The men by the side of the road: Determinants of the wages of day labourers

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It all starts here ™

Abstract

South Africa faces significant challenges with low economic growth and high unemployment rates. Unemployed individuals find it difficult to enter into the informal and formal sectors and are often required to work as day labourers. The purpose of this study is to investigate whether the human capital theory can provide an explanation for the determinants of wages of day labourers. A focus was placed on the relationships between wages and education, wages and training, wages and skills, and wages and experience. Using cross-sectional data from a survey conducted in 2007/2008, a regression analysis of these relationships was performed. The results showed that earnings increase with an increase in educational level. Day labourers who completed primary and secondary schooling earn more than day labourers who have had no schooling. The day labourers who completed a post-school qualification realised the highest returns in wages. A small percentage of day labourers indicated that they completed a form of training. A pattern was evident of day labourers with higher levels of education engaging in training that is associated with scarce work that requires higher levels of skills and that is more likely to pay higher wages. Work in the skilled cluster was found to be positively and significantly associated with wages. Day labourers who are able to do a variety of jobs are also likely to earn higher earnings. Experience was represented by the number of years an individual has worked as a day labourer and was found to be negatively associated with wages. The findings of this paper confirm that most of the human capital theory can be applied to explain the wages of day labourers in South Africa.

Opsomming

Lae ekonomiese groei en 'n hoë werksloosheidsyfer is van die grootste uitdagings wat Suid-Afrika tans in die gesig staar. Werklose individue vind dit moeilik om die informele en formele arbeidsmarkte toe te treë en word dikwels genoodsaak om as dag-arbeiders te werk. Die doel van hierdie studie is om vas te stel of die menslike kapitaalteorie gebruik kan word om die determinante van die lone van dag-arbeiders te verklaar. Hierdie studie fokus spesifiek op die verwantskap tussen lone en onderrig, lone en opleiding, lone en vaardighede, en lone en ervaring. Kruissnitdata wat verkry is vanuit 'n opname in 2007/2008 is gebruik om 'n regressie-analise te doen. Die gevolgtrekking is dat lone vermeerder soos wat daar 'n toename in die

dag-arbeider se onderrigvlak is. Dag-arbeiders wat primêre en sekondêre onderrig voltooi het, verdien meer as die dag-arbeiders wat geen skoolopleiding ontvang het nie. Die dag-arbeiders wat 'n naskoolse kwalifikasie voltooi het, ervaar die hoogste opbrengste in terme van lone in vergelyking met dié wat geen skoolopleiding ontvang het nie. 'n Klein persentasie van die dag-arbeiders het aangedui dat hulle al 'n vorm van opleiding gehad het. 'n Patroon is waarneembaar waar dag-arbeiders met hoër vlakke van onderrig betrokke is by opleiding wat geassosieer word met skaars werksgeleenthede wat meer vaardighede vereis en hoër lone betaal. Twee groepe is geïdentifiseer volgens werk wat meer vaardighede vereis en werk wat minder vaardighede vereis. Die groep wat meer vaardighede vereis is positief en beduidend verwant aan lone. Die dag-arbeiders wat 'n groter verskeidenheid van werk kan doen, met ander woorde wat meer verskillende vaardighede het, verdien ook groter lone. Ondervinding wat aangedui is deur die hoeveelheid jare wat 'n individu al as dag-arbeider werk, is negatief verwant aan lone. Die gevolgtrekking van hierdie studie is dat meeste aspekte van die menslike kapitaalteorie gebruik kan word om die determinante van lone vir dag-arbeiders in Suid-Afrika te verduidelik.

Keywords: South Africa, Day labourers, Wage determinants, Human Capital Theory

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Chapter 1   Introduction

South Africa faces significant challenges in low economic growth rates and high levels of poverty and inequality. According to the Labour Force Survey Report published by Statistics South Africa (2014:2), the unemployment rate during the first quarter of 2014 was 25.2 per cent, increasing to 25.5 per cent in the second quarter of 2014 (Statistics South Africa, 2014:2). Despite best efforts, South Africa is still one of the countries with the highest unemployment rates in the world. Countries that share a high unemployment rate in 2014, according to the International Monetary Fund, is the Former Yugoslav Republic of Macedonia with 29 per cent, Greece with 26 per cent, Spain with 26 per cent, and Bosnia and Herzegovina with 26 per cent (International Monetary Fund, 2014).

South Africa's unemployment rate is remarkably high and it is most visible in the form of the day labourers who stand alongside busy roads, in front of businesses, home improvement stores, gas stations and at mining areas every day waiting for somebody to pick them up and provide them with work for the day. The increase in the unemployment rate by 0.3 percentage points from the first to the second quarter in 2014 strengthens fears in the foreseeable future that is evidenced by large numbers of unemployed people in South Africa. (Statistics South Africa, 2014:2).

In an earlier analysis, Kingdon and Knight (2001a) found that South Africa's informal sector is small compared to other developing countries and that the observed unemployment is not voluntary. Earlier work on day labourers include Harmse *et al.* (2009), who examined the day labour market in regions within South Africa, and found that the wages that day labourers earn in cities and larger towns are significantly higher than the wages earned by day labourers in rural areas. Provinces that contribute a greater share of GDP tend to have lower levels of unemployment, but larger numbers of day labourers (Harmse *et al.*, 2009:375). Krugell and Blaauw (2014:498) examined the spatial aspects of the day labour market and found that a thicker metropolitan labour market allows workers to become more specialised and earn a better income.

This dissertation aims to extend the analysis of day labourers by taking a closer look at the human capital theory and whether it provides an explanation of the earnings of day labourers.

The human capital theory puts forward the importance of education, training, skills and experience as predictors of wages.

Barker (2007) describes the human capital theory in his book about the South African labour market by explaining how education and training result in higher productivity and evidently higher earnings. He argued that the benefits of education are far reaching and include private as well as social benefits (Barker, 2007:207).

He also explained interesting criticisms of the human capital theory, for example that there are challenges in measuring the quantity and quality of education as well as the progression from education and training to productivity and higher earnings. There were also strong arguments that the influence of a person's ability might lead to that person being more able to obtain a higher qualification and that the person's abilities are the reason for that person earning a higher wage rather than the person having a higher qualification (Barker, 2007:209). Other criticisms of the human capital theory come from the screening hypotheses, taking into account an individual's family background and financial status, the dual labour market theory and the radical approach (Barker, 2007:210).

This dissertation's focus is on day labourers – a segment of the labour market that is not characterised by high levels of education or training – and it asks whether the prediction of human capital theory also holds true for them.

1.1   Problem statement

This study aims to examine the predictors of the wages of day labourers, drawing specifically on the predications of the human capital theory.

1.2   Motivation

South Africa's unemployment rate is among the highest in the world, making it one of the most critical socio-political problems facing the government. Figures published by Statistics South Africa in the Quarterly Labour Force Survey for quarter 2 of 2014 indicate that by narrow definition the unemployment rate currently stands at 25.5 per cent. There was a quarter-to-

quarter increase in the unemployment rate of 0.3 percentage points between the first and second quarters (Statistics South Africa, 2014:2). There are currently 5.2 million unemployed people in South Africa, which was recorded as the highest level since the commencement of the Quarterly Labour Force Survey report in 2008 (Statistics South Africa, 2014:V).

As a result of the high employment rate, 45.7 per cent of households rely on social grants from the government to provide for their families. Limpopo, the Eastern Cape and Northern Cape have the highest percentage of beneficiaries in South Africa, with 60.8 per cent, 58.7 per cent and 55.3 per cent, respectively (Statistics South Africa, 2013:56). Unemployment, poverty and inequality form the centre of political discussions over economic policy reform and populist issues such as land reform, or the nationalisation of the mining industry. There is continued pressure on the South African government to create jobs to improve living standards, poverty, inequality and overall wellbeing.

Education and training form the basis of government's approach to address the high unemployment rate and the government has been willing to provide the necessary funding towards projects and initiatives required to achieve this. The 2014 National Budget Speech indicated that investment in people is at the centre of the government's growth and development strategy, and the funding provided proves this. The forecasted expenditure on education for the 2014/15 financial year is R254 billion (South African National Treasury, 2014). Despite all the plans that the South African government has to improve education and training, the question remains to what extent this will improve the lives of individuals, if at all.

This dissertation aims to extend the analysis of labour market outcomes and the importance of education, training, skills and experience to the case of day labourers in particular as there are so many of them in South Africa. There are approximately 1 000 places in South Africa that serve as a platform for roughly 45 000 men waiting for work to come by. The majority of these are black, African men (Krugell & Blaauw, 2014:487). Being a day labourer is often a position vulnerable to abuse and exploitation. Heyer (2008:425) found that a violation of workers' rights, wage theft, physical violence, workplace injuries and hazardous work sites characterise the day labour market. Aspects such as withholding wage payments and abandoning workers at sites are also not uncommon practice. More often than not, the day labourers are the individuals in

dire need of income and they would withstand these circumstances in attempt to make a living (Heyer, 2008:427).

This dissertation aims to determine whether education, training, skills and experience are determinants of wages for day labourers as the human capital theory predicts, and whether this might be the solution to the problems of unemployment, poverty and inequality that South Africa faces now even more than ever.

1.3 Objectives

The general objective of this study is to test the hypotheses of the human capital theory that education, training, skills and experience are predictors of the wages of day labourers in South Africa.

To achieve this objective, a number of specific objectives have to be achieved. This study aims to:

1. review the literature on human capital theory and identify testable hypotheses;
2. provide an overview of the South African labour market literature and indicate where the analysis of human capital theory and day labourers fits in;
3. describe the survey dataset, focusing specifically on the characteristics of the day labourers and predictors of their wages;
4. estimate a regression model of the predictors of the wages of day labourers, specifically those from the human capital theory; and
5. interpret the results of the analysis and draw conclusions and make recommendations for policymakers and future research.

1.4 Method

The study will consist of a review of the literature and empirical analysis. The literature review will examine the human capital theory and identify testable hypotheses of the relationships between workers' education, training and experience, and their wages. The second part of the literature review will consider earlier studies on the South African labour market, the importance

of human capital and predictors of wages. The empirical analysis will consist of a description of the data and regression model of the determinants of the wages of day labourers. The dataset consists of primary data collected in a survey during 2007 and 2008 (as presented by Blaauw (2010) and cited in Krugell and Blaauw, 2014:488). The dataset contains approximately 3 812 respondents surveyed across South Africa.

1.5   Outline

Chapter 1 presents the introduction, problem statement, motivation, objective and brief overview of the method of the study. Chapter 2 will be the literature review. It will consist of the two parts: the first part will focus on international literature concerning the human capital theory and the predictors of workers' wages, and the second part will provide an overview of the literature on the South African labour market. A discussion of the survey, dataset and description of the data will be presented in Chapter 3. In Chapter 4, the estimation of the regression model of the predictors of the wages of day labourers will be explained and the results of the models interpreted. A summary, conclusions and recommendations will follow in Chapter 5.

Chapter 2   Literature review

Labour market outcomes such as employment and wages are determined by numerous factors such as individual characteristics, labour market structures and differences between sectors. Numerous studies have been conducted on the importance of individual characteristics, labour market structures and differences between sectors, as well as many other endogenous and exogenous factors that determine wage levels. These findings will be discussed in more detail throughout this chapter. The aim of this study is to examine the predictors of the wages of day labourers, drawing specifically on the human capital theory.

The human capital theory was originally put forward in the work of Sir William Petty around 1691. He made one of the first attempts to estimate the monetary value of a human being (Kiker, 1966:482). Through the years, many others developed his theory, one of whom is Adam Smith. Although Smith did not explicitly define the term capital, he included in his definition of fixed capital, the skills and capabilities of a human being. He regarded the skills and capabilities of labour as something that required costs to improve, but that would, in return, generate a profit (Kiker, 1966:485). Human capital assumes that training and education are costly and should be considered as an investment. Evidence has over the years shown a close relationship between human capital investments and economic growth and development. Better human capital leads to higher productivity and to better wages, which contribute to growth and development. Further research has proven that economic development relies on technological and scientific knowledge that is accumulated through human capital investment.   It can therefore be concluded that economic growth and development are to a great extent reliant on the accumulation of human capital (Becker *et al.*, 1990:S13).

Wages, specifically the downward stickiness of wages, are explained by models such as the efficiency wage model and the insider-outsider model. The efficiency wage model suggests that labour productivity is influenced by the real wage paid by the firm and that cutting wages may harm productivity and as a result raise labour costs (Yellen, 1984:200). The insider-outsider model was described by Lindbeck and Snower (2002) and argues that workers already working for a company, otherwise known as insiders, have an advantage over prospective new employees, otherwise known as outsiders. This advantageous lead can be misused to drive up the insider wage (Lindbeck & Snower, 2002:22).

South Africa is known for its high unemployment rates. Kingdon and Knight (1999:13) explain that there exists a typical wage curve in South Africa. A typical wage curve is an estimation that calculates the relationship between the level of unemployment and the level of wages in a predefined area, for example cities, regions or countries. It argues that a worker employed in a high unemployment area will earn less than an individual with similar or the exact same skills and abilities who is employed in an area where the unemployment rate is low (Blanchflower & Oswald, 1995:157).

Kingdon and Knight (1999:13) also argued that the broad definition of unemployment is the most accurate one that should be used to explain unemployment in South Africa. Union negotiations play a major role in determining wages in South Africa. A noticeable characteristic of the South African labour market is the number of unemployed African individuals who have never held employment before (Kingdon & Knight, 2001c:5).

The study on the determinants of the wages of day labourers is of interest because they are a group of individuals that is classified as unemployed, and when they find the odd job to do, they do not enjoy safe and fair working conditions and wage rates. The determinants of their wages are not fully known, but are most likely not the same as the determinants that influence wages in the formal and informal sector. The question remains whether models such as the human capital theory, the efficiency wage model or the inside-outsider model can explain wages for day labourers.

This study will attempt to determine whether the principles of the human capital theory hold for day labourers where the majority of workers have a low level of education and training. This chapter presents the literature review. It consists of two parts: the first will focus on international literature concerning the human capital theory and the predictors of workers' wages, and the second will provide an overview of the literature on the South African labour market. The aim is to identify testable hypotheses of the relationships between workers' education, training, experience and their wages and to indicate where the analysis of human capital theory and day labourers fits into the South African literature.

2.1 International literature on labour market outcomes and human capital theory

2.1.1 Education

Balcar (2012) recently looked at multiple investigations of the relationship between wages and characteristics of an individual and concluded that there is enough supporting evidence that confirms the indirect wage effects of individual background and educational attainment. The returns on education are measured by a percentage increase in wages for every additional year of schooling (Balcar, 2012:208-215). A wide variety of studies may be called upon to further explain the relationship between wages and education. Most of these studies based their research on the human capital earnings function that was originally developed by Jacob Mincer. The human capital earnings function demonstrates that wages are influenced by investing in human capital (Li, 2003:318).

One such study was done by Psacharopoulos and Patrinos in 2002 to review the current literature on estimates and patterns of returns on investment in education. They confirmed again which was previously recorded, that primary education has higher returns on wages for men (20.1%), while females enjoy a higher return on secondary education (18.4%) (Psacharopoulos & Patrinos, 2002:15). This finding was similar for research completed by Bedi and Born (1995) and also Li (2003), who used cross-sectional data collected during the 1990s, correspondingly by the Office of Planning Coordination and Budget in Honduras in 1990 and the Household survey in China conducted in 1995. The survey samples were similar in size, with the sample from Honduras consisting of 8 067 individuals, predominantly males (5 404), and the sample size from China consisting of 10 913 workers. Bedi and Born (1995:152) explained that in Honduras, women experience a lower return on elementary education of 11 per cent compared to 12.8 per cent experienced by men, while men experience a lower return on secondary education of 15 per cent compared to 17.7 per cent for women. The findings on returns on education in Honduras were in line with the expected outcome from the theoretical model. Bedi and Born (1995:145) found evidence that rates of returns on all levels of education were above the 10 per cent benchmark for the opportunity cost of capital.

This result was also found in the research completed by Li (2003), who illustrated that in China, women experience a 6.9 per cent return on education, while men only experience a 4.3 per cent

return (Li, 2003:321). Although these results are significantly lower than the results from Honduras, lower than the world average of 10.1 per cent and lower than the Asian average of 9.6 per cent (Li, 2003:317), they are still higher than the findings from his review of previous literature that found returns of between 3 and 4 per cent. This occurrence was expected by Li (2003), who attributed the low returns on education to economic transition in China that resulted in an underestimation. He provided two possible explanations for this underestimation. The first was that previous literature relied on an analysis of monthly/annual earnings instead of hourly wages and the second was that many different variables can be used to measure work experience and that estimating an individual's experience based on age and years of schooling may overestimate the years of job experience and ultimately the returns on education (Li, 2003:318). After adding various dummy variables, including 'ownership and industry dummies', 'ethnic minority dummy variables', and 'years of education and degree dummies', the results showed that returns on education are underestimated and returns on experience are overestimated (Li, 2003:320). He concluded that if hourly wages and actual job experience were used instead, that overall return on education would be 15 per cent higher (Li, 2003:320).

Genre *et al.* (2011) focused on the determinants of the wage structure from a sectoral point of view. Using data from the Organization for Economic Co-operation and Development Structural Analysis database and data from the EU Labour Force Survey, they assembled a cross-country panel of 22 industries in eight Euro-area countries for 1991 to 2002 (Genre *et al.*, 2011:1299). Their motivation for further examining industry wage differentials originates from findings in previous literature that there are noticeable differences in wages for individuals with similar characteristics performing the same or similar tasks across industries. They base their examination on two types of theories that can be separated into competitive theories and new wage determination theories. The competitive theories argued that a worker's characteristics such as educational attainment, professional experience and age are determinants of wages (Genre *et al.*, 2011:1300). The results obtained by regression with panel data obtained from the structural analyses (STAN) database of the OECD and the EU Labour Force survey concluded that characteristics of the workforce are relevant variables that explain differences of wages between sectors. They found that a significant number of young or low-skilled workers earn lower wages, while industries that employ more older workers on average tend to pay higher wages (Genre *et al.*, 2011:1306).

Another important note from this study was their acknowledgement that perhaps unobservable industry-specific factors apply pressure on wages and are at times overcompensated for in an analysis by the influence of traditional observable determinants (Genre *et al.*, 2011:1311). In other words, individual industry-specific factors that are not observed might sometimes counterbalance the influence of commonly observed determinants of wages. This view corresponds with an earlier study completed by Bauer (2000), who investigated whether controlling for unobserved individual characteristics might influence findings on the wage effect of an educational mismatch with job requirements. Bauer (2000) found an increasing number of studies that have researched the incidence and labour market effects of an educational mismatch. A summary of the findings, according to Bauer (2000:221), was that "returns to actual years of schooling are lower than returns to the required years of schooling on a job, returns to surplus schooling are positive but smaller than those to required education, returns to years of under-education are negative and estimated returns to over-education are always significantly different to zero".

The panel dataset used in his study was from the German Social Economic Panel (GSOEP) collected for 1984 to 1998. It comprised 13 500 individuals and 7 000 households living in Germany (Bauer, 2000:224). Only full-time employed, prime-aged males and females of German origin were selected and after excluding all the observations with missing values, the sample size consisted of 13 364 person-year observations of 1 824 males and 5 273 person-year-observations of 922 females (Bauer, 2000:224). In his first model, mismatched workers are compared to workers with the same level of schooling who work in jobs that demand their achieved level of schooling. The second model breaks down the actual years of schooling into three possibilities, i.e. required years of schooling, years of over-schooling and year of under-schooling (Bauer, 2000:222). Findings confirmed what is mostly reported in existing literature that overeducated and undereducated workers earn less and more respectively, than workers with a similar educational attainment but who are employed in a position that fully utilises their educational attainment (Bauer, 2000:228). It was concluded that estimated effects differ significantly when you use panel techniques to control for unobserved heterogeneity and Bauer (2000) recommended that further analyses must be done to determine whether the same holds true when the importance of unobserved individual effects is taken into account.

2.1.2 Training

There has been considerable research done on the effect of training on wages, and as expected, generally the findings are that there exists a positive relationship between training and wages. This is not surprising since education and training go hand-in-hand and the evidence from the literature on the impact of education and return on wages indicate a positive correlation. Reder (1967) explained the human capital theory in a very basic way. He said that "a human agent of production is produced by an application of productive resources to a pre-existing entity. The result of this particular application is a trained human agent whose enhanced productive capacity is manifested in a stream of services of enhanced value. Because the training process requires time to complete, the resources used can be seen as an investment and the increment in earning power that results from the training be treated as its yield" (Reder, 1967:97).

When the relationship of training and wages is considered, a distinction between two parts of wages can be made. The first to consider is the effect of training on starting wages as demonstrated in the research done by Veum (1999) and Sicilian (2001), who based their theoretical models on the human capital theory that predicted a negative effect of training on starting wages. Veum (1999:526) explained that it seems from previous literature that workers pay for their preliminary training by accepting wages lower than they could have earned somewhere else. This view was shared by Sicilian (2001), who found evidence that company-financed training also appears to contain a general component that is transferrable across jobs.

Both studies expected their outcomes to be aligned with the human capital theory, which argues that training has a negative impact on starting wages and a positive relationship with wage growth. Veum (1999) used panel data from the US National Longitudinal Survey (NLSY), which is a sample that consists of approximately 10 000 young men and women between the ages of 14 and 22 in 1979, and interviewed once a year from 1979 to 1994 (Veum, 1999:528). Veum's sample was noticeably larger than the sample used by Sicilian (2001) in his cross-sectional dataset obtained from the Employment Opportunities Pilot Project (EOPP) database. He started with approximately 3 000 US firm observations that were conducted in 1980 and 1982 and, similar to Veum (1999), also disregarded observations that included missing information. His final sample concluded with roughly 400 observations (Sicilian, 2001:812).

Findings from the two studies were corresponded to the predictions of the human capital theory. Veum (1999:531) found that there was a negative relationship between training received within the initial six months of employment and starting wage, while Sicilian (2001:813) concluded, through his first-difference estimates, eliminating the problem of ability bias, that on-the-job training was associated with lower starting wages.

Veum (1999:531) provided further evidence on previous training and explained that training received at a former employer was positively associated with starting wages, adding that a 10 per cent increase in previous training results in an increase of approximately 0.5 per cent in starting wages, which also suggests that training can be transferred between jobs or might be general. Company-financed training, onsite and offsite, proved to have a positive correlation with starting wages. However, when the author estimated the starting wage regressions separately by gender, it was found that various types of training had different impacts on starting wages for the two genders. Certain forms of initial training were negatively associated with starting wages for men and only offsite, company-paid training was portable for females (Veum, 1999:535).

The second part to consider is how training affects individual wage growth. The general literature indicates that there is a positive relationship between training and wage growth. Bartel (1995) showed that training leads to a higher wage growth and that it has a positive effect on job performance (Bartel, 1995:424). It is important to understand the different kinds of training and the various ways to obtain and invest in human capital. A study by Becker (1962) identified four kinds of human capital investments, including on-the-job training, schooling through an institution specialising in the production of training, knowledge including any other kinds of information that gives an employee a competitive advantage, and improving an individual's emotional and physical health. In a study done by Veum (1995), he looked at various sources of training and its impacts on wage growth. He selected six types of training to examine, including "company training programs, apprenticeships, business schools, vocational and technical institutes, correspondence courses, and seminars outside the workplace" (Veum, 1995:812). He also found from his research on previous literature a general consensus that there exists a positive relationship between training and wages (Veum, 1995:813).

Researchers have tried to explain this relationship by arguing that firms increase wages during the time of employment in an attempt to lessen staff turnover costs, that it happens as a result of suitable worker and employer's matches, and also that it is the result of employers trying to encourage and improve worker effort and morale. Veum's (1995) study is an extension of the findings, using panel data from the National Longitudinal Survey of Youth from 1986 to 1990 to empirically model the elements of training through a range of probit equations (Veum, 1995:813-815). The author also "estimate wage level equations and first-differenced fixed effect wage equations" (Veum, 1995:815). The data from the NLSY consists of roughly 10 000 young males and females between the ages of 14 and 22 who have been interviewed annually from 1979 onwards. The sample only included individuals who finished formal schooling after the interview in 1986 and those who had not returned to schooling after the 1990 interview. The sample also excluded entries that did not contain observations and information on other variables during the 1986 to 1990 interviews. This provided a final group sample of 4 614 individuals (male and female) aged between 21 and 29 in 1986 and 25 to 33 in 1990 (Veum, 1995:814).

Results showed that the duration of training does not have an impact on wage growth, but the occurrence of the training does. The author furthermore provides two possible explanations why there is a difference between the estimated effects of the occurrence and length of company training and seminars outside of the workplace. He contributed it to the success of the training programmes that may not be a function of the duration spent in the training. He also explained that it might be that the training duration variable contains a potential measurement error (Veum, 1995:821).

When estimating gender differences, results showed that training received at seminars outside of work has a positive relationship with wages for both males and females, but that only females experience the benefits of wage growth for company training (Veum, 1995:822). This was substantiated with findings in Veum's study in 1999 from the wage growth equations he ran for each gender that found that only on-site, company paid training is significantly related to wage growth for females (Veum, 1999:537). The author further examined the effect of types of training on changes in wages by estimating the first-differenced wage equation and found that none of the types of training had a significant effect on wage growth, but when he tested for the individual measures of off-the-job training, he found that time spent in vocational training shares a positive relationship with wage change (Veum, 1995:822). Findings when testing for the other

variables indicated that there exists a positive relationship between wage growth and increases in tenure, wage growth and changing jobs, wage growth and moving to a large employer and lastly wage growth and becoming a union member (Veum, 1995:824).

The above findings suggest there is a positive effect on wage growth when changing jobs, which in return suggests that training obtained at previous employment must be transferrable between roles. Knowing the extent of the impact on wages and wage growth could have important implications for employers. Regnér (2002) looked at the importance of distinguishing between general and specific training in a study he did on the effects of on-the-job training on wages in Sweden. This study also investigates whether the effect of training is different between the private and public sectors and also between recently hired senior employees (Regnér, 2002:327).

Most of the findings by Regnér (2002) were in line with the predictions of the human capital theory. The results showed that there is a significant return to general on-the-job training in both the private and public sector, but more so in the private sector (Regnér, 2002:336). He also found a positive relationship between on-the-job training and tenure, but found that there is no significant relationship between wages and long, specific training (Regnér, 2002:338). He based his finding on cross-sectional data obtained from the Swedish level of Living Survey, representative of the Swedish population. The survey to collect the data was conducted in 1968, 1981 and 1991 and the sample used consisted of entries for employed individuals between the ages of 18 and 65 (Regnér, 2002:328). The first finding was slightly different to that of Veum (1995:821), who argued that length of training has no impact on wages, while Regnér (2002:331) found that the estimated wage premium for extended on-the-job training was 15.7 per cent. Regnér (2002) also differed from Veum (1995) in his finding on the relationship and tenure and argued that the effect of training does not increase with tenure and that there is, in fact, a negative relationship between training and tenure, specifically for employees who have been with a company between six and 15 years (Regnér, 2002:334).

It was also found that wage effects vary significantly between gender and sectors in Sweden. For lengthy training, men enjoyed a 20.8 per cent premium on wages, while women only enjoyed 13.5 per cent. Lengthy on-the-job training also seems to be more advantageous in the private sector, where individuals will enjoy an 18.1 per cent effect on wages, while public sector

workers will experience a low 11 per cent (Regnér, 2002:331). Regnér (2002) further examined the importance of differentiating between general and specific training for both genders and sectors. In order to test the importance, he completed an F-test and the hypothesis that general and specific training has the same effect was rejected by the results and this suggests that one must distinguish between the two (Regnér, 2002:336).

2.1.3 Skills

Numerous studies have been done on the relationship between cognitive ability and labour market outcomes (Fletcher, 2013:122). The increasing importance of skills was captured in research conducted by Murnane *et al.* (1995), who aimed at indicating in their study that basic cognitive skills have an impact on wages and had an increasing importance in wage determination on an economy-wide basis. They used data from two longitudinal surveys of American High School seniors, namely the National Longitudinal Study of the high school class of 1972 (NLS72) and the High School and Beyond (HS&B) to estimate sample means and standard deviations (Murnane *et al.*, 1995:3).

The first dataset (NLS72) consisted of 22 652 students who were first surveyed in 1972 as high school seniors, while the second dataset (HS&B) contained information on the labour market experiences of 11 500 students surveyed as seniors in 1980 (Murnane *et al.*, 1995:3). As a measure of cognitive skills, the IRT scale's mathematics score was used and the results indicated that basic cognitive skills were of higher importance for wage determination for a 24-year old who completed high school in 1980 than it was for a 24-year old who completed high school in 1972 (Murnane *et al.*, 1995:14).

Soft skills have over the recent years become increasingly important to employers as continuous research shows that they are just as important an indicator of job performance as hard skills. Employers are willing to pay more for employees with the desired soft skills as is evident in research done by Fletcher (2013:128), who found that individuals with an extrovert type personality experience a five to six per cent increase for every one standard deviation increase in extraversion. The same study also found that an individual with the opposite type of personality, who suffers from neuroticism will experience a five to nine per cent reduction in earnings for every one standard deviation increase in neuroticism (Fletcher, 2013:128).

The general consensus of existing literature is that cognitive skills have a direct impact on wages, although the conclusions can be different on whether it is a positive or a negative effect, the degree of impact and whether it varies by gender. Kuhn and Weinberger (2005) substantiated this statement in their research that found that leadership as an example of a non-cognitive skill has an impact on wages. After running multiple tests, they found that individuals who demonstrated leadership tendencies in high school were found to be earning considerably more 10 years later than those individuals who did not show similar tendencies (Kuhn & Weinberger, 2005:397).

Most of the research done on the variation between genders turns to the locus of control concept introduced by Rotter (1966). This concept provides the basis for assuming a person's level of non-cognitive ability in that a person with an external locus of control is assumed to have low levels of non-cognitive ability, while a person with an internal locus of control is assumed to have higher levels of non-cognitive ability (Flossmann *et al.*, 2007:3).

One such an example is a study done by Cobb-Clark and Tan (2009), who used panel data collected from the survey on Household, Income and Labour Dynamics in Australia (HILDA) to assess whether men and women's non-cognitive skills affect the occupations they hold and whether it adds to the disproportion of men and women's wages (Cobb-Clark & Tan, 2009:3-4). They base their findings on a data sample of 21 106 person-year observations and found that men and women start off their careers with a wage gap because men and women with similar cognitive skills enter the same professions at very different rates (Cobb-Clark & Tan, 2009:1). They also reported that women appear to be under-represented in roles related to management, skills trades and production. The authors attributed this to "human capital endowments, demographic characteristics and non-cognitive skills underlying occupational attainment" (Cobb-Clark & Tan, 2009:14).

They further went on to explain the impact of external and internal locus of control and presented evidence that men with an internal locus of control are more likely to excel at their job, while he could not link females' occupational attainment to internal or external locus of control (Cobb-Clark & Tan, 2009:16-17). The above results were slightly different to a study done by Flossmann *et al.* (2007), who found no evidence of a difference in the effect of non-cognitive skills on wages between males and females in Germany (Flossmann *et al.*, 2007:12).

They did, however, find evidence of a significant positive influence of non-cognitive skills on wages and reported a 1.33 per cent increase in wages for females and 1.39 per cent increase for men for every one point increase in cognitive skills (Flossmann *et al.*, 2007:9). This is significantly less than findings from Fletcher (2013:129) of "a one standard deviation increase in cognitive skills (PPVT score) is associated with earnings increase of up to 12 per cent". He did, however, mention that the high increase can be partially contributed to "family and occupational factors" (Fletcher, 2013:129).

The determinants of wages for low-skilled or unskilled employment is not quite as diverse as for skilled employment and Cahuc *et al.* (2006:325) found that wages are mostly determined by exogenous factors that they have little or no control over, such as union negotiations, institutional wage floors (minimum wages) and policy interventions. Skills and ability can also contribute to determining wages for low or unskilled workers. Maxwell (2008) found a reasonable amount of previous research that supports the suggestion that skills and other exogenous factors affect wage differences among individuals with different levels of education (Maxwell, 2008:395). Occupations for labourers with a high school education or less require a large number and variety of skills, but in most cases are found to require less skills than other jobs (Maxwell, 2008:399). In conclusion, Maxwell (2008:404) found that wages are higher in occupations that require office/clerical or mechanical skills, while occupations that require more physical skills offer lower wages.

2.1.4   Experience

The general consensus in the literature is that there exists a positive relationship between experience and wages. Studies done in Honduras (Bedi & Born, 1995), China (Li, 2003) and Germany (Dustmann & Meghir, 2005) all based their models on cross-sectional data and tested for the returns that additional years of work experience have in terms of wages for males and females, as well as for skilled and unskilled workers. Findings were conclusive and all found a positive and significant rate of return.

Bedi and Born (1995) started off by testing whether experience is positively related to a person's earnings and found that for every additional year of experience, an individual enjoys a 3.2 per cent return on wages (Bedi & Born, 1995:151). Their sample consisted of 5 404 males and

2 633 females, ranging between the ages of 16 and 64 (Bedi & Born, 1995:148). The authors distinguished between two different types of experience; the first, experience gained at current employment, and the second, experience gained somewhere other than current employment. They found that for males, experience gained somewhere other than his current job, yielded a higher return on wages of 3.9 per cent, while experience gained at current employment only resulted in a 2 per cent return in terms of wages (Bedi & Born, 1995:154).

Li (2003) raised the issue of underestimation of returns to experience by explaining that previous studies estimated a person's job experience using age and years of schooling. He explained that the human capital theory predicts that experience is a proxy for general and specific job training, but because so many variables exists (for example, the amount of time spent obtaining the education or training and waiting for employment), the importance of years of job experience will be overestimated and the returns on experience will be underestimated (Li, 2003:318). This paper's data sample was similar in size than that of Bedi and Born (1995) and consisted of 10 913 individuals ranging in age from 18 to 60 years (Li, 2003:319). The results indicated that there is a considerable overestimation of the returns on experience and the author attributed this finding to the use of annual earnings instead of hourly wages and also the transition process that has deepened in China (Li, 2003:320). Another interesting finding by Li (2003) was that the wage experience profile has a parabolic shape and that wages peak at 21 years of experience for females and 29 years of experience for males (Li, 2003:321).

Dustmann and Meghir (2005) focused on the determinants of wage growth for the youth in Germany and differentiated between skilled and unskilled workers. Similar to the study by Li (2003), this study also pointed out possible problems with the estimation. They stated that if one compares earnings with different levels of experience, it can result in biased results and provided three possible explanations why this might occur (Dustmann & Meghir, 2005:80). They explained that some of the differences might exist due to workers finding more suitable employment, high-ability workers who might have a strong labour market attachment and workers who spend short periods of time out of the labour market because the cost of not working is too high (Dustmann & Meghir, 2005:80).

The OLS estimation for unskilled workers was divided into two categories, workers starting a new job and workers starting a new job after displacement. Wage returns to the first year of

experience for workers starting a new job after displacement were 8.7 per cent, which suggest that the high wage return for unskilled workers in the first year is due to job search and improved job fits (Dustmann & Meghir, 2005:92). The authors concluded that for unskilled workers, wage growth due to experience increases significantly during the first two years, but declines thereafter until it yields zero return. For skilled workers, it is a slightly different scenario in that wage returns due to experience start off slow and then continue to grow at 1.2 per cent thereafter (Dustmann & Meghir, 2005:94).

2.1.5 Summary

The above sections focused on findings from previous literature on the relationship between wages and education, training, skills and experience. It is evident from the literature that all the above-mentioned variables are intermixed and are sometimes difficult to separate and to determine the precise impact of each variable. They should in effect be taken as a whole rather than individually. Most of the literature based its research on the human capital theory and there are some distinct characteristics that are evident in most of the findings.

In essence, education has positive wage returns for both male and females and individual characteristics such as education attainment, professional experience and age have an impact on wages. Training was found to have a negative impact on starting wages, but had a positive relationship with future wage growth. It was evident that duration of training does not have an impact on wages, but the occurrence of training does.

Skilled unemployed workers' wages are mainly determined by labour-market competition, institutional wage floors, productivity, skills and ability, and also bargaining powers, while low skilled or unskilled workers are dependent on external forces, such as union negotiations, institutional wage floors and policy interventions. Cognitive and soft skills were also found to have a positive impact on wages for workers. Finally, the existence of a positive relationship between wages and experience was evident from previous literature. The next section will investigate examples from previous literature on the determinants of wages among vulnerable groups similar to day labourers.

2.2 Literature specifically on labour market outcomes for vulnerable groups

In Spanish America in the early 1900s, a labour market driven by what was claimed as 'peonage' was in existence. There are solid arguments that workers were recruited from villages through the offer of cash loans, which they then had to repay by means of physical labour (Bauer, 1979:37). There were little or no definite variables that determined wages for this labour and it was purely based on the assumption that the advance carried forcible power. As Bauer (1979:36) stated, "labour conditions were harsh, workers were imported by force, debt was systematically used to provide a legal basis for coercion and plantation owners, aided by local police or the army were able to restrict workers' movement and tie them to the estates".

Many years later, one can still argue that a form of peonage exists in labour markets for groups that are seen as inferior and at the bottom of the wage earning scale, usually including individuals who find themselves among day labourers, seasonal workers, unskilled workers and immigrants. Although it is not as harsh and controlled as during the 1900s, workers are still subject to external conditions (Cahuc *et al.*, 2006) and factors determining their wages that they have little or no control over. Gunter (1986) investigated the determinants of wages for farm workers in Georgia. The data was attained through a survey done in 1983 that required the interviewing of 389 operators of a total of 540 hired farm workers who worked more than 150 days on the farms during 1982 (Gunter, 1986:201). Results from the estimated wage determination models suggest that wages were mainly determined by local labour market conditions as well as farm characteristics (Gunter, 1986:205).

A similar outcome was found in a study done by Burnette (2004), who considered the wages that women were paid as day labourers working in English agriculture. The panel data of wages paid was compiled from the farm accounts of 84 farms for male and female day labourers working through the summer, winter and harvest seasons with a total of 264 farm observations (Burnette, 2004:667). It was evident that from 1750 to 1850, wages paid to females declined relative to wages paid to males, except in the industrial North West (Cheshire, Lancashire and West Riding of Yorkshire), where the wages paid to females increased. This was attributed to local market conditions that caused a decline in the supply of females for agricultural employment (Burnette, 2004:686).

Valenzuela *et al.* (2006) outlined a very interesting profile on the occurrence of day labourers in the United States. They used data from the National Day Labor Survey, which consisted of 2 660 day labourers selected from 264 hiring sites in 139 municipalities in 20 states as well as the District of Columbia (Valenzuela *et al.*, 2006:2). They found that the day labourers mainly consisted of immigrants, with 59 per cent born in Mexico, 28 per cent born in Central America and seven per cent born in the United States (Valenzuela *et al.*, 2006:iii). The median hourly wage earned by these day labourers was $10, but they were still classified to be among the working poor, earning low annual wages. This is mainly attributed to the inconsistency of employment, low hourly wages that they received sometimes, lost work opportunities due to injury and illness, and the occasional underpayment or no payment of wages by employers (Valenzuela *et al.*, 2006:10). They further concluded that these day labourers are unlikely to earn anything above $15 000 a year, which keeps them below the federal poverty threshold (Valenzuela *et al.*, 2006:12).

There have been suggestions that raising a country's minimum wage level will result in an increase in overall average earnings and most likely have an impact on the wages of immigrants who are found to be mainly participating in day labour type of employment. The following section will elaborate on this topic and will provide arguments in favour of and against such economic theories.

Historic literature suggests that local market conditions can be influenced by various factors, one of which is minimum wages. Orrenius and Zavodny (2008) found that current literature report findings on the impact of minimum wages, on groups that are known for earning low wages, such as the youth. There has been limited research done on the impact of minimum wages on the earnings of immigrants in the USA (Orrenius & Zavodny, 2008:544-545).

There is literature found to be in support of and against conventional economic theories that predict that raising minimum wages will result in an increase in average earnings and lead to lower employment-to-population rates (Orrenius & Zavodny, 2008:545). Their predictions derived from previous literature are that raising the minimum wage will have a bigger impact on immigrants' wages than on natives' wages, although there are some suggestions that the impact could have the opposite effect if immigrants lean towards working in industries where labour demand is less elastic (Orrenius & Zavodny, 2008:545-546).

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Their study used panel data from the Current Population Survey Outgoing Rotation groups (CPS ORG) (Orrenius & Zavodny, 2008:546). The data sample was taken from 55 000 nationally representative households and the empirical results suggest that the fraction of workers earning the same or less than the minimum wage as well as earning slightly more than the minimum wage were all higher among immigrants than native workers (Orrenius & Zavodny, 2008:547). This was further developed by the regression results and findings were in support of the conventional economic theory. It was found that increasing the minimum wage by 10 per cent will result in a wage increase of 2.2 per cent for immigrant men and 2.4 per cent for immigrant women. The same was not true for low-skilled native workers (Orrenius & Zavodny, 2008:552).

The subject of immigrants and wages and employment raises some interesting questions. From the historical descriptions and findings, it appears that immigrants do not always enter a labour market under ideal conditions. The questions that arise are how they are able to find employment and survive (despite all the factors that count against them), and also what the factors are that have an impact on their wages. Aguilera and Massey (2003) provide some explanation on how immigrants are able to enter the market and earn a living wage. They turned to the concept of social capital that was first introduced in 1977. There have been suggestions that social capital not only provides a reliable platform to seek employment, but it can also affect wages for immigrants. Aguilera and Massey (2003) found evidence from previous literature that suggests that interpersonal networks have over time developed into a self-sustaining process of social capital accumulation (Aguilera & Massey, 2003:672).

It is suggested that immigrants rely on kinship, trust and friendship to reduce any risks associated with moving to and finding employment in another country (Aguilera & Massey, 2003:673). Since the value gained has been proved in historical literature, the author expected similar result for Mexican immigrants. They developed four hypotheses that they tested in their research, which were that interpersonal networks will have a positive and significant effect on earnings, social capital enables access to higher paid jobs in the formal sector, social capital will play a more significant role in determining wages for undocumented migrants, and lastly, distant interpersonal networks will be more significant for undocumented migrants than for documented migrants (Aguilera & Massey, 2003:675-677).

The data that they used contained interesting characteristics from a survey conducted in 52 communities with an average sample size of 200 households per community. Empirical results indicate that 71 per cent of the undocumented immigrant workers had gained access to their jobs through a friend or family member (Aguilera & Massey, 2003:681).

Further results from the regression confirmed that social capital had direct and indirect effects on wages earned. The researchers concluded that their findings supported the hypotheses and the theory of social capital. There is enough evidence to argue that immigrants who have social capital generally earn higher wages than those who do not have social capital (Aguilera & Massey, 2003:690).

It is important to note the determinants of wages for Mexican immigrants that were also revealed from the regression models used in this study. English language ability appeared to have a major impact on wages for both documented and undocumented immigrants. Documented immigrants enjoyed a 14 per cent higher wage if they were able to speak and understand English well, while undocumented immigrants enjoyed a significant 38 per cent wage return if they spoke and understood English well (Aguilera & Massey, 2003:687). Human capital was also a significant contributor to rising wages, and education, experience and duration of stay were the main drivers. Every additional year of schooling resulted in a 1.2 per cent wage increase for documented immigrants (Aguilera & Massey, 2003:687).

The above findings corresponded with the findings from a study done by Baldacci *et al.* (1999) on the determinants of foreign workers' wages in two Italian regions known for high illegal immigration. The authors of this paper explained that standard economic models rely on demand and supply to explain wage determinants. They felt that the determinants of wages should be explained by looking at "individual tastes, labour market segmentation, abilities and skills" (Baldacci *et al.*, 1999:678).

They based their assumptions on two basic economic theories that claim that investment in human capital is a main determinant of wage levels and the second claims that education does not enhance productivity and that educational attainment guides employers with assessing workers' abilities (Baldacci *et al.*, 1999:679).

The data was collected through multiple surveys conducted in four different regions in Italy, namely Rome, Frosinone, Naples and Caserta (Baldacci *et al.*, 1999:682). The sample consisted of 1 574 foreign immigrants of whom 66.8 per cent were employed at the time of the surveys. The final sample was based on 971 immigrants that represented 93 per cent of the number of respondents who were employed at the time of the survey (Baldacci *et al.*, 1999:683). The multidimensional analysis performed on the data provided supporting evidence for a number of variables that play a role when wages are determined. Higher education, ability to speak the native language (Italian), sector activity, self-employment, dependents, legal status, area of origin, experience, working conditions, work effort, gender, on-the-job training and characteristics of occupation were all found to have a significant impact of the determination of wages for immigrants in the regions of Italy (Baldacci *et al.*, 1999:692-706).

Ability to speak Italian had a positive effect on wages for illegal female immigrants, while educational attainment had the opposite, negative effect (Baldacci *et al.*, 1999:693). Sector of activity was positively related to wages for legal immigrants and it can be divided into males enjoying a higher wage in the manufacturing sector, while females earn a higher wage in the services sector (Baldacci *et al.*, 1999:698).

The authors divided the data sample into six different groups in an attempt to find the impact of origin on determinants of wages. The sample consisted of Eastern Europe, North Africa, Horn of Africa, Latin America, West Africa and Asia. There was a definite impact observed for age and experience for all groups; however, the immigrants from Eastern Europe and the Horn of Africa only indicated signs of an effect on the length of stay (Baldacci *et al.*, 1999:704). It paid to be a legal male immigrant originating from North Africa, while immigrants from Eastern Europe enjoyed some advantages by having had an occupation in their homeland (Baldacci *et al.*, 1999:704). For all the groups, having children or dependents impacted negatively on wages and this was attributed to the little time a worker had available to work if he or she had to commit some time to look after a dependent (Baldacci *et al.*, 1999:704).

In summary, from the above literature it is evident that there are some common factors that determine wages for workers employed in the formal sector, informal sector as well as the vulnerable groups such as immigrants and seasonal workers. Such factors include education, training, skills and experience. It does, however, appear that the vulnerable groups are more exposed to external determinants of wages that cannot be controlled, such as local labour

market conditions and minimum wage. The questions remain whether the determinants of wages are the same for day labourers as they are for workers in the formal and informal sector. This study will now look at the conditions of the labour market in South Africa.

2.3   The literature on the South African labour market

South Africa is known to struggle with poverty, income inequality and high unemployment and for many years these have been the greatest challenges facing the country. The unemployment rate for quarter 2 of 2014, according to the Quarterly Labour Force Survey (Statistics South Africa, 2014:2), was 25.5 per cent. The South African GDP growth rate averaged at an estimated 1.9 per cent during 2012/13 (The World Bank, 2014). This is not nearly enough to reduce the high unemployment rate. Fourie (2011:2) described the South African labour market as "characterized by segmentation, informal-formal and rural-urban dualisms, and segmentation within the informal sectors (alongside subsistence and survivalist sectors)".

Determination of wages is one of the most important outcomes of the labour market and wages play an important part in the distribution of labour between occupations, sectors and regions. Barker (2007:60) discussed the different determinants of wages by breaking it down into the different types of labour markets. The follow paragraphs will attempt to summarise his findings in a similar representation, by individual labour market.

In a perfectly competitive labour market, there is no control by any group involved and wages are determined by an agreement between the prospective employer and potential employee. However, these wages cannot be set at any level the employer wishes as the law governs the country's minimum wage. By and large, in a perfectly competitive labour market, demand and supply will determine at what levels wages and employment are set (Barker, 2007:61).

A monopsony labour market, on the other hand, is completely controlled by the employer and wages are set by adjusting the number of workers hired. This can typically occur where one employer dominates the market or where numerous employers collude (Barker, 2007:61).

A segmented labour market is defined as a market that is grouped into segments, each with its own unique characteristics. These segments are known to be firmly controlled and movement

between the sectors is constrained. Wages in this type of labour market are mostly determined by rules within the institutions that operate in this type of labour market. There are characteristics of the inside-outsider model where individuals are more likely to enjoy promotions within an organisation and in the process also secure a wage that is higher than the market would have determined. Institutional forces and wage structures also have an impact on the determination of wages in this labour market (Barker, 2007:61).

The dual labour market is divided into two non-competing markets, namely the primary and secondary labour markets. The primary segment is known for high remuneration, favourable working conditions and employment stability. Access into this market is limited and positions are mostly filled from within an organisation. Because no demand and supply conditions exist within this market, wages are set by internal rules. The secondary segment is small in scale and is characterised by low-paying, labour-intensive occupations and unstable patterns of employment. An oversupply of labour usually exists and individuals often have only low levels of skills (Barker, 2007:62).

G Kingdon and J Knight have conducted extensive studies on the labour market in South Africa. In one of their earlier studies, Kingdon and Knight (1999) tested the criticism against the traditional model of the labour market, which explains that unemployment and wages have a positive relationship and that in an area with high unemployment rates, wages tend to be high to compensate for costs related to searching for employment. They found opposing arguments in numerous studies that claim a negative relationship between wages and unemployment, referred to as the wage curve. Using data from the South African Living Standards Survey, they tested the robustness of the wage curve relationship under high unemployment conditions. South Africa made a perfect case study for this exercise due to the high unemployment rates (Kingdon & Knight, 1999).

Understanding the wage curve for South Africa is of valuable importance for reasons provided by Kingdon and Knight (1999:1); it can assist with indicating which definition of unemployment, broad or narrow, is more accurate for explaining unemployment in South Africa, it can help explain the degree of labour market segmentation between rural and urban areas and also assist to determine the extent of the impact that unions have on the responsiveness of wages to local unemployment conditions. Understanding the wage curve can be beneficial in testing

labour immobility and is also important to understand because it has implications for poverty, a big challenge that South Africans face every day.

Their findings were that there exists a typical wage curve in South Africa evident from their explanation that "tripling unemployment from 10 per cent to 30 per cent reduces wages by approximately 30 per cent in the data" (Kingdon & Knight, 1999:13). Further results from their study showed that the wage curve elasticity in South Africa is similar to that of OECD countries, but that it occurs over an extensive range of unemployment rates and therefore suggests that it can have a substantial effect on wages in South Africa, but not on wages that are negotiated by unions. They also found that wages were more responsive to the broad and narrow definition of unemployment between homeland and non-homeland areas than between rural and urban areas (Kingdon & Knight, 1999:10).

Finally, one of their findings, while testing for the responsiveness of wages to the broad and narrow definition of unemployment, was that the broad definition of unemployment is the most accurate definition to use to explain unemployment in South Africa. Because the difference between the unemployment rate by narrow definition and the unemployment rate by broad definition is so substantial, this could have major implications for South Africa and affect the perceptions about the magnitude of unemployment in South Africa (Kingdon & Knight, 1999:13).

It is evident from the above study that the wage curve and union negotiations play a role in determining wages in South Africa. The finding by Kingdon and Knight (1999) on the definition of unemployment necessitated further investigation. Their argument in favour of using the broad definition for reporting unemployment in South Africa was supported in their study to determine whether the searching unemployed state can be separated from the non-searching unemployed state in a developing country such as South Africa.

Kingdon and Knight (2000:2) focused on data gathered by the South African Labour and Development Research Unit in 1993 and from the October Household Survey (OHS94) to determine how vastly the circumstances of the searching and non-searching unemployed differ. Extensive tests were formulated to investigate the reasons why the non-searching unemployed choose not to actively participate in a search for employment. They compared the existence of poverty between searching and non-searching unemployed and investigated to what extent it

contributes to the lack of active searching. They also acknowledged that quality of life might determine how actively a person wants and is able to search for employment and included a comparison between the searching and non-searching unemployed to determine whether an individual's wellbeing is explanatory (Kingdon & Knight, 2000:3).

In their first test, they considered reasons that could explain the lack of actively searching for employment among individuals. It is important to note that although day labourers do not fall in the category of unemployed, or not actively seeking, one must gain a better understanding of the labour market conditions in South Africa. The low prospect of finding employment was found to be a valid reason for a lack of actively searching for employment and this was "supported by StatsSA's 1997 Special Retrospective Survey of Employment and Unemployment" (Kingdon & Knight, 2000:5). The recruitment methods often used by employers also proved to be hindering in finding employment and the evidence showed that the general way of finding employment was to wait for word of a job or for an employer to pick them up, similar to day labourers who stand next to the road waiting for an employer to pick them up (Kingdon & Knight, 2000:5).

It was also taken into consideration that individuals might interpret the survey question whether they have been searching for employment in the past as meaning physically going to places and asking for vacancies. Because they are just sitting and waiting for a phone call, they possibly answered no to this question. The costs associated with actively searching for employment were also found to be deterring to the non-searching unemployed who are already living in poverty (Kingdon & Knight, 2000:5).

The findings in Kingdon and Knight (2000) substantiated the findings in Kingdon and Knight (1999) who concluded in favour of using the broad definition as indicator of unemployment in South Africa. Kingdon and Knight (2000) argued that the unemployed individuals who are not actively searching for employment do so because they are discouraged. They also found no substantial variation between the searching and non-searching unemployed and found no difference in their level of emotional state, which suggests that the searching unemployed are no better off than the non-searching unemployed are (Kingdon & Knight, 2000:17).

G Kingdon and J Knight have throughout their research explained the robustness of the wage curve and its importance to the South African labour market. They have also provided evidence and recommendations in support of Statistics South Africa using the broad definition to report on unemployment and explained why the non-searching unemployed choose not to participate in an active search for unemployment. As a result of Statistics South Africa adopting the narrow definition as their formal measure of unemployment, it is suggested that unemployment is seen as voluntary. Because of the high unemployment rate in South Africa, Kingdon and Knight (2001a) further investigated this occurrence by looking at whether unemployment is voluntary or involuntary. They argued that the importance of understanding this has major implications for South African policies if it is found that it is in fact mostly voluntary. Unemployment as one of the biggest current challenges facing South Africa would thereafter be seen to have a lower level of urgency to be addressed through policy (Kingdon & Knight, 2001a:2). In order to assist them in answering this question, they focused on why the unemployed do not enter the informal sector and why they do not enter wage employment. Using data from the Household Survey collected in 1993, 1994 and 1997, they provided a basic framework within which to set the empirical analysis (Kingdon & Knight, 2001a:4).

Two suggested reasons why the unemployed do not enter the informal sector are because they prefer a life of freedom and have the funds to do so, and the other is that they are not able to easily enter the informal sector due to restrictions that are deterring their efforts (Kingdon & Knight, 2001a:5). The first hypothesis that argues in favour of the unemployed choosing a life of leisure was tested by Kingdon and Knight (2001a:6) using the earnings function of formal sector workers to forecast wages of informal sector workers. The results showed that the unemployed are significantly worse off than the individuals employed in the informal sector across the board and especially in terms of earnings and expenses and suggest that this hypothesis does not hold (Kingdon & Knight, 2001a:6).

The second argument that the informal sector is difficult to enter into due to restrictions has been supported by several authors, according to Kingdon and Knight (2001a:8), suggesting a lack of skills, experience and contacts as possible obstacles (Kingdon & Knight, 2001a:10).

Results have indicated that, in general, the unemployed are worse off than those individuals in the informal sector. The question arises then why do more unemployed people not enter wage

employment? This was addressed in a study done by Kingdon and Knight (2001b) who suggest that perhaps these individuals have high and unrealistic wage aspirations referred to as the "optimistic wage aspirations hypothesis" (Kingdon & Knight, 2001b:10). They tested this theory by fitting "log wage functions for employed persons and used the estimated parameters to obtain predicted wages (PW) of the unemployed" (Kingdon & Knight, 2001b:10). Their findings concluded that "African, rural homeland, low-education workers, females, the young, and persons who have never worked before" had higher expectations of wages than their counterparts (Kingdon & Knight, 2001b:11). The reasons provided for this was that individuals living in remote areas are uninformed about their labour market worth and might put forward a wage request similar to one that they would earn in an area other than the one in which they currently reside. Further explanations that were suggested were that perhaps the candidates who were questioned had reported on the wages that they would prefer rather than the wages that they are worth and that they might have reported from a negotiating stance and would agree on wages considerably less than their initial request (Kingdon & Knight, 2001b:11). The above findings indicate that perhaps unemployment in South Africa is not voluntary and the hypothesis in favour of this is questionable.

South Africa is known for its regrettable past of racial discrimination. There is evidence that perhaps the past has a bigger impact on unemployment in South Africa than what first meets the eye. Kingdon and Knight (2001c) contributed to this literature through their research done on the relations between race and unemployment in South Africa. They started off by investigating the dimension and nature of the distribution of unemployment in South Africa using data from the October Household Survey of 1994 and data collected in a household survey carried out by SALDRU in 1993. They estimate a probit regression equation of unemployment and look at descriptive statistics to determine the impact of racial distribution of unemployment, specifically focusing on the extent to which mediocre employment characteristics (common among black workers), and labour market discrimination explains the race gap in the possibility of employment (Kingdon & Knight, 2001c:2). Their first finding was that rural unemployment rates were significantly higher than urban unemployment rates and they attributed this to the apartheid years that forced non-white individuals to live in rural areas that had little development, poor land quality, few prospects and minimal employment opportunities. They then separated the occurrence of unemployment into two parts, namely the "chances of entering

unemployment and the duration for which individuals remain unemployed" (Kingdon & Knight, 2001c:5).

A noticeable characteristic of the South African labour market that was identified and demonstrated by Kingdon and Knight (2001c:5), was the incidence of unemployed African individuals who have never held employment before. 68.4 per cent of the unemployed African individuals indicated that they have never had a job and that they have been unemployed from the date of entering the labour market. This was 38.1 per cent more than the occurrence among white individuals (Kingdon & Knight, 2001c:28). Some of the components that have an impact on the likeliness of individuals entering unemployment were identified by them to include, among others, race, age, region, gender, education, and the cost of being unemployed (Kingdon & Knight, 2001c:8-9).

Two possible explanations were suggested for the duration that an individual remains unemployed, which is the rate at which an individual receives, and secondly, accepts a job offer (Kingdon & Knight, 2001c:9). This has a direct relationship with supply and demand and it was found that the duration is significantly lower for "younger, well-educated, white groups" (Kingdon & Knight, 2001c:10). It was also found that 56.3 per cent of the interviewed individuals had been unemployed for more than three years (Kingdon & Knight, 2001c:10).

The extent to which average employment characteristics and labour market discrimination explain the race gap in the likelihood of employment was further investigated. Focus was placed on the different qualities of an individual that increase the likelihood of that person being unemployed (Kingdon & Knight, 2001c:11). The findings on whether the quality of schooling had an impact on the higher occurrence of unemployment among black and other non-white races were, although probable, inconclusive due to weak evidence (Kingdon & Knight, 2001c:13). They did, however, find that the occurrence of unemployment reduced significantly with an increase in education across all races and that for Africans, education reduces unemployment from the "junior secondary level onwards" (Kingdon & Knight, 2001c:14).

Age seemed to be negatively correlated with the likelihood of unemployment at a diminishing rate (Kingdon & Knight, 2001c:13). It was evident from their regression model that the youth are more inclined to enter into unemployment due to their flexible nature, fewer commitments and

responsibilities and their optimism of finding another job relatively easily (Kingdon & Knight, 2001c:9).

Home ownership can apply a positive influence on the likelihood of unemployment, but this was explained by Kingdon and Knight (2001c:15) as an occurrence that might be due to home owners who are more immobile or home owners representing a wealthier group, which might have higher reservation wages and would therefore voluntarily be unemployed. Dependents and number of dependents, according to this study, could either result in a higher or lower likelihood of unemployment. The care responsibility that comes with dependants would most likely result in a higher likelihood of unemployment among females than among males (Kingdon & Knight, 2001c:15). Lastly, Kingdon and Knight (2001c:16) found that the possibility of an individual being unemployed is higher for those living in an area considered to be homeland than for a person living in an area considered to be non-homeland.

Using the results from their study as reported above, Kingdon and Knight (2001c) attempted to calculate the probability of being unemployed as an outcome of certain characteristics, some explained and others unexplained. They believed that the likelihood of being unemployed that cannot be explained by the observable characteristics in the model could indicate the relevance of discrimination by employer or unmeasurable racial differences (Kingdon & Knight, 2001c:18). They calculated a total African-white race gap in the probability of being unemployment of 33.7 percentage points, of which 75 per cent were explained by characteristics common among white people. The remaining 25 per cent, which cannot be explained by the decomposition done by the model, could be attributed to employer discrimination (Kingdon & Knight, 2001c:21).

Following an exploratory study done by Schenck and Louw (2005) on day labourers in the Elarduspark area in Pretroia, Blaauw et al. (2006) completed a more extensive and thorough research study on day labourers in the wider Pretoria area. The study by Blaauw et al. (2006) contributed to the limited research done on the informal sector and investigated the employment history and income earned by day labourers. The test subjects were situated in the Pretoria area and were mainly young males with few skills, earning a minimal and unreliable sum of money enduring the severest of working conditions (Blaauw et al., 2006:462). The data was collected through scheduled and structured interviews using a questionnaire that consisted of four sections containing questions relating to demographic features, income, working conditions

and possible abuse (Blaauw *et al.*, 2006:461). A total of 242 questionnaires were accepted as correctly completed and suitable to be used for interpretation (Blaauw *et al.*, 2006:461).

88.8 per cent of the respondents originated from outside Gauteng and were seeking employment in the Pretoria area. This might be some evidence that location is a determinant of finding employment and ultimately of wages. Day labourers were found to be mostly unskilled with little or no education and formal training. Five per cent of the sample population had indicated that they had never attended school, while 40.9 per cent admitted that they have had no formal training to perform the tasks at hand (Blaauw *et al.*, 2006:462). Another interesting finding that was revealed from the questionnaire was that half of the day labourers had, during their time in the informal sector, missed a job opportunity as a result of not having the sufficient tools to complete the required tasks (Blaauw *et al.*, 2006:463). This raises the questions whether adequate or in-adequate tools could also influence a day labourer's wage?

A further analysis of the income of day labourers revealed that 57.6 per cent of the sampled day labourers earned less than R700 in the month leading up to the survey and that 24.7 per cent of the day labourers received less than R300 per month (Blaauw *et al.*, 2006:468).

While the formal sector unemployment forces individuals to enter the informal sector, the informal sector serves as a catchment area for those looking for employment, but who are having difficulty to do so. Once workers find themselves in this group of mostly unskilled and untrained labourers, it is very difficult to return to the formal zone. The evidence is that the longer a person remains unemployed, the faster their existing low levels of human capital deteriorate (Blaauw *et al.*, 2006:466). The opposite is true for developed countries such as the United States of America, where day labouring serves as a way into the labour market for workers who hope to make the transition into the formal economy (Theodore *et al.*, 2009:423).

Blaauw *et al.* (2012:1333-1346) compiled the first study to focus on wage determinants of migrant day labourers from Zimbabwe working in South Africa. Due to the nature of the informal sector, there is little regulation from the government or as Camou (2009:39) described it, true "laissez-faire conditions" exist in the informal sector. Because day labourers are for the most part paid in cash, it is nearly impossible for the authorities to enforce minimum wages.

Blaauw *et al.* (2012:1335) stated that the pricing of the labour is mostly determined by discussions between the employer and the day labourers. In other words, it is determined by supply and demand. There has also been evidence in support of disparities in levels of socio-economic development between different parts of a country. The economy in South Africa is no different to this and is characterised by an uneven distribution of economic opportunities (Harmse *et al.,* 2009:367). Factors associated with an uneven distribution of socio-economic development play a part in determining wages as well as the conditions in the various suburbs of the same city (Blaauw *et al.*, 2012:1335).

The data used for the empirical study on wages of Zimbabwean day labourers was sourced from a detailed questionnaire survey designed in a multiple phase process among day labourers in South Africa and was completed in 2007 (Blaauw *et al.,* 2012:1336). The authors predicted that human capital, length of stay in the target country, age, health, language fluency, same employer frequency and legal status might be determinants of wages of migrant day labourers from Zimbabwe (Blaauw *et al.*, 2012:1335-1336).

Findings were mostly as expected, such as age, which was found to be a determinant in that the "physical nature of day labour activities rewards older and physically stronger workers with higher wages" (Blaauw *et al.,* 2012:1341). Previous full-time employment did not reflect as a determinant of wages and regression results indicated that the more experienced the worker is, the less income he receives. The possible explanation for this is that due to the nature of the work there is no reason why a worker who has years of experience in, for example, an administrative office job should earn higher wages while performing hard physical work (Blaauw *et al.*, 2012:1341).

Results on the impact of nutrition on wages were found to be statistically insignificant and questions were raised about causality. It was also found that workers who get hired by the same employer regularly tend to earn more in wages, and so does a worker who has the ability to speak the preferred language, in this case, Afrikaans (Blaauw *et al.*, 2012:1341). Results for the impact of human capital and workers specialising in a specific activity on wages indicate that workers who have completed secondary school and have some formal post-school qualification earn on average 18 per cent more than workers whose highest qualification is secondary school only. Every vocational training course completed adds 29 per cent to earnings. This is an

important finding for the purpose of this study and could set the stage for expected results when running the regression model to determine whether the human capital theory holds for day labourers (Blaauw *et al.*, 2012:1341). Even though this study focused on wage determinants for Zimbabwean day labourers, the results are expected to be similar for day labourers in South Africa in general, regardless of their nationality.

2.4   Summary and conclusions

Chapter 2 compiled findings from research done on labour market outcomes in the national and international markets. The general consensus is that there are significant numbers of variables that influence wage determination. Vulnerable groups such as immigrants, seasonal workers and day labourers are mainly at the receiving end of external forces that they have little or no control over, such as local labour market conditions and minimum wages. There have also been suggestions from existing literature that location and age affect wages for specifically day labourers. However, it became evident that there is limited research that focuses on the determinants of wages of day labourers in South Africa. Day labourers are a group of interest as they are not classified as unemployed individuals, yet they are exposed to sporadic employment and have to endure harsh working conditions.

For the purpose of this study, more focus was placed on education, training, skills and experience, as these are the underlying principles of the human capital theory. In both national and international labour markets, education, training and experience appeared to be positively associated with an individual's wages. Empirical analysis is required to test the hypothesis that for every additional year of education there would be a percentage increase in wages. The same is required to test the hypothesis that for every additional year of experience there will be an increase in wages. It is also necessary to investigate whether day labourers who have received a form of training earn higher wages than those who have not, as evidence from a study conducted by Veum (1999:531) suggests that certain forms of training are transferrable between jobs and contribute to receiving higher wages.

At the time of this study, not much research could be found on the impact of skills on wages, but the conclusion made from the existing literature that was available was that skills and other exogenous factors affect wages among individuals with different levels of education and that

occupations that require more physical skills often offer lower wages. Further investigation is required from this study to determine whether this hypothesis holds. The use of principle component analysis to group different types of jobs performed by different day labourers will make it possible to use cluster analysis to regroup the labourers by earnings and types of jobs.

The next chapter will focus on the survey, dataset and characteristics of the data.

Chapter 3   The survey of day labourers and the characteristics of the sample

This study investigates the determinants of wages of day labourers. It draws on the human capital theory and aims to determine whether the principles of the human capital theory hold for day labourers where the majority of workers have a low level of education and training. Chapter 2 provided an overview of the available literature on the determinants of wages in the formal and informal sectors and suggests that there are a number of important determinants of wages. The determinants that were found to be of significance are very similar for both the international labour market and the South African labour market and include, among others, education, training, skills and experience.

This study will, however, specifically focus on day labourers in South Africa and the determinants of their wages since there is little official data available on informal employment and informal workers. This study will use survey data to test the hypotheses. Chapter 3 will describe the survey conducted to collect the data as well as the characteristics of the sample data, and Chapter 4 will provide and interpret the findings of the basic regression model.

3.1   The survey of day labourers

Blaauw *et al.* (2006) collected the first dataset on day labourers through a case study in Pretoria, which investigated their employment history and the income earned. They conducted a survey in September 2004 by trained fieldworkers. Before the survey was conducted, however, scouting was done in the greater Pretoria area utilising sources such as municipalities, churches, welfare organisations and the Department of Labour to determine the size of the research sample. They also developed a questionnaire that was used by the fieldworkers to conduct scheduled and structured interviews (Blaauw *et al.*, 2006:461). A follow-up survey was conducted in 2005 and 2006 when the research team this time travelled to many of the towns and cities in South Africa and physically counted the number of day labourers. They also conducted preliminary interviews and recorded the street names where the day labourers were mainly found as well as the number of day labourers at each location. The results from this follow-up survey showed that there are roughly 1 000 places hosting approximately 45 000 day labourers across the country (Harmse *et al.*, 2009:365).

In 2007 and 2008, another survey was conducted among the day labourers of South Africa. The questionnaire that was developed for this survey was based on the questionnaire used in the 2006 survey by Blaauw *et al.* (2006). The interviews were conducted by a trained fieldworker who was multilingual in a number of the official languages of South Africa and was supported by additional fieldworkers from UNISA for the interviews in the larger metropolitan areas (as presented by Blaauw (2010) and cited in Krugell and Blaauw, 2014:488). This dataset will be used for this study and will be presented in the sections that follow.

Figure 1 is an illustration of the geographical distribution of day labourers in South Africa at the local municipality level. This was compiled at the time of the survey.

Figure 1: The spatial distribution of day labourers in South Africa, 2006/07
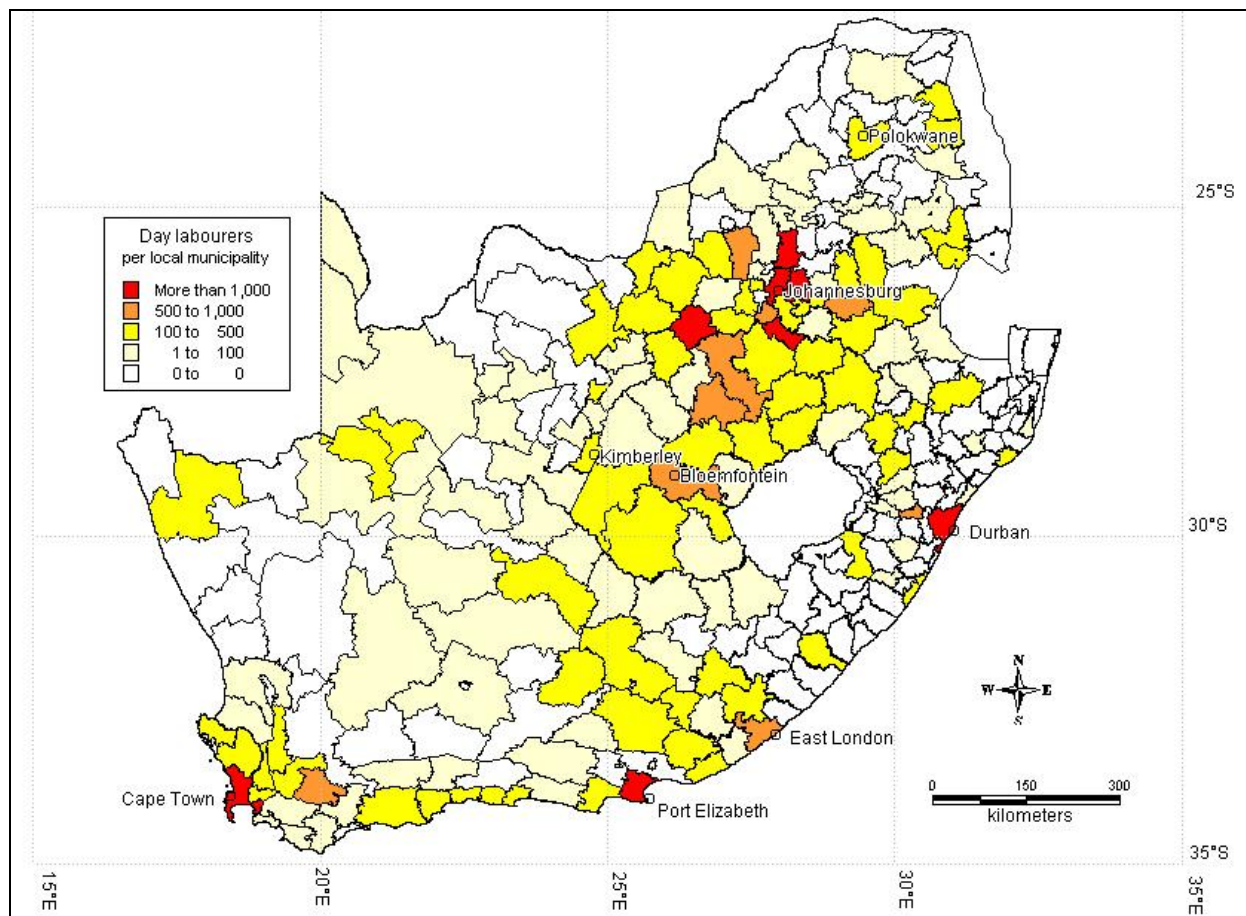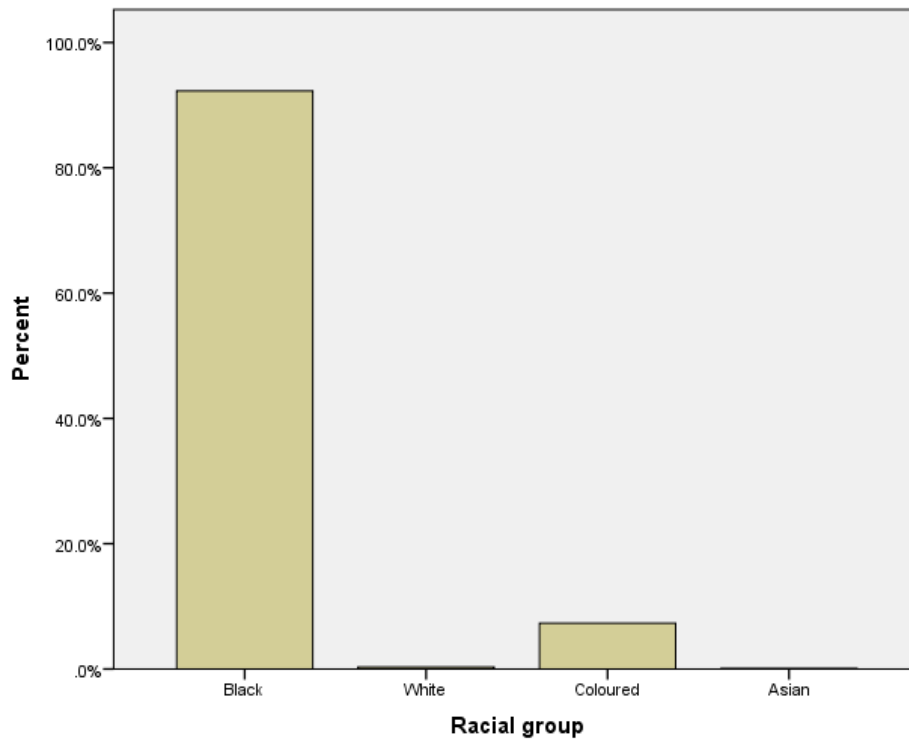

Source: Krugell & Blaauw, 2014:487

3.2 Basic socio-demographics

The final sample consists of 3 812 individuals who are mostly black (92%) males (96.2%) aged between 21 and 35 years (62.9%) as can be seen in Figure 2 and Figure 3. Section 3.4 will expand on the interrelationships between age and human capital.

Figure 2: Distribution by race

Source: Survey data

Figure 3: Distribution by age
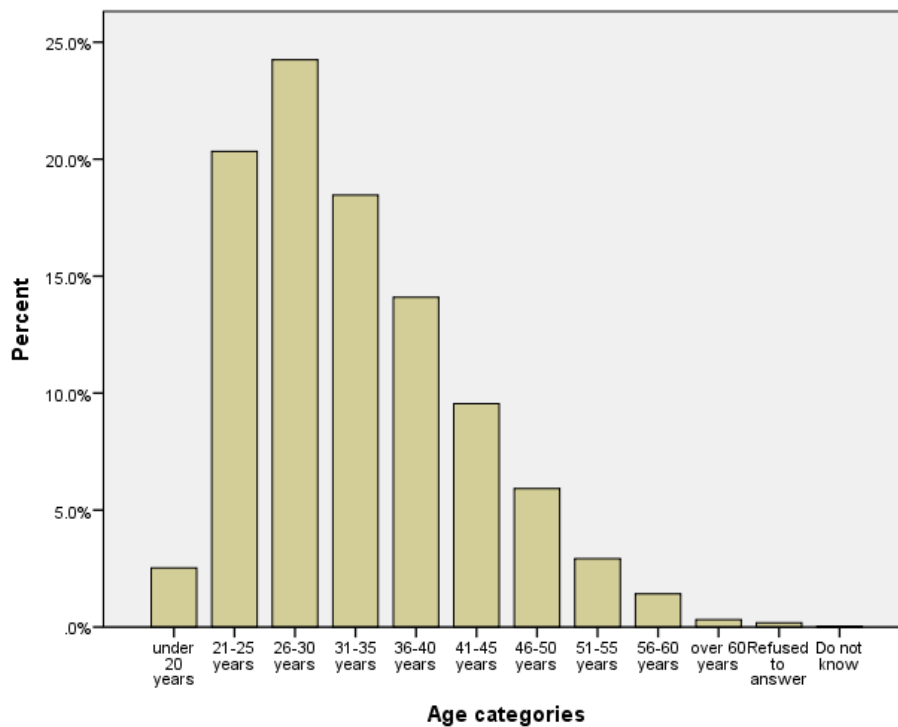
Source: Survey data

Table 1 and Figure 4 show the majority of day labourers reached through this survey were gathered in Gauteng (25.8%), the Western Cape (16.1%) and KwaZulu-Natal (14.2%). Day labourers gathered in Limpopo were the fewest in number and represent only 3.1 per cent of the respondents. Figure 4 is a graphical illustration of Table 1 and from it can also been seen that the fourth greatest share of day labourers are in the Eastern Cape, followed by the Free State, Northern Cape, Mpumalanga, North West and Limpopo.

Table 1: Distribution by province

Province		
	Frequency	**Per cent**
Gauteng	982	25.8
Western Cape	612	16.1
KwaZulu-Natal	541	14.2
Eastern Cape	431	11.3

Free State	303	7.9
Northern Cape	296	7.8
Mpumalanga	276	7.2
North West	247	6.5
Limpopo	119	3.1
Total	3807	99.9

Source: Survey data

Figure 4: Distribution by province
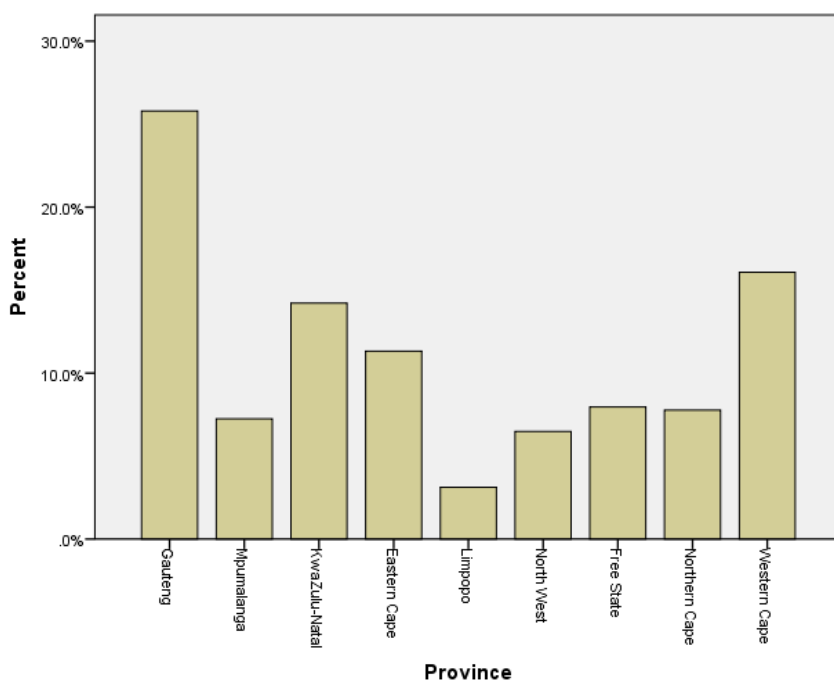
Source: Survey data

As far as the distribution across cities is concerned, the larger gatherings of day labourers were in the main cities of South Africa. Cape Town (9.8%), Durban (9%), Pretoria (8.2%) and Johannesburg (8%) represent a substantial share of the sample data, as can be seen in Table 2 below.

Table 2: Distribution by city

City		
	Frequency	**Per cent**
CAPE TOWN	375	9.8

DURBAN	344	9.0
PRETORIA	313	8.2
JOHANNESBURG	304	8.0
EAST LONDON	169	4.4
PORT ELIZABETH	132	3.5
NELSPRUIT	102	2.7
BLOEMFONTEIN	95	2.5
KIMBERLEY	84	2.2
RUSTENBURG	78	2.0

Source: Survey data

More than 50 per cent of the day labourers spoke a language other than English. The language mainly spoken by day labourers is isiXhosa (28%), while 17.5 per cent spoke isiZulu and 11.5 per cent spoke Sesotho. Only 2.7 per cent of the day labourers indicated that they spoke English.

Table 3: Distribution of Language groups

Language group		
	Frequency	**Per cent**
isiXhosa	1066	28.0
isiZulu	668	17.5
Sesotho	439	11.5
Setswana	301	7.9
Afrikaans	298	7.8
Sepedi	231	6.1
Xitsonga	208	5.5
isiNdebele	166	4.4
SiSwati	138	3.6
Other	119	3.1
English	104	2.7
Tshivenda	58	1.5

Source: Survey data

Keeping this basic profile in mind, it is possible to further examine the measures of human capital that theory would indicate are related to their earnings.

3.3 Measures of human capital

The review of the literature in Chapter 2 showed there is a relationship between education and wages, training and wages, skills and wages and finally experience and wages. Education was argued to have a positive wage return for males and females, while training was shown to have a positive relationship with future wage growth. The literature indicated that both soft and hard skills proved to be increasingly important to employers and much focus was placed on cognitive skills. There were also suggestions that cognitive skills had a direct impact on wages, although there are arguments on whether it is a positive or a negative effect, the degree of impact and whether it varies by gender. Chapter 2 further provided examples of literature, concluding that there exists a positive and significant rate of return for experience in terms of wages. The following section will expand on the descriptive statistics of the data for the variables suggested by previous literature to have an impact on the level of wages.

3.3.1 Education

The majority of day labourers appear to have little education. Figure 5 indicates that 5.9 per cent had no schooling, 18.8 per cent had some primary schooling and 9.2 per cent completed primary schooling. A total of 48.8 per cent of the day labourers have some secondary schooling, while only 14.8 per cent indicated that they have completed secondary schooling. A very small percentage had some form of post-school qualification (1.8%).

Figure 5: Highest qualification level obtained
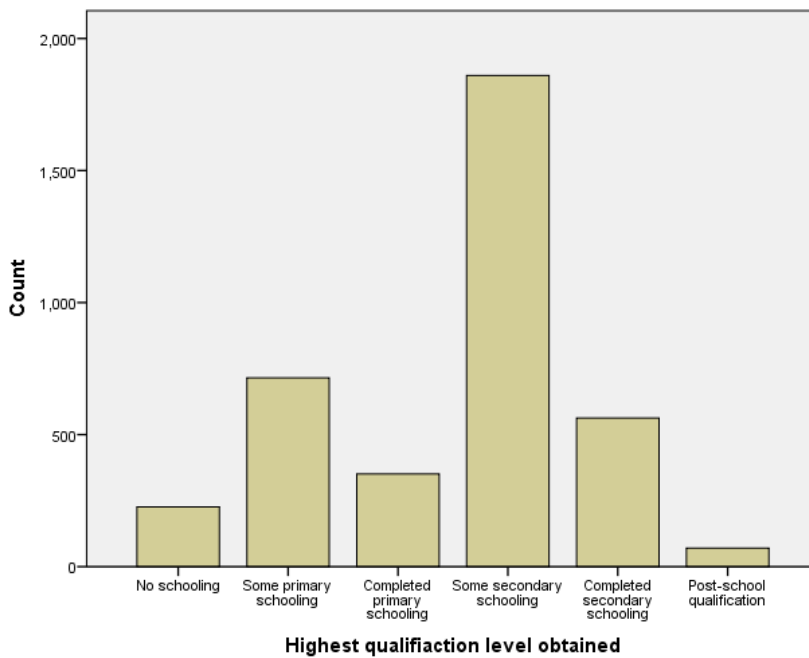
Source: Survey data

Figure 6 considers education level and age together and it is evident that younger day labourers achieved higher levels of education. Of the day labourers interviewed aged 21 to 25 years, 24.3 per cent completed secondary schooling. Of the day labourers aged 31 to 35 years, 14.9 per cent completed secondary schooling and of the day labourers aged 46 to 50 years, only 1.8 per cent completed secondary schooling. It was also evident from the data that day labourers older than 40 years have had very little formal education.

Figure 6: Inter-relationship between age and highest qualification level obtained
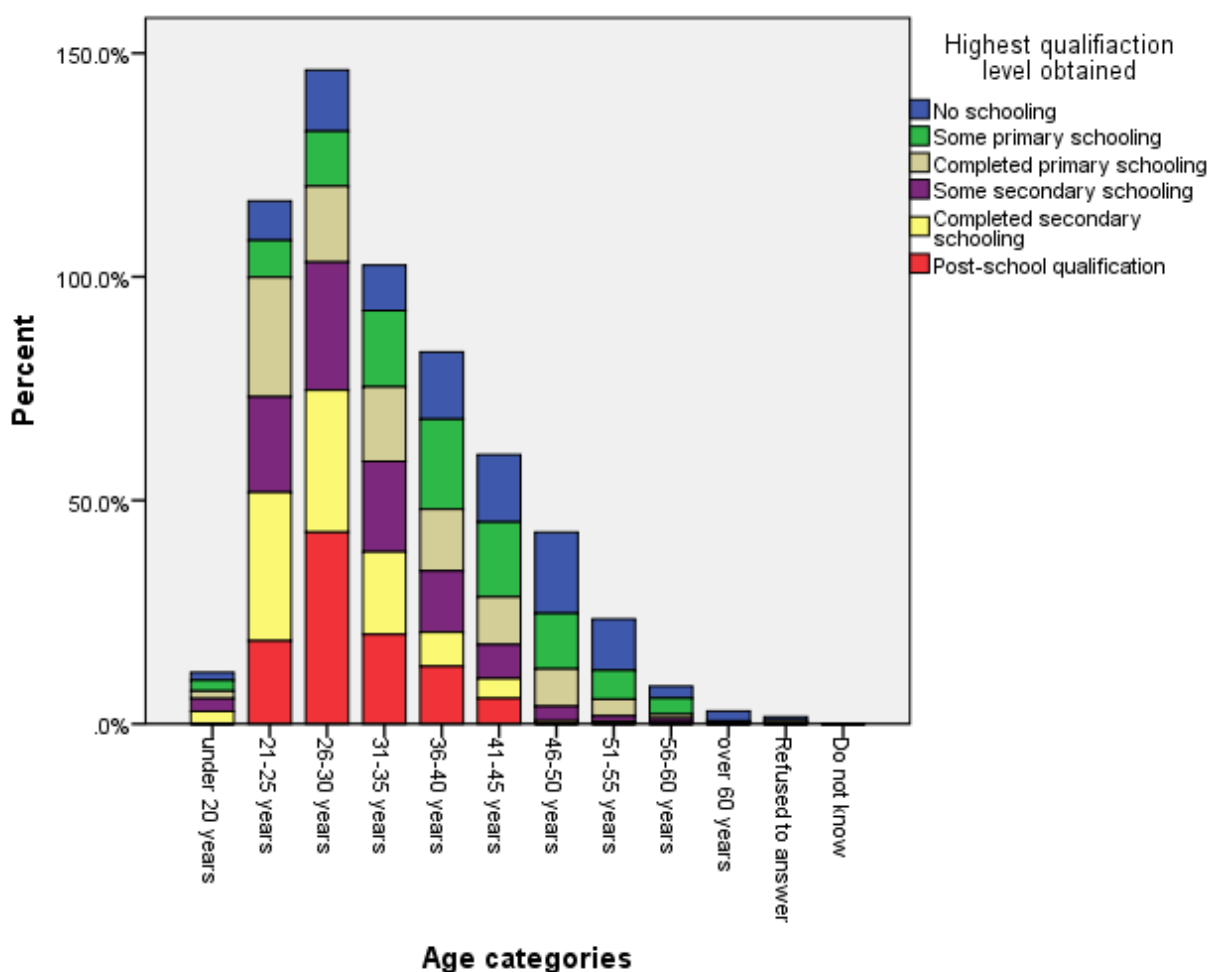
Source: Author's own calculations

3.3.2 Training

A small percentage of day labourers indicated that they have completed some form of vocational training or course, as shown in Table 4. Training as a painter (6.2%), for bricklaying (4.8%) and as a carpenter (4.1%) appears to be the most common. This is followed by training as a tiler (3.6%), for electrical work (2.8%), plumbing (2.4%) and as a cabinet maker (1.0%). Around 11.3 per cent of the day labourers indicated that they completed some other form of vocational training or course, while 64 per cent of the respondents said that they have not received any kind of vocational training.

Table 4: Vocational training or courses completed

Vocational training or courses completed		
	Frequency	**Per cent**
Bricklaying	183	4.8
Painter	235	6.2
Plumbing	92	2.4
Tiler	136	3.6
Electrical work	107	2.8
Cabinet maker	37	1.0
Carpenter	158	4.1
Other	430	11.3
No training	2434	63.9

Source: Survey data

When comparing the inter-relationship between level of education and vocational training received, using cross tabulation, it is possible to discern some patterns. When interpreting the row percentages (within level of education), Table 5 shows that among the day labourers with no schooling, 17.5 per cent received training as a painter and 15 per cent as a carpenter. Among those with some secondary schooling, 15.8 per cent received training in bricklaying, and 14.3 per cent as a painter. Among those who completed secondary schooling, greater shares received training as painters and carpenters. Finally, among day labourers with post-school qualifications, 21.8 per cent received training in electrical work, 20 per cent received training in carpentry and 16.4 per cent in tiling.

When comparing the column percentages (within the type of vocational training or course), it is useful to compare the percentages to the sample characteristics for education. Recall that 48.8 per cent of the day labourers had some secondary schooling and 14.8 completed secondary schooling. Therefore, training in bricklaying and plumbing had larger shares of those with some secondary school education. Training in tiling, electrical work, cabinet making and carpentry are positively associated with having completed secondary schooling.

These relationships between levels of education and types of training will have to be kept in mind if the type of vocational training is also associated with scarce work that requires higher-level skills and pays higher wages.

Table 5: Cross-tabulation between highest qualification obtained and vocational training/courses completed

Highest qualification level obtained * Vocational training or courses completed cross-tabulation									
		Vocational training or courses completed							
Highest level obtained		Bricklaying	Painter	Plumbing	Tiler	Electrical work	Cabinet maker	Carpenter	Other
No schooling	Count	10	14	7	8	10	4	12	15
	% within highest qualification level obtained	12.5%	17.5%	8.8%	10.0%	12.5%	5.0%	15.0%	18.8%
	% within vocational training or courses completed	5.5%	6.0%	7.7%	5.9%	9.3%	10.8%	7.6%	3.5%
Some secondary schooling	Count	96	87	47	56	41	12	57	212
	% within highest qualification level obtained	15.8%	14.3%	7.7%	9.2%	6.7%	2.0%	9.4%	34.9%
	% within vocational training or courses completed	52.5%	37.3%	51.6%	41.5%	38.3%	32.4%	36.3%	49.5%
Completed secondary schooling	Count	29	38	17	43	34	14	48	101
	% within highest qualification level obtained	9.0%	11.7%	5.2%	13.3%	10.5%	4.3%	14.8%	31.2%
	% within vocational training or courses completed	15.8%	16.3%	18.7%	31.9%	31.8%	37.8%	30.6%	23.6%

	Count	0	2	3	9	12	3	11	15
Post-school qualification	% within highest qualification level obtained	0.0%	3.6%	5.5%	16.4%	21.8%	5.5%	20.0%	27.3%
	% within vocational training or courses completed	0.0%	.9%	3.3%	6.7%	11.2%	8.1%	7.0%	3.5%

Source: Author's own calculations

3.3.3 Skills

There are two approaches to describe the skills of day labourers. The first is to consider the type of work that they do and the skills that this implies.

There is a variety of types of work that day labourers have engaged in that was indicated on the survey on a list of 20 choices and an 'other' option (Krugell & Blaauw, 2014:489), but the most indicated that they have worked as a painter assistant (16.2%), followed by a bricklaying assistant (9.2%), plastering (7.9%), car wash (6.8%), painting (6.6%) and domestic work (6%). The 'other' option was chosen by 15.1 per cent. The smallest numbers of day labourers have worked as a roofing assistant (0.8%), in carpentry (0.8%), digging/shovelling (0.7%) and roofing (0.3%). These results are displayed in Figure 7.

Figure 7: Type of work as a day labourer
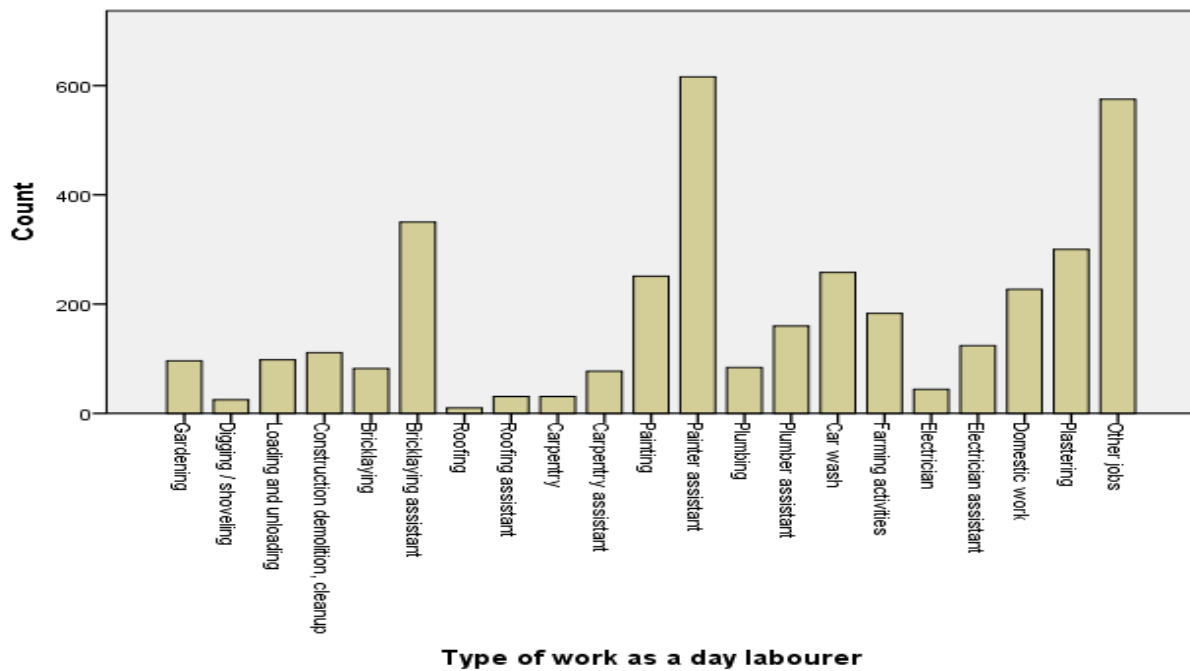
Source: Survey data

The principle component analysis shows that different kinds of jobs are related. Different kinds of jobs are done by different kinds of day labourers. Table 6 below shows the results of the KMO and Bartlett's test.

Table 6: KMO and Bartlett's test

KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy.		.758
Bartlett's test of sphericity	Approx. chi-square	8263.157
	df	210
	Sig.	0.000

Source: Author's own calculations

According to Field (2005:640), a KMO test score value that is between 0.7 and 0.8 indicates that the data is suitable for principle component analysis. Bartlett's test is significant ($p < .05$) (Field, 2005:599).

Table 7 shows the rotated component matrix from the principle component analysis and the groupings of jobs that are typically done by the same day labourers. Varimax rotation was used with Kaiser normalisation. Forty-six per cent of the variance of the different types of jobs is explained by the extracted components.

Table 7: Rotated component matrix

	Component					
	1	2	3	4	5	6
Digging/shovelling	.752 *(0.7)*					
Loading and unloading	.726 *(2.6)*					
Construction demolition, clean-up	.667 *(3.0)*					
Gardening	.626 *(2.6)*					
Bricklaying assistant	.585 *(9.4)*					
Roofing assistant		.653 *(0.8)*				
Carpentry assistant		.603 *(2.1)*				
Roofing		.597 *(0.3)*				
Carpentry		.576 *(0.8)*				
Plumbing assistant		.456 *(4.3)*				
Car wash			.697 *(6.9)*			
Domestic work			.629 *(6.1)*			
Farming activities			.619 *(4.9)*			
Bricklaying				.714		

				(2.2)		
Plastering				.703 *(8.0)*		
Electrician					.748 *(1.2)*	
Electrician assistant					.723 *(3.3)*	
Painting assistant						.570 *(16.5)*
Plumbing						-.481 *(2.2)*
Other jobs						.472 *(15.4)*
Valid percent						

Source: Author's own calculations

The lower-skilled jobs are grouped in component 1 and include digging and shovelling, loading and unloading, construction demolition and clean-up, gardening and bricklaying assistant. These are jobs that are likely to deliver smaller returns on training and experience. Component 3 contains 17.9 per cent of jobs held and is made up of car wash, domestic work and farming activities. The construction-related work is clearly distinguished and grouped by skills required. The bricklaying and plastering workers are grouped together, while the electricians and electrician assistants make up their own group.

The use of principle component analysis to group different types of jobs performed by different day labourers made it possible to use cluster analysis to regroup the labourers by earnings and types of jobs. A simple two-step cluster analysis provided two distinct clusters, one that contains the more unskilled jobs (for example domestic work, gardening, car wash, farming activities, loading and unloading, construction demolition and clean-up), and one that contains the physical labour (digging and shovelling) as well as more skilled construction jobs such as bricklaying, roofing, roofing assistant, carpentry and carpentry assistant, electrician and electrician assistant, painting, plastering and other jobs. Table 8 summarises the number of workers by clustered type of work.

Table 8: Type work by cluster

Type work by cluster		
	Frequency	**Per cent**
Unskilled	2107	55.3
Skilled	1509	39.6
Total	3616	94.9

Source: Author's own calculations

The second approach to describing skills is to relate the type of work to education. Of the day labourers who indicated they had no schooling, most have engaged in farming activities (19.7%), plastering (9.6%) and bricklaying assistance work (9.2%). 10.1 per cent indicated that they have done other jobs. The individuals who have completed secondary schooling mostly spend their time being a painter assistant (15.4%), washing cars (8.1%) and plastering (7.9%). 16.1 per cent indicated they have done other jobs. The day labourers who have completed a post-schooling qualification engaged mostly in painter assistance work (17.4%), painting (14.5%) and electrician assistance (11.6%). 15.9 per cent indicated they have participated in other jobs.

The types of jobs that can be classified as jobs that require more education, such as carpentry assistance work and electrician assistance work, were mostly undertaken by day labourers who had a post-school qualification, with 7.2 per cent engaging in carpentry assistance and 11.6 per cent engaging in electrical assistance. Deriving from these results it is clear that certain kinds and types of jobs are done by certain types and kinds of day labourers. The above findings can be seen in Table 9 below.

*Table 9: Highest qualification level obtained * Type of work as a day labourer cross-tabulation*

Highest qualification level obtained			Type of work as a day labourer								
			Bricklaying assistant	Carpentry assistant	Painting	Painter assistant	Car wash	Farming activities	Electrician assistant	Plastering	Other jobs
No schooling		Count	20	2	19	14	11	43	8	21	22
		% within highest qualification level	9.2%	.9%	8.7%	6.4%	5.0%	19.7%	3.7%	9.6%	10.1%

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	obtained									
	% within type of work as a day labourer	5.7%	2.6%	7.6%	2.3%	4.3%	23.6%	6.5%	7.0%	3.8%
Completed secondary schooling	Count	27	24	35	84	44	7	22	43	88
	% within highest qualification level obtained	4.9%	4.4%	6.4%	15.4%	8.1%	1.3%	4.0%	7.9%	16.1%
	% within type of work as a day labourer	7.8%	31.6%	14.1%	13.7%	17.3%	3.8%	17.7%	14.3%	15.3%
Post-school qualification	Count	2	5	10	12	0	2	8	2	11
	% within highest qualification level obtained	2.9%	7.2%	14.5%	17.4%	0.0%	2.9%	11.6%	2.9%	15.9%
	% within type of work as a day labourer	.6%	6.6%	4.0%	2.0%	0.0%	1.1%	6.5%	.7%	1.9%

Source: Author's own calculations

Finally, the level of education can also be considered together with the variety of jobs that day labourers do. The survey provided 20 possible jobs that they could do and the labourers indicted which one they tend to do. Expressing the jobs that they do as a percentage of the total is a measure of the variety and whether they tend to specialise, or work as a jack of all trades.

Table 10: Variety of jobs per level of education

Highest qualification level obtained	Mean	N	Std. deviation
No schooling	.1624	224	.11578
Some primary schooling	.1731	695	.10817
Completed primary schooling	.1660	345	.09143
Some secondary schooling	.1675	1823	.10710
Completed secondary schooling	.1781	545	.13261
Post-school qualification	.2082	67	.15281

| Total		.1704	3699	.11173

Table 10 shows a comparison of the means of the variety measure per level of education and shows that there are no significant patterns or differences. Higher educated workers do not specialise, i.e. do a smaller variety of jobs.

3.3.4   Experience

51.7 per cent of the day labourers indicated that they have held a full-time job previously and 48.3 per cent indicated that they have not held a full-time job before. More than half of the day labourers have worked as day labourers for less than three years. Twenty-seven per cent have been working as day labourers for one year, 16.3 per cent for two years and 14.1 per cent for three years. 16.3 per cent have worked as day labourers between three and five years, and 20.4 per cent between five and 10 years.

Figure 8: Ever held a full-time job
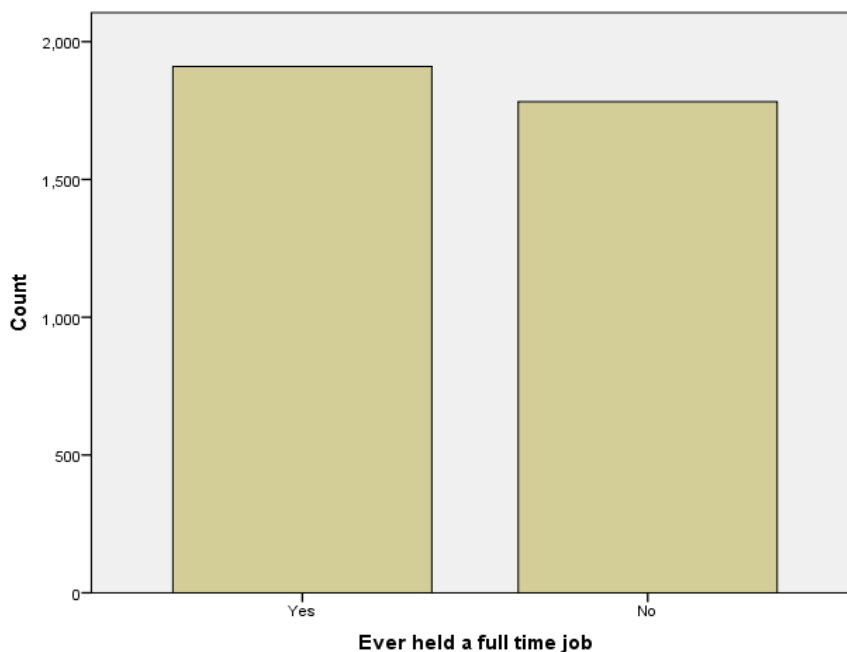
Source: Survey data

When asked the question how often the day labourers are employed by the same employer more than three times, the majority indicated that they are seldom (49.2%) or never (10.8%) employed by the same employer more than three times. Some of the day labourers indicated that they are sometimes (24.1%) employed by the same employers more than three times, while 14.9 per cent indicated that they are often employed by the same employers more than three times.

Figure 9: Frequency of hire by same employer more than three times
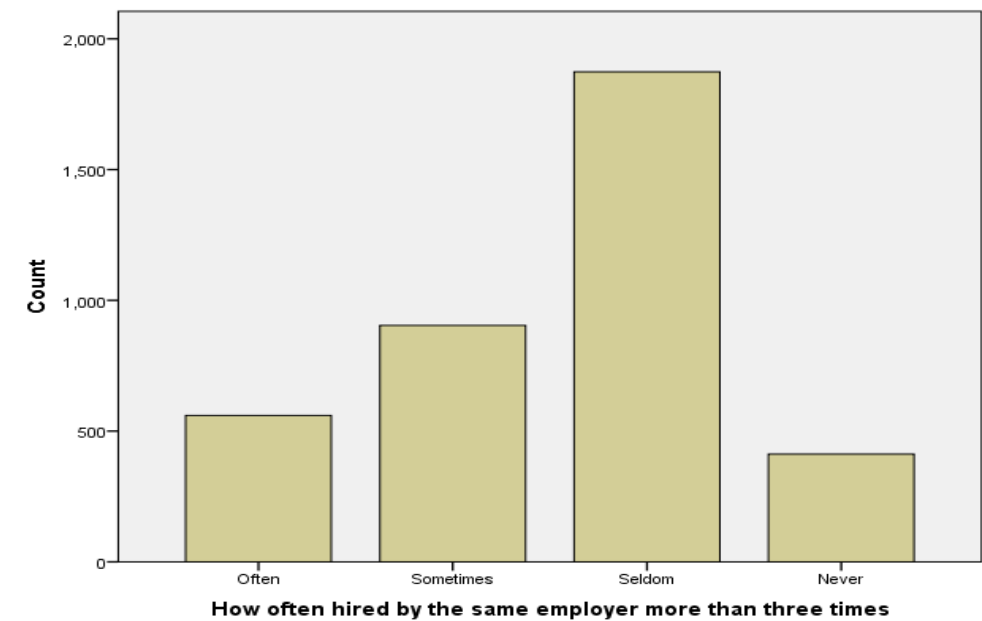
Source: Survey data

3.3.5 Wages

When comparing the average wage earned in a good week (R385.81) with the average wage earned in a bad week (R163.09), the difference is noticeable. The highest earning recorded in a good week was R2 110.

Table 11: Mean of earnings in a good week and earnings in a bad week

	Earnings in a good week in rands	Earnings in a bad week in rands

Mean	385.81	163.09
N	3639	3368
Std. deviation	304.271	152.609

Source: Survey data

3.4 Summary and conclusions

An empirical analysis of the data revealed that the sample data consisted mainly of black (92%) males (96.2%) aged between 21 and 35 years (62.9%). The majority of the day labourers were gathered in Gauteng (25.8%), the Western Cape (16.1%) and KwaZulu-Natal (14.2%). The language mainly spoken by the day labourers captured in the sample data is isiXhosa (28%), while a low 2.7 per cent indicated that they spoke English.

It was also revealed that the majority of day labourers had low levels of education, with 5.9 per cent indicating they have had no schooling. Only 9.2 per cent completed primary schooling and only 14.8 per cent finished secondary school. It was evident that the younger day labourers achieved higher levels of education. The day labourers over the age of 40 had very little formal education.

Training as a painter (6.2%), bricklayer (4.8%) and carpenter (4.1%) appeared to be the most common training among the day labourers. Again, it became evident that levels of training were low among the day labourers, with approximately 64 per cent of the day labourers indicating that they have not received any kind of vocational training. Patterns were identified where training for certain areas were more likely to occur among day labourers, with different levels of education, for example training in tiling, electrical work, cabinet making and carpentry were more common among day labourers who have completed secondary schooling.

In order to consider the skills that day labourers have, the data captured the type of work that day labourers are involved in, which would then imply the skill set. Most of the day labourers indicated that they have worked as a painter assistant (16.2%), followed by a bricklaying assistant (9.2%), plastering (7.9%), car wash (6.8%), painting (6.6%) and domestic work (6%). The rotated component matrix, principle component analysis and two-step cluster made it possible to group jobs that are typically performed by the same day labourers and to identify two

distinct clusters, one for more skilled labour and one for more unskilled labour. It was discovered that jobs that can be classified as jobs that require more education were mostly undertaken by day labourers who had a post-school qualifications. The conclusion is therefore that certain kinds and types of jobs are done by certain types and kinds of day labourers.

Levels of experience were measured by whether a day labourer has held a full-time job before, how long they have worked as a day labourer and whether they are often employed by the same employer more than three times. More than half (51.7%) indicated that they have held a full-time job in the past, and approximately 57.4 per cent have been a day labourer for three years or less. The majority of day labourers (60%) are not employed by the same employer more than three times.

The next chapter will focus specifically on further investigating the relationship between wages and potential determinants of wages.

Chapter 4: Empirical analysis

This study investigates the determinants of wages for day labourers and draws specifically on the human capital theory to determine whether the predictions of the theory hold. The human capital theory argues that if an individual is trained, educated and skilled, it would in return generate a profit (Kiker, 1966). There are costs involved in training, education and skills acquiring and it should therefore be seen as an investment that would lead to growth and development (Reder, 1967). This chapter will investigate the relationship between a number of variables and wages to determine whether the predictions of the human capital theory hold for day labourers in South Africa. These predictions include that there exists a positive relationship between wages and education, between wages and training, between wages and skills and finally between wages and experience.

The empirical analysis was performed using an ordinary least squares regression that examined the dependant variable of day labourers' *earnings in a good week* as a function of a number of other variables. The *earnings in a good week* variable was measured as the log transformation of earnings per week. The other independent variables included *age*, *education*, *years worked as a day labourer*, *frequency of hire*, *type of work*, *variety of day labour jobs* and whether the respondents have *ever held a full-time job*.

The models of this study show a resemblance to the Mincerian wage equation, which, by definition, is explained as a model "that uses the main components of accumulated human capital as determinants of the wages earned by individuals in the labour market" (Bhatti, 2013:25). The first model contains the age dummy variables and the second model estimates *earnings in a good week* as a function of age, education and experience.

The variables *age, education, and frequency of hire* are dummy variables with the comparator categories being 'age under 20 years', 'no schooling' and 'never hired by the same employer more than three times', respectively. Work experience was measured by the number of years a respondent worked as a day labourer and is captured by the variable *years worked as a day labourer.* The *type work by cluster* variable differentiates between two clusters that consist of more skilled jobs versus less skilled jobs. The *variety of day labourer jobs* variable consists of the selections from a list of 20 different choices of types of work that the day labourers have

engaged in, for example gardening, bricklaying, carpentry, painting, etc. *Ever held a full-time job* variable is also a dummy variable that takes on a value of either 1 or 0 for 'yes' or 'no', respectively.

The following table shows the average earnings per province in a good week. The average wage in a good week appears to be the highest in the Western Cape (R572.96), with KwaZulu-Natal (R415.85) ranking second highest, followed by Gauteng (R413.38). Limpopo came in with the lowest average wage earned in a good week with only R137.18

It is interesting to note that the average wage earned in a good week is different between the provinces; however, these differences are not statistically significant and were therefore not included in the regression model.

Table 12: Average earnings in a good week per province

Province	Mean	N	Std. Deviation
Gauteng	413.38	945	213.524
Mpumalanga	366.60	263	243.781
KwaZulu-Natal	415.85	512	394.687
Eastern Cape	346.19	416	206.592
Limpopo	137.18	117	85.869
North West	318.48	237	258.897
Free State	214.34	296	128.286
Northern Cape	250.28	255	184.876
Western Cape	572.96	593	423.349
Total	**385.95**	**3634**	**304.399**

Source: Survey data

4.1   Literature review

Chapter 2 focused on research that was done on the determinants of wages. There are some theories and models that can be drawn upon to explain determinants of wages, such as the human capital theory, the insider-outsider model and the efficiency wage model. This study mainly focused on the human capital theory and aims to test whether the predictions of the human capital theory hold for day labourers in South Africa. The human capital theory was

developed and introduced by the work of Sir William Petty (Kiker, 1966) and has shaped the thoughts of many researchers thereafter. Much focus was placed on how human capital can influence and determine wages. Becker *et al.* (1990) explained that better human capital leads to increased wages, which, in return, contributes to economic growth and development.

The main focus was placed on education, training, skills and experience as elements of human capital. Education was found to have an impact on determining wages and men enjoyed better returns on primary education, while women enjoyed better returns on secondary education (Bedi & Born, 1995; Psacharopoulos & Patrinos, 2002; Li, 2003). Evidence from the literature supports the fact that there is a relationship between training and wages, but in order to determine whether it is positive or negative, one first has to distinguish between the two types of effects that training can have on wages. The first is the impact of training on starting wages and the second is the impact of training on individual wage growth. The human capital theory predicts a negative relationship between training and starting wages, and this was confirmed by Veum (1999) and Sicilian (2001), who argued that workers pay for their preliminary training by accepting wages that are lower than they could have earned at other employment. Veum (1999) also provided evidence that the type of training affects starting wages and that certain types of training negatively affect starting wages for men, while offsite, company-paid training was transferrable for females only. Individual wage growth was found to be positively influenced by training and was confirmed in the research done by both Bartel (1995) and Veum (1995), who found that training leads to faster individual wage growth. This is, however, also dependent on whether the training received was general or specific, and whether it was in the private or public sector. This importance of distinguishing between the types was explained by Regnér (2002).

From the literature review in Chapter 2 it is clear that there also exists a relationship between skills and wages. Much research has been done on the importance of soft skills and cognitive ability. Fletcher (2013) found that employers are willing to pay more for employees with the right set of soft skills. There is also evidence that cognitive ability is positively related to wages (Murnane *et al.*, 1995) and reference was made to using locus of control as a basis to explain an individual's cognitive ability (Rotter, 1966). According to Flossman *et al.* (2007), an individual with external locus of control has lower levels of cognitive ability, while an individual with an internal locus of control has a higher level of cognitive ability. Wages are found to be lower in

roles that require lower levels of skills and cognitive ability, for example roles that utilise physical skills (Maxwell, 2008).

The impact of experience on wages was tested in numerous studies and the conclusion was that there exists a positive relationship between wages and experience. For every additional year of experience, an individual can enjoy up to 3.2 per cent return in higher wages (Bedi & Born, 1995). For skilled workers, the returns on experience start off low and reach its highest level after two years of employment, where after it continues to grow; however, for unskilled workers, returns on experience decline after two years of employment (Dustmann & Meghir, 2005).

Determinants of wages for the vulnerable groups such as day labourers, seasonal workers, unskilled workers and immigrants are mainly influenced by external factors and conditions that they have little or no control over. Local labour market conditions seem to be one of the major influencers of wages in both America and England (Gunter, 1986; Burnette, 2004). A study done on the impact of minimum wages on immigrants' wages in the United States yielded an interesting conclusion that raising the minimum wage by 10 per cent can result in a 2.2 per cent increase in wages for males and 2.4 per cent for females (Orrenius & Zavodny, 2008). There was also evidence that immigrants rely on social capital to settle into a new country and that the social capital positively affects wages (Aguilera & Massey, 2003). Further research yielded evidence that language ability (Aguilera & Massey, 2003), sector activity, legal status, area of origin, length of stay, working conditions, gender and work effort all have an impact on wages for these vulnerable groups (Baldacci *et al.*,1999). Human capital variables such as experience, training and education all have an influence on wages for vulnerable groups (Aguilera & Massey, 2003; Baldacci *et al.*, 1999).

The above findings have mainly focused on the international labour market, but for the purpose of this study, the condition of the South African labour market is also important. The South African labour market is known for its high unemployment rate and has been described as being segmented between formal and informal and rural and urban contrasts (Fourie, 2011). There exists a typical wage curve in the South African labour market, which has been found to play an important part in the determination of wages along with union negotiations (Kingdon & Knight, 1999). Kingdon and Knight (1999) have done extensive research on which definition of

unemployment, broad or narrow, is best suitable to explain unemployment in South Africa and they are in favour of the use of the broad definition. Statistics South Africa has accepted the narrow definition as the official measurement to capture current unemployment, which indirectly suggests that they consider unemployment in South Africa to be mainly voluntary (Kingdon & Knight, 2001a). This was found to not necessarily be the case, but rather that the unemployed do not seek employment or enter into the informal sector because they are discouraged from doing so (Kingdon & Knight, 2000).

Finally, a number of other variables have also been considered as determinants of wages, such as location (Blaauw *et al.*, 2006) supply and demand (Blaauw *et al.*, 2012) and the uneven distribution of socio-economic development (Harmse *et al.*, 2009). When Blaauw *et al.* (2012) investigated the determinants of wages for Zimbabwean day labourers looking for employment in South Africa, they found that age, frequency of hire by same employer, language fluency, education and training all influenced wages for these day labourers.

4.2 Expected outcomes

A study on Zimbabwean day labourers in South Africa (Blaauw *et al.*, 2012) has indicated that age, frequency of hire by same employer and education all have an influence on wages of day labourers. This study will examine the relationship between earnings and age, earnings and education, earnings and experience, and earnings and frequency of hire, type and variety of work for all day labourers in South Africa. After considering the findings from the empirical analysis and literature review, the prediction is that there exists a positive relationship between wages and education, training, experience and skills. It is therefore expected that the results from this study will correspond with findings from existing literature and will show that there exists a positive relationship between earnings and most of the variables.

4.3 Results

Model 1 contains the age dummy variables as a function of earnings. The beta coefficients indicate that, in comparison with the day labourers younger than 20 years of age, earnings in a good week increase with age. For the day labourers aged between 36 and 55, the beta coefficients are smaller, but remain positive, suggesting that they still earn more than the day

labourers under the age of 20. The day labourers falling in the age group between 56 and 60 earn less in a good week in comparison with the under 20-year olds, as is reflected by the negative beta coefficient of -0.024. Earnings in a good week compared to day labourers under 20 improve again for day labourers over the age of 60 when the beta coefficient becomes a positive 0.080. The adjusted R^2 for both the first and second model is a low 0.009 and 0.068, suggesting that the models do not predict the determinants of wages for day labourers very well; however, the F-statistics indicate that both model 1 and model 2 are significant at the 5% level.

For model 2, the variables representing education and work experience are added. The positive relationship between earnings and age remain, and when education is added, the negative relationship between earnings and day labourers between the ages of 56 and 60 becomes positive, although it is not significant. The education variables are compared to having received no schooling and in comparison with this it appears that both having some primary schooling and having some secondary schooling are negatively associated with earnings. Having completed primary schooling is positively associated with earnings, but it is insignificant, while having completed secondary schooling is also positively associated with earnings and is significant. It appears that earnings increase with an increase in schooling level, and having a post-school qualification will result in the highest return in terms of earnings.

Work experience that is represented by the *years worked as a day labourer* variable is negatively associated with earnings, which is in line with the findings by Blaauw *et al.* (2012), who found that the more experienced a worker is, the less income he receives. They have explained this by arguing that if a worker has a number of years' experience in, for example, a role that consists of administrative duties, there should be no reason why they should earn more in a role that consists of more physical work.

Table 13: Regression results: Explaining earnings in a good week

Dependent variable: Log of earnings in a good week	Model 1		Model 2		Model 3		Model 4
(Constant)	2.367		2.389		2.403		2.293
	(.035)		(.040)		(.038)		(.044)
Age dummy 21-25	.091		.059		.065		.054
	(.037)*		(.036)		(.032)*		(.031)

Age dummy 26-30	.123 (.037)*	.105 (.036)*	.113 (.032)*	.100 (.031)*
Age dummy 31-35	.137 (.037)*	.137 (.036)*	.130 (.032)*	.117 (.032)*
Age dummy 36-40	.107 (.038)*	.127 (.037)*	.107 (.033)*	.096 (.033)*
Age dummy 41-45	.088 (.039)*	.113 (.038)*	.094 (.034)*	.086 (.034)*
Age dummy 46-50	.028 (.041)	.068 (.041)	.075 (.037)*	.071 (.036)
Age dummy 51-55	.085 (.047)	.121 (.047)*	.097 (.042)*	.092 (.041)*
Age dummy 56-60	-.024 (.057)	.030 (.057)	.044 (.050)	.047 (.050)
Age dummy over 60	.080 (.101)	.109 (.098)	.063 (.088)	.044 (.087)
Education: Some primary schooling		-.102 (.025)*	-.069 (.023)*	-.067 (.022)*
Education: Completed primary schooling		.019 (.029)	.032 (.026)	.029 (.025)
Education: Some secondary schooling		-.041 (.024)	-.006 (.021)	-.010 (.021)
Education: Completed secondary schooling		.158 (.027)*	.149 (.024)*	.133 (.024)*
Education: Post-school qualification		.170 (.046)*	.199 (.041)*	.178 (.040)*
Years worked as a day labourer		-.002 (.001)	-.001 (.001)	-.001 (.001)
Frequency of hire dummy: Often			.197 (.020)*	.173 (.020)*
Frequency of hire dummy: Sometimes			.093 (.019)*	.074 (.018)*
Frequency of hire dummy: Seldom			-.172 (.017)*	-.178 (.017)*

Type work: Skilled cluster=1				.086 (.010)*
Variety of day labour jobs				.290 (.044)*
Ever held a full time job =1				.033 (.011)*
Adjusted R-squared	.009	.068	.261	.284
F-stat	4.407	17.772	68.491	66.168
n	3447	3447	3447	3447
* = significant at the 5% level				

Source: OLS regression analysis

Model 3 is an extension of model 2 with the inclusion of the *frequency of hire dummy* variables. These variables aim to capture how frequently a day labourer is hired by the same employer for more than three days. The findings are in line with a study by Blaauw *et al.* (2012), who found that day labourers who are hired more often by the same employer earn better wages. Table 13 indicates that, in comparison with those who are never hired by the same employer for more than three days, those day labourers who are sometimes or often hired by the same employer for more than three days earn better wages. Conversely, the results show that there exists a negative relationship between earnings and being seldom hired by the same employer for more than three days, suggesting that these day labourers earn less in comparison with day labourers who are never hired by the same employer more than three days.

Model 4 is a further extension of model 3 and is the most complete model in this study. In addition to the variables in model 3, model 4 also includes the *type of work*, *variety of day labour jobs* and whether the respondents have *ever held a full-time job*. From the results, it is evident that work in the skilled cluster is positively and significantly associated with earnings. There also exists a positive relationship between earnings and doing a variety of jobs. Having held a full-time job at some point in time is also positively associated with earnings.

Out of the four models, model 4 mostly explains the variance of earnings in a good week (28%), while model 3 only explains approximately 26 per cent of the variance. The F-statistics indicate that both model 3 and model 4 are significant at the 5% level.

4.4   Summary

In this chapter, an empirical analysis was performed using an ordinary least squares regression model to determine the influence of a number of variables on *earnings in a good week* for day labourers in South Africa. The independent variables included *age*, *education*, *years worked as a day labourer*, *frequency of hire*, *type of work*, *variety of day labour jobs* and whether the respondents have *ever held a full-time job.* It was found that, in comparison with day labourers under the age of 20, earnings increase as age increases. This relationship remained the same after the education variables were added. In comparison with day labourers who have received no education, education appeared to be positively correlated with earnings and the day labourers who have completed a post-school qualification earn the most. Models 3 and 4 were a further extension of models 1 and 2 and included the variables that represent experience and skills. It was found that, in comparison with day labourers who are never hired by the same employer more than three times, those day labourers who are hired sometime or often by the same employers for more than three days earn more. Model 4 was the most complete model of all and the results showed that the skilled cluster is positively and significantly associated with earnings. There also exists a positive relationship between earnings and doing a variety of jobs. Having held a full-time job at some point in time is also positively associated with earnings.

Chapter 5 Summary, conclusions, recommendations

5.1   Summary

This dissertation examined the determinants of wages of day labourers in South Africa, specifically drawing on the human capital theory to determine whether it provides an explanation of the earnings for workers who have a low level of education and training. The human capital theory argues that education, training, skills and experience are important predictors of wages. The literature review focused on previous research that was done on international labour markets and found that education was positively related to wages for both males and females. It was also found that training had a negative impact on starting wages, but a positive impact on future wage growth, while experience was positively related to wages.   Labour market competition, institutional wage floors, skills and ability, bargaining powers, union negotiations, policy interventions, as well as cognitive and soft skills were all found to influence how wages are determined.

The literature review also investigated research that was previously done on vulnerable groups similar to day labourers, for example seasonal workers, unskilled workers and immigrants in international labour markets. It was found that local labour market conditions played a major role in the determination of wages for these groups. Immigrants were found to rely on kinship, trust and friendship to find employment when they first arrive in a foreign country, an occurrence which is referred to as social capital accumulation and was found to have direct and indirect effect on wages. Human capital was also found to be an important variable to determine wages for immigrants. Despite the impact of the mentioned variables, evident from the research was that vulnerable groups such as day labourers, seasonal workers and immigrants are mainly exposed to external determinants of wages, which they have little or no control over.

The South African labour market was described as being segmented and having formal-informal and rural-urban dualisms. Research supports that there exists a typical wage curve in the South African labour market and that wages are significantly influenced by union negotiations. An extensive explanation was given on the use of the broad definition of unemployment instead of the narrow definition to truly capture the extent of the current unemployment rate in South Africa. Unemployment was found to be involuntary as a result of restrictions that deter efforts

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from the unemployed to enter employment. When comparing the literature from previous research on the determinants of wages for the South African labour market to the determinants of wages in the international market, it was found to be very similar. Some of the determinants of wages include labour supply and demand, negotiations between employer and employee, the uneven distribution of socio-economic development, location, age, education and training.

The data was collected in 2007 and 2008 through a survey that was conducted among day labourers in South Africa (as presented by Blaauw (2010) and cited in Krugell and Blaauw, 2014:488). A limitation of the study is that only a single cross-section of data is available and unlike in the case of panel data models, it is therefore not possible to control for unobserved heterogeneity. The data consisted mainly of black (92%) males (96.2%) aged between 21 and 35 years (62.9%). The majority of day labourers were gathered in Gauteng (25.8%), spoke isiXhosa (28%) and had very low levels of education, training, skills and experience. Due to the lack of

Results from the regression models show that earnings increase with age. Education is positively related to earnings and increase with an increase in schooling level. Having a post-school qualification yields the highest return in earnings. Work experience indicated a negative relationship with earnings, while having held a full-time job at some point in time is positively associated with earnings. Labourers who are often hired by the same employer for more than three days at a time earn higher wages than those who are not. A small percentage of day labourers indicated that they completed a form of training. A pattern was evident of day labourers with higher levels of education engaging in training that is associated with scarce work that requires higher levels of skills and that is more likely to pay higher wages. Labourers who were competent in the jobs that were classified under the skilled cluster earn more than those who are not. Doing a variety of jobs was positively associated with earnings, suggesting that workers who have more skills and are likely to diversify are better off than workers who do not and rather specialise on one skill/area.

5.2 Conclusions and recommendations

The results from this study suggest that most of the predictions of the human capital theory hold. This is relevant for policymakers as it suggests that investment in education, training and skills development is of utmost importance.

Education is positively correlated with higher wages, yet the majority of day labourers have very low levels of education. It is therefore important that policymakers take into account the importance of educating the nation. The South African government is on the right track with existing support for education and training and it is clear that this policy forms the basis of the government's approach towards economic growth. Further research could be done to determine whether the allowed budget for the 2014/15 financial year of R254 billion will be sufficient to make a significant impact in the long run. One should ask how many individuals will have access to the education that this funding provides and will be able to benefit from it enough to contribute to sustainable economic growth.

Although education is the fundamental requirement for economic improvement, it alone is not enough to improve the lives of day labourers in South Africa. Policy reform is required to create opportunities for day labourers, where they can gain training and improve their skills. From the findings in this study, it is evident that both are positively related to wages for day labourers. Work in the skilled cluster, which is directly associated with the type of skills that require more education and training, is positively associated with wages. Further research would be beneficial to determine how policy can address and create low cost, credible opportunities where day labourers can gain more skills and perhaps a trade qualification. This will enable them to move into the informal sector and work themselves out of poverty. Mention must be made of the fact that there are also other deterring factors to entering the informal sector. This is a matter that can also be addressed through further research.

A final suggestion is that the research from this study is further extended to investigate the harsh conditions that day labourers have to endure, and how these conditions affect wages for day labourers. These harsh conditions can include, but is not limited to, situations where day labourers receive less than a law enforceable minimum wage, situations where workers are not allowed a break after an extended amount of hours worked. This can also include situations

where workers have to provide labour in what can be considered as dangerous areas, or working in conditions where there is no minimum standard of health and safety compliance. Further research might be able to determine whether day labourers receive higher or lower wages on jobs where these conditions have to be endured, or whether these conditions are omissible with regards to wage determination.   This is of particular interest due to the increased influx of immigrants from neighbouring African countries, many of whom do not have the required legal immigration documentation.

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