

This study attempted to explore whether there are gender differences in the demographic and socio-economic characteristics, which determine an individual's labour market outcomes. A number of regressions were run to determine how these characteristics influence women's LFP decisions differently to men's, and how these characteristics impacted employment probabilities differently for men and women.

Data from Wave 1, 2, and 3 of the NIDS surveys were used in this report. The methods utilised to investigate the research questions posed in the introduction, included estimating a binary probit model to determine how characteristics of individuals impacted the likelihood of being a labour force participant or not. This was followed by a multinomial logistic model to determine how these characteristics impacted the probability of an individual being NEA, employed or unemployed. Lastly, a binary logistic model was used to analyse the way in which individual characteristics affect the likelihood of an unemployed or NEA individual obtaining employment in a subsequent period.

In the literature review, a number of theories were investigated, which hypothesised on the determinants of LFP of individuals, and particularly women. Empirical evidence was then used to support or refute the hypotheses forwarded by the theoretical views presented. The human capital theory, an individual's reservation wage, the issue of reproductive labour, and the added worker effect were analysed in the context of the study, and how these will possibly affect men and women's LFP differently.

The main findings of the report related to the geographical location of an individual, the effects of education, the marital status of an individual, and the household composition of the individual. These variables produced interesting gender differences in the ways in which they affect labour market outcomes.

It was found that there may be restrictive gender relations in traditional areas and opportunities which may not be as widespread for females as they are for males. In contrast to this, farms were highly conducive for the employment probabilities of men and women; while women were more likely to be labour force participants and employed if they resided in an urban area. This suggests that there may be job segmentation in the types of jobs which are available to men and women in urban areas, traditional areas and on farms. In addition, this

could point to the fact that more opportunities are available in urban areas than in traditional areas, and that those who reside on farms are more likely to be employed as these areas have been demarcated for productive activity, i.e. commercial farming.

Although education was an important factor for both men and women, it had a stronger effect in inducing women to enter the labour market and in obtaining employment. This was evident from all three sets of regressions, with higher levels of education, such as the possession of a martic certificate, a degree, or a diploma having significantly positive effects on the labour force participation and employment probabilities of women. This is consistent with findings from Dinkelman and Pirouz (2011), Mlatsheni and Rospabé (2002) and Van Der Westhuizen et al. (2007). In addition to this, the youth also gained greatly from increased levels of education, with young women especially, choosing to enter the labour market as opposed to remaining inactive, the higher the level of education. Having previous work experience affected women's employment probabilities positively as well, with women being more likely to transition into employment, having been unemployed or inactive in a previous period, if they have previous work experience. This may be as a result of women obtaining jobs, where a certain level of education and previous work experience is valued by employers, such as clerical and office jobs, whereas men may more easily obtain jobs which involve manual labour or where on the job training may be more appropriate.

Women were not likely to be NEA when there were children present in the home, although their employment probabilities were reduced. Given the fact that many women are heading households, this could allude to a lower reservation wage when there are children present in the home, but an inability to obtain employment as children and in particular young children, may be in need of supervision. The presence of older children in the home also reduced the employment probabilities of men. Young women and men were less likely to be employed and less likely to be NEA, compared to unemployed, than their older counterparts, when there were children present in the household. In addition to this, they also had higher mean values of children, both young and older in the household, thus making it difficult for young women in particular to obtain employment. This indicates that young people with children in the household may have a need to work, thus choosing to be active in the labour force, but that they may find it difficult to obtain employment. Once again, this could allude to the reservation wage of young people with children in the home being lower than for the older cohort who may not have the burden of many young children in the household, but who interestingly have larger shares of NEA individuals.

The presence of pensioners and working-age adults in the household had an adverse effect on the employment probabilities and LFP of males. Having a pensioner who receives a pension in the home, could mean that men are benefitting from intra-household transfers and choosing not to work as a result. Furthermore, young women were more likely to be labour force participants when there is a pensioner in the home, possibly suggesting that they are facilitating job search and providing childcare responsibilities. This is consistent with findings from Aassve et al. (2012), Posel et al. (2006) and Ranchhod (2010).

The study illustrates that, gender differences do exist in the ways in which certain characteristics affect the labour market outcomes of men and women. These differences also exist among the youth cohort in many cases, suggesting that traditional roles around the reproductive age play a larger role than changing norms in society around gender roles.

Recommendations

Assuming that many women residing on farm areas are NEA due to them accompanying their husbands to their places of work, work opportunities, which are appropriate for women, could be explored on farms to make use of the potential labour these women provide; that is, if they wish to enter into employment while living in these areas.

Education is also an area where inroads can be made, as the report has shown the strong effects which education has for both sexes, and especially for women and the youth in entering the labour force, as well as obtaining employment. Greater access to quality education would prove beneficial to the South African labour market, as this would increase the opportunity cost of choosing to stay NEA, and would also increase the likelihood of individuals obtaining employment.

Since women with children are more likely to be unemployed, relative to being NEA, and more likely to be unemployed relative to being employed, the possibility of women wanting or needing to enter the labour market, but not being able to find work, due to childcare responsibilities is demonstrated. It would thus be in the interest of these women to have work environments where children could be taken care of, perhaps in a day-care facility. Policy-makers would do well in encouraging firms to accommodate young women in managing their childcare responsibilities.

Areas for future research

While the results presented some interesting gender differences even among the youth cohort, the study faced a number of limitations. The limitations, as discussed in Chapter 3, were

mainly related to causality, which was difficult to determine in certain instances; as well as sample size, particularly in the panel regressions. While these challenges are beyond the scope of this report, this suggests that there is still room for further investigation should better data become available.

APPENDICES

A 1: Labour market outcomes by gender and marital status (column percentages)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
Married	28.97	18.00	43.62	36.91	38.91	28.45	39.18	36.17
	(2.34)	(1.89)	(2.20)	(1.83)	(2.10)	(2.10)	(1.75)	(1.33)
Cohabit	6.03	9.38	12.68	11.04	9.76	16.03	9.66	11.43
	(1.08)	(1.50)	(1.10)	(0.78)	(1.11)	(1.47)	(1.19)	(0.83)
Widow	3.56	1.58	1.48	1.84	9.25	3.02	6.95	6.53
	(0.97)	(0.74)	(0.27)	(0.27)	(0.99)	(0.56)	(0.70)	(0.46)
Divorced	2.17	1.31	3.34	2.81	2.38	1.66	7.31	4.37
	(0.64)	(0.55)	(0.64)	(0.46)	(0.56)	(0.42)	(1.09)	(0.55)
Never-married	59.26	69.72	38.87	47.40	39.70	50.84	36.91	41.50
	(2.62)	(2.83)	(1.83)	(1.63)	(1.88)	(2.25)	(1.69)	(1.34)
Total	100	100	100	100	100	100	100	100
N	**4390**				**6426**			

Notes

1. *The data are weighted, standard errors in parentheses.*

A 2: Labour market outcomes by gender and education level (column percentages)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
No schooling	15.00	6.57	6.05	7.59	13.13	3.64	5.74	7.26
	(1.83)	(1.39)	(0.70)	(0.64)	(1.20)	(0.46)	(0.56)	(0.52)
Gr1-7	23.74	20.79	19.48	20.39	25.65	15.78	16.15	18.75
	(2.28)	(1.79)	(1.49)	(1.17)	(1.68)	(1.25)	(1.18)	(0.88)
Gr8-11	39.42	39.59	31.41	34.10	40.18	49.29	30.20	38.24
	(2.54)	(2.48)	(1.67)	(1.25)	(1.82)	(1.71)	(1.64)	(1.21)
Matric	16.83	22.71	23.10	22.02	14.35	22.18	22.50	20.10
	(2.65)	(2.17)	(1.55)	(1.23)	(1.40)	(1.45)	(1.45)	(0.97)
Certificate/Degree/Diploma	5.00	10.33	19.96	15.90	6.69	9.11	25.41	15.65
	(1.13)	(2.00)	(1.80)	(1.36)	(1.47)	(1.09)	(2.32)	(1.44)
Total	100	100	100	100	100	100	100	100
N	**4387**				**6429**			

Notes

1. *The data are weighted, standard errors in parentheses.*

A 3: Labour market outcomes by gender and race (column percentages)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
African	87.29	90.07	75.29	79.74	79.92	87.09	72.63	78.64
	(2.07)	(2.60)	(2.75)	(2.26)	(2.93)	(2.35)	(3.08)	(2.38)
Coloured	4.82	6.94	8.67	7.75	8.34	6.65	10.56	8.86
	(0.90)	(2.12)	(1.31)	(1.11)	(1.47)	(1.76)	(1.66)	(1.45)
Indian	1.37	1.34	3.01	2.46	2.56	0.96	3.33	2.47
	(0.85)	(1.34)	(1.19)	(1.08)	(2.09)	(0.48)	(1.14)	(1.03)
White	6.52	1.65	13.03	10.05	9.18	5.30	13.48	10.03
	(1.87)	(0.70)	(2.25)	(1.71)	(2.09)	(1.67)	(2.46)	(1.72)
Total	100	100	100	100	100	100	100	100
N	**4396**				**6439**			

Notes

1. *The data are weighted, standard errors in parentheses.*

A 4: Labour market outcomes by gender and location (column percentages)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
Traditional	47.10	36.51	17.35	25.42	42.39	32.33	22.82	30.97
	(3.93)	(4.29)	(1.93)	(2.34)	(3.24)	(3.15)	(2.35)	(2.43)
Urban	47.80	58.34	70.38	64.68	48.31	62.84	68.30	61.14
	(3.77)	(4.39)	(2.72)	(2.62)	(3.10)	(3.23)	(2.65)	(2.52)
Farms	5.10	5.15	12.27	9.90	9.30	4.83	8.88	7.89
	(1.71)	(2.01)	(2.40)	(1.97)	(2.76)	(1.11)	(1.86)	(1.73)
Total	100	100	100	100	100	100	100	100
N	**4396**				**6439**			

Notes

1. *The data are weighted, standard errors in parentheses.*

A 5: Labour market outcomes by gender and province (column percentages)

	Male				Female			
	NEA	**Unemployed**	**Employed**	**Total**	**NEA**	**Unemployed**	**Employed**	**Total**
Western Cape	7.28	4.00	11.46	9.52	9.69	8.24	13.02	10.77
	(1.16)	(0.99)	(1.43)	(0.98)	(1.21)	(1.41)	(0.97)	(0.75)
Eastern Cape	24.10	15.71	7.97	11.90	17.83	11.54	8.94	12.17
	(2.24)	(3.40)	(0.86)	(0.98)	(1.51)	(1.90)	(1.26)	(1.07)
Northern Cape	2.50	2.07	2.59	2.49	2.39	2.30	2.07	2.22
	(0.41)	(0.35)	(0.33)	(0.22)	(0.33)	(0.28)	(0.20)	(0.17)
Free State	4.82	8.80	5.89	6.21	4.81	6.63	5.53	5.62
	(0.77)	(1.27)	(0.60)	(0.42)	(1.16)	(0.92)	(0.71)	(0.44)
KwaZulu-Natal	16.53	19.43	14.20	15.46	17.31	18.75	20.95	19.32
	(2.22)	(2.69)	(1.32)	(1.10)	(2.07)	(1.99)	(1.66)	(1.07)
North West	6.86	10.34	8.28	8.40	6.40	8.64	5.61	6.66
	(1.19)	(2.20)	(0.94)	(0.79)	(1.68)	(0.94)	(0.44)	(0.51)
Gauteng	15.33	22.57	34.38	29.29	17.94	27.08	27.46	24.66
	(2.61)	(3.43)	(2.38)	(1.97)	(2.09)	(2.92)	(2.06)	(1.60)
Mpumalanga	7.43	7.87	7.83	7.77	6.57	8.86	8.52	8.06
	(1.18)	(1.64)	(0.84)	(0.65)	(0.89)	(1.36)	(1.03)	(0.75)
Limpopo	15.14	9.20	7.40	8.96	17.05	7.95	7.89	10.51
	(2.39)	(1.68)	(1.47)	(0.96)	(1.62)	(0.96)	(1.18)	(0.84)
Total	100	100	100	100	100	100	100	100
N	**4396**				**6439**			

Notes

1. *The data are weighted, standard errors in parentheses.*

A 6: Probability of employment across periods, by gender - excluding NEA individuals

Binary Logistic Model

Period	I		II	
	Wave 1 to 2		Wave 1 to 3	
Dependent Variable	Wave 2 outcome		Wave 3 outcome	
	Male	Female	Male	Female
Searching unemployed in previous Wave	0.067	0.032	0.414*	0.071
	(0.26)	(0.19)	(0.22)	(0.16)
Age	0.009	-0.047	0.049	0.066
	(0.07)	(0.06)	(0.06)	(0.05)
Age Squared	-0.010	0.098	-0.051	-0.039
	(0.10)	(0.09)	(0.09)	(0.08)
Race (Ref: African)				
Coloured	-0.217	-0.224	1.098*	0.616
	(0.51)	(0.43)	(0.63)	(0.38)
Indian	0.677	-2.052*	-2.832**	-1.670
	(1.31)	(1.05)	(1.28)	(1.27)
White	-	0.386	1.480	0.743
	-	(0.72)	(1.14)	(0.60)
Province (Ref: Gauteng)				
Western Cape	1.852**	0.522	-0.391	0.188
	(0.81)	(0.49)	(0.54)	(0.39)
Eastern Cape	0.279	0.262	0.061	-0.521**
	(0.44)	(0.30)	(0.38)	(0.26)
Northern Cape	0.089	-0.410	0.577	-0.641*
	(0.47)	(0.37)	(0.49)	(0.34)
Free State	-0.080	-0.013	0.715*	-0.182
	(0.47)	(0.33)	(0.37)	(0.31)
KwaZulu-Natal	-0.184	0.047	0.122	-0.339
	(0.43)	(0.31)	(0.36)	(0.26)
North West	0.248	-0.404	0.227	-0.735**
	(0.48)	(0.34)	(0.42)	(0.31)
Mpumalanga	0.302	0.064	0.349	-0.774***
	(0.49)	(0.33)	(0.38)	(0.28)
Limpopo	0.071	0.190	0.558	-0.461
	(0.51)	(0.35)	(0.39)	(0.30)
Geographical Location (Ref: Traditional)				
Urban	0.006	0.444**	-0.055	-0.407**
	(0.30)	(0.21)	(0.22)	(0.18)
Farms	0.481	0.974**	0.419	-0.124
	(0.56)	(0.43)	(0.40)	(0.32)
Educational Attainment (Ref: No Schooling)				
Grade 1 to Grade 7	-0.081	0.481	-1.800***	-0.233
	(0.52)	(0.45)	(0.41)	(0.32)
Grade 8 to Grade 11	-0.474	0.484	-1.191***	-0.200
	(0.53)	(0.45)	(0.41)	(0.32)
Matric	-0.063	0.708	-0.824*	0.224
	(0.58)	(0.50)	(0.46)	(0.36)
Diploma/Degree	-0.791	1.452***	0.113	0.520
	(0.69)	(0.56)	(0.61)	(0.44)
Fluent English	0.143	-0.076	-0.035	0.135
	(0.27)	(0.20)	(0.21)	(0.17)
Marital Status (Ref: Never-married)				
Married	0.045	0.364	0.145	-0.213
	(0.44)	(0.26)	(0.35)	(0.22)
Cohabiting	1.117**	-0.008	-0.112	0.111
	(0.48)	(0.30)	(0.46)	(0.25)
Widow	1.175	0.771	-1.925*	-0.202
	(1.34)	(0.47)	(1.11)	(0.43)
Divorced	-0.146	-0.635	3.553***	0.153
	(1.21)	(0.71)	(1.21)	(0.68)
Young Children	-0.140	-0.006	0.136	0.092
	(0.13)	(0.08)	(0.11)	(0.07)
Older Children	0.014	-0.045	0.105	-0.113*

	(0.12)	(0.08)	(0.09)	(0.06)
Working-age adults	-0.089	0.053	-0.176**	-0.014
	(0.09)	(0.06)	(0.07)	(0.05)
Pensioners	-0.061	0.019	-0.475**	-0.107
	(0.24)	(0.18)	(0.20)	(0.16)
Perceived socio-economic status (Ref: Lower Income)				
Middle Income	-0.038	-0.267	0.261	0.119
	(0.28)	(0.20)	(0.22)	(0.16)
Higher Income	0.011	0.568	-0.951	-0.023
	(0.83)	(0.62)	(0.68)	(0.66)
Daily Hardship	0.000	1.425**	-0.882	0.512
	(.)	(0.72)	(0.80)	(0.53)
Previous work experience	0.131	0.332	-0.361	0.274
	(0.30)	(0.21)	(0.26)	(0.18)
Constant	0.532	-0.903	0.495	-1.111
	(1.32)	(1.12)	(1.11)	(0.93)
N	**662**	**1286**	**1022**	**1758**

Notes

1. *Source: NIDS, 2008, 2010/11, 2012.*
2. *The data are weighted, standard errors in parentheses.*
3. **** p<0.01 ** p<0.05 * p<0.10.*
4. *Wave 2 panel weights were utilised to analyse period I and Wave 3 panel weights were utilised to analyse period II.*
5. *The dataset does not contain any unemployed white males in period I, thus the coefficients are omitted.*

A 7: Probability of employment across periods, by gender - Wave 2 to Wave 3

Binary Logistic Model

Dependent Variable: Wave 3 outcome			**Excludes NEA individuals**	
	Male	**Female**	**Male**	**Female**
Searching unemployed in Wave 2	0.738***	0.101	0.415**	-0.034
	(0.17)	(0.16)	(0.20)	(0.17)
Age	0.291***	0.245***	0.170***	0.113**
	(0.04)	(0.04)	(0.05)	(0.05)
Age Squared	-0.419***	-0.308***	-0.223***	-0.089
	(0.06)	(0.06)	(0.08)	(0.07)
Race (Ref: African)				
Coloured	-0.430	0.639**	-0.365	0.624*
	(0.37)	(0.27)	(0.44)	(0.33)
Indian	0.740	-0.424	1.556	-0.103
	(0.66)	(0.68)	(1.09)	(0.97)
White	0.404	0.005	0.709	1.302
	(0.59)	(0.76)	(0.87)	(1.07)
Province (Ref: Gauteng)				
Western Cape	-0.170	0.237	-0.196	0.387
	(0.42)	(0.31)	(0.46)	(0.38)
Eastern Cape	-0.724**	-0.173	-0.792**	-0.194
	(0.33)	(0.27)	(0.38)	(0.30)
Northern Cape	0.276	0.002	0.599	0.026
	(0.34)	(0.29)	(0.46)	(0.34)
Free State	0.107	0.360	-0.029	0.520
	(0.32)	(0.27)	(0.37)	(0.33)
KwaZulu-Natal	-0.384	0.330	-0.207	0.494*
	(0.27)	(0.24)	(0.32)	(0.29)
North West	-0.251	-0.332	-0.377	-0.220
	(0.32)	(0.29)	(0.39)	(0.35)
Mpumalanga	-0.105	0.221	-0.139	-0.036
	(0.30)	(0.26)	(0.34)	(0.30)
Limpopo	-0.204	0.389	0.005	0.398
	(0.33)	(0.28)	(0.40)	(0.33)
Geographical Location (Ref: Traditional)				
Urban	-0.110	0.070	-0.072	-0.064
	(0.20)	(0.16)	(0.23)	(0.20)
Farms	0.257	-0.153	0.147	0.059
	(0.27)	(0.25)	(0.30)	(0.28)
Educational Attainment (Ref: No Schooling)				
Grade 1 to Grade 7	-0.659**	0.324	-1.177***	0.120
	(0.32)	(0.26)	(0.41)	(0.37)
Grade 8 to Grade 11	-0.723**	0.244	-1.115***	0.025
	(0.32)	(0.26)	(0.41)	(0.38)
Matric	-0.444	0.582*	-0.844*	0.405
	(0.37)	(0.31)	(0.45)	(0.42)
Diploma/Degree	-0.299	1.063***	-0.706	0.516
	(0.43)	(0.37)	(0.53)	(0.49)
Fluent English	0.183	0.330**	0.061	0.302*
	(0.19)	(0.16)	(0.21)	(0.18)
Marital Status (Ref: No Schooling)				
Married	0.560*	-0.548***	0.543	-0.490**
	(0.30)	(0.19)	(0.34)	(0.22)
Cohabiting	0.333	0.184	0.169	0.363
	(0.34)	(0.24)	(0.40)	(0.29)
Widow	1.260**	-0.078	1.979*	-0.094
	(0.52)	(0.29)	(1.15)	(0.38)
Divorced	-0.793	-0.613	-0.932	-0.910*
	(1.22)	(0.48)	(1.19)	(0.54)
Young Children	0.055	-0.007	0.025	0.031
	(0.09)	(0.06)	(0.10)	(0.07)
Older Children	-0.013	0.032	0.098	0.028
	(0.07)	(0.05)	(0.09)	(0.07)
Working-age adults	-0.094*	-0.034	-0.103*	-0.060
	(0.05)	(0.04)	(0.06)	(0.05)
Pensioners	-0.384**	-0.276**	-0.188	-0.248

	(0.15)	(0.14)	(0.18)	(0.16)
Perceived socio-economic status (Ref: Lower Income)				
Middle Income	0.081	-0.151	0.280	-0.118
	(0.17)	(0.15)	(0.20)	(0.17)
Higher Income	-0.685	0.775*	-0.931	1.160*
	(0.73)	(0.45)	(0.76)	(0.65)
Daily Hardship	-0.319	-0.269	0.031	-0.097
	(0.39)	(0.34)	(0.54)	(0.40)
Previous work experience	0.176	-0.329	0.323	-0.187
	(0.35)	(0.36)	(0.47)	(0.45)
Constant	-4.192***	-6.026***	-1.512	-3.115***
	(0.82)	(0.79)	(1.02)	(0.92)
N	**1884**	**3200**	**1165**	**1685**

Notes

1. *Source: NIDS, 2010/11, 2012.*
2. *The data are weighted, standard errors in parentheses.*
3. **** p<0.01 ** p<0.05 * p<0.10.*
4. *Wave 3 panel weights were utilised in this panel analysis.*

A 8: Wave 2 labour market outcomes by gender (%)

	Male	**Female**
NEA	25.79	39.73
	(1.11)	(1.09)
Unemployed	14.36	18.86
	(0.90)	(0.89)
Employed	59.86	41.41
	(1.34)	(1.15)
Total	100	100
N	**3552**	**5118**

Notes:

1. *Source: NIDS, 2010/11*
2. *Data are weighted with Wave 2 weights*

A 9: Mean characteristics of variables by gender

Variable	Total	Male	Female	Variable	Total	Male	Female
NEA	0.372	0.163	0.283	**Farms**	0.083	0.100	0.079
	(0.01)	(0.01)	(0.01)		(0.02)	(0.02)	(0.02)
Unemployed	0.191	0.171	0.274	**Never-married**	0.493	0.474	0.415
	(0.01)	(0.01)	(0.01)		(0.01)	(0.02)	(0.01)
Employed	0.437	0.666	0.443	**Married**	0.318	0.369	0.361
	(0.01)	(0.02)	(0.01)		(0.01)	(0.02)	(0.01)
Age	36.473	36.650	36.197	**Cohabiting**	0.088	0.110	0.114
	(0.30)	(0.34)	(0.22)		(0.01)	(0.01)	(0.01)
African	0.792	0.799	0.787	**Widow**	0.069	0.019	0.066
	(0.02)	(0.02)	(0.02)		(0.00)	(0.00)	(0.00)
Coloured	0.079	0.076	0.088	**Divorced**	0.032	0.028	0.044
	(0.01)	(0.01)	(0.01)		(0.00)	(0.00)	(0.01)
Indian	0.024	0.025	0.025	**No Schooling**	0.091	0.075	0.073
	(0.01)	(0.01)	(0.01)		(0.00)	(0.01)	(0.01)
White	0.104	0.100	0.100	**Grade 1 to 7**	0.197	0.205	0.188
	(0.02)	(0.02)	(0.02)		(0.01)	(0.01)	(0.01)
Gauteng	0.245	0.289	0.245	**Grade 8 to 11**	0.396	0.340	0.381
	(0.01)	(0.02)	(0.02)		(0.01)	(0.01)	(0.01)
Western Cape	0.097	0.094	0.108	**Matric**	0.187	0.219	0.201
	(0.01)	(0.01)	(0.01)		(0.01)	(0.01)	(0.01)
Eastern Cape	0.132	0.120	0.122	**Diploma/Degree**	0.128	0.160	0.157
	(0.01)	(0.01)	(0.01)		(0.01)	(0.01)	(0.01)
Northern Cape	0.022	0.025	0.022	**Fluent English**	0.462	0.463	0.469
	(0.00)	(0.00)	(0.00)		(0.01)	(0.02)	(0.02)
Free State	0.057	0.062	0.056	**Number of young children**	0.688	0.464	0.834
	(0.00)	(0.00)	(0.00)		(0.03)	(0.03)	(0.03)
KwaZulu-Natal	0.187	0.157	0.193	**Number of older children**	0.905	0.600	0.969
	(0.01)	(0.01)	(0.01)		(0.03)	(0.04)	(0.03)
North West	0.073	0.084	0.067	**Number of working-age adults**	2.750	2.559	2.895
	(0.00)	(0.01)	(0.01)		(0.07)	(0.08)	(0.08)
Mpumalanga	0.079	0.079	0.081	**Number of pensioners**	0.284	0.141	0.164
	(0.01)	(0.01)	(0.01)		(0.01)	(0.01)	(0.01)
Limpopo	0.108	0.090	0.105	**Lower Income**	0.680	0.708	0.675
	(0.01)	(0.01)	(0.01)		(0.01)	(0.02)	(0.01)
Traditional	0.321	0.256	0.310	**Middle Income**	0.295	0.265	0.301
	(0.02)	(0.02)	(0.02)		(0.01)	(0.01)	(0.01)
Urban	0.596	0.644	0.611	**Higher Income**	0.024	0.027	0.024
	(0.02)	(0.03)	(0.03)		(0.00)	(0.00)	(0.00)
				Daily Hardship	0.026	0.017	0.019
					(0.00)	(0.00)	(0.00)

Notes:

1. *Source: NIDS, 2008*
2. *Data are weighted, standard errors in parenthesis.*

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