Job Search Strategies and Social Networks: Evidence from the Khayelitsha/Mitchell's Plain Survey

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Thesis submitted to the Department of Economics at the University of Cape Town in partial fulfilment of the requirements for the award of the degree of

Master of Arts (Economics)

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Faculty of the Humanities
University of Cape Town
December 2004

Declaration

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

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Abstract

The thesis investigates factors which determine the choice of the search method used by the unemployed in looking for jobs. In line with the existing literature on job search in South Africa we identify that job search is constrained by the low probability of finding a job and the cost of job search. Especially in the context of mass unemployment, job seekers have to evaluate the benefits and costs of job search. It has been suggested that as a response to adverse conditions of the labour market, the use of social networks is an important search strategy in getting access to the labour market. This thesis therefore pays especially attention to social networks. We develop a more formal search model to establish how certain factors can either constrain or facilitate the search process. We argue that search strategy is determined by the probability of locating a job, the probability of getting a job, the financial cost of the search method as well as the opportunity cost of pursuing the search method. This helps us to identify individual, household and labour market characteristics which affect the choice of the search method. Using the first wave of the Khayelitsha/Mitchell's Plain Survey, our findings support the argument that the choice of the search strategy is a compromise between what the job searchers perceive to be the most effective search strategy and what is feasible for them. Especially job searchers which rely exclusively on active or passive search strategies have indicated that they perceive other search methods as more effective, which shows that they are constrained in the pursuit of such methods. The findings of the descriptive and econometric analysis show that the use of social networks is strongly dependent on the number of contacts the searcher has got in the labour market. This confirms the claim that the usefulness of social networks is dependent on the position of the searcher in network structures. The closer the job searcher is to the recruitment network of the labour market the more effective is the pursuit of passive search. The main constraint to active search is the lack of time available for search. When job-seekers are not time constrained and also reported to have contacts in the labour market they immediately pursue a mixed search strategy of active and passive methods. Surprisingly, personal characteristics of the searchers explain very little of the different search strategy choices.

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1. Introduction

A recent study by the Development Policy Research Unit (DPRU) (2004) shows that by 2002 South Africa's unemployment problem had increased in its severity to a strict unemployment rate of higher than 30% and a broad unemployment rate of close to 42%. A constant question that unemployed job-seekers have to ask themselves is "how do I get a job?" High unemployment rates force unemployed workers to carefully consider the advantages and disadvantages of job search itself and the search method they pursue.

The Khayelitsha/Mitchell's Plain Survey (2000) shows that close to two thirds of the currently employed in this area found their jobs through social networks. Thus, they found employment because friends or relatives told them about a job or even organised a job for them at the contact's workplace. The remaining one third got employed through more formal channels like newspaper advertisements or through other active methods like contacting employers directly. The unemployed job-seekers in Khayelitsha and Mitchell's Plain exhibited search behaviour which seemed to be consistent with the way in which the currently employed found employment. Slightly more than one third of the job-seekers used active search methods exclusively, while the remaining searchers either exclusively relied on social networks or pursued a mixed strategy of active methods and social networks.

The question is what determines the choice of the search method of the unemployed? Is it solely influenced by the success of other employed people or is the choice of the search method determined by a combination of factors? It is argued in this paper that the unemployed pursue search methods that are a compromise between what they perceive to be an effective way for them to search for a job and what is feasible for them. Individual and household characteristics as well as labour market conditions either facilitate or constrain the pursuit of certain search methods.

The aim of this thesis is therefore twofold. Firstly, we try to add to the conceptual understanding of job search by developing a search model that explains the various factors influencing the decision of the unemployed to look for a job with a particular search method. Secondly, using the KMP survey, we investigate factors which determine the search behaviour of unemployed residents in the Mitchell's Plain magistrate. Given the significance of social networks in determining labour market outcomes, the emphasis of the analysis lies on social networks.

The thesis is structured in the following way. The second chapter provides an overview of the existing literature on job search in South Africa. The ongoing debate around the most appropriate definition of unemployment in the South African context highlights the need for further investigation into the search behaviour of the unemployed. It is generally agreed that obstacles in getting access to relevant labour market information determine the search behaviour of the unemployed. High search costs and a low probability of finding a job reduce search activity. The importance of social networks as a possible response to these labour market conditions has been widely identified.

The third chapter establishes the theoretical underpinnings of job search. Job search and the choice of the search method are dependent on the probability of finding a job and the costs of search. We show that the probability of finding a job is strongly influenced by having access to relevant market information (the probability of locating a job) and the ability to communicate private information to the employer (the probability of getting the job that has been found). Hence, the more and the better the information transmission between the employer and the job-seeker, the higher is the probability of employment and the more effective is the search method. At the same time various constraints based on the job searcher's individual characteristics as well as his or her household characteristics might hinder the job-seeker in pursuing the search method which he or she perceives to be most effective. Thus, the choice of the search method is a compromise between what is perceived to be most effective and what is feasible.

The fourth chapter develops an argument which shows that two types of networks seem to constitute the search process in the labour market. From the demand side, employers are using 'recruitment networks' to fill open vacancies whereby they rely on their existing workforce to find and recommend applicants, while on the supply side the unemployed job-seekers might choose networks as their main search method to look for available jobs. Although these two networks eventually overlap, members of each network can have different characteristics, which can determine the outcome of the search process for the searching individual. It is argued here that the position of the searching individual in the structure of the two social networks will determine the ability to take advantage of the networks and therefore the success of getting employed.

Chapter 5 introduces the Khayelitsha/Mitchell's Plain survey. We use the survey to analyse factors which constrain or facilitate the pursuit of certain search strategies. The final chapter concludes the thesis.

2. Unemployment and Job Search in South Africa

There has been extensive debate in South Africa about which definition of the unemployment rate most appropriately represents the nature of unemployment in South Africa (Kingdon and Knight 2000, Dinkelman and Pirouz 2001, Nattrass 2002). Scholars mainly disagree about which the factors influence the level of participation of jobless people in the labour market.

2.1 The Definition of Unemployment

The demand for labour constitutes the amount of workers required by producers to generate an output of goods and services. The supply of labour is seen as the number of people who are willing and able to provide their services to those producers and therefore are actively "engage[d] in or seeking paid employment" (Sapsford & Tzannatos, 1993: 7). The labour force is then derived from the sum of the employed workers and those seeking work. The jobless people who are seeking work are defined as unemployed. As the unemployment rate is the percentage of jobless people seeking work relative to the entire labour force, the definition of unemployment directly affects the unemployment rate. The more jobless people are excluded from the unemployment definition, the lower is the unemployment rate and vice versa. The question therefore is what job seeking activity indicates the participation of a jobless person in the labour market, i.e. when does an unemployed individual indicate willingness to be available for work?

To investigate the level of participation, surveys conventionally are based on the 'activity principle' meaning "a person's labour market status is determined by what he or she was actually doing during a specified (short) period prior to the survey interview" (Nattrass, 2002: 3). Based on their activity, people are then categorised as employed, unemployed or non-participating.

Unemployment refers to people who are not working for some kind of financial compensation but are: a) willing to work; b) available for work; and c) actively searching for work. (Statistics SA, 2002)

The fulfilment of conditions a, b and c defines a 'narrow' or 'strict' definition of unemployment where the jobless person not only has to be willing and available for work but must also have been actively searching for a job in a given time period.[1] A 'broad' or 'expanded' definition of unemployment requires the fulfilment of conditions a and b, but does not require condition c. Hence, to be categorized as broadly unemployed a jobless person only has to be willing and available for work without having done any active search for a job in the reference period prior to the survey.

In South Africa the debate around the most appropriate definition of unemployment was sparked with the decision of Statistics South Africa (StatsSA) in 1998 to adopt the narrow definition as the 'official' definition of unemployment. This represented a move away from StatsSA's decision of 1993, when it opted for the use of the broad

[1] Normally, this time period is between 1 to 4 weeks prior to the survey

definition of unemployment. StatsSA justified its decision by referring to higher international compatibility of the narrow definition, which apparently is used by the majority of all countries. Furthermore, the narrow definition is considered to be more accurate in following the unemployment trend as the broad definition would bring "more subjectivity into the measure of the unemployment rate, and instability in tracking trends, as it is more difficult in establishing what constitutes 'wanting' a job than to say whether someone has engaged in definite actions to find one" (Statistics SA, 1998: 63).

This means that active job search itself is seen as the only indicator of willingness. It therefore divides jobless people on the one side into narrowly defined unemployed who indicate their willingness to participate in the labour market through search and on the other side into non-participants who might want work but seem to do nothing to find a job. Participation of the unemployed in the labour market is therefore simply based on the dichotomy between searching and non-searching.

Table 1: Unemployment rates in South Africa, 1994-2002 (%)

Year	Source	Broad Definition	Narrow Definition	Difference
1994	OHS	31.5	20.0	11.5
1995	OHS	29.2	16.9	12.3
1996	OHS	35.6	21.0	14.6
1997	OHS	37.6	22.9	14.7
1998	OHS	38.6	25.2	13.4
1999	OHS	36.2	23.3	12.9
2000	LFS	35.9	25.8	10.1
2001	LFS	41.6	29.5	12.1
2002	LFS	41.8	30.5	11.3

Source: October Household Survey (OHS) figures from StatsSA, Labour Force Survey (LFS September Survey) calculations from DPRU (2004)

Table 1 shows the narrow and broad unemployment rate of South Africa since the first democratic elections. The most striking insight we can draw from the table is the magnitude of the unemployment problem. While only every fifth worker of the strictly defined labour force was considered unemployed in 1994, by 2002 this had increased to almost every third worker of the strict labour force being unemployed. In terms of the broadly unemployed, the broad unemployment rate has increased from 30.5% to more than 40% of the labour force being unemployed but actually willing to work.

Two questions arise out of this picture. Firstly, why is the unemployment rate so high? Secondly, given the significant difference between the narrow and the broad rate of unemployment in South Africa why are there so many jobless people who indicate that they are willing to work and that they are available for work but do not engage in active search for a job?

Although the first question is not the focus of this thesis, it needs to be addressed briefly for an understanding of the implications of the second question. As Wittenberg puts it, "the simplest labour market models would assume that [South Africa's high unemployment rate] is purely a pricing issue: that either reservation wages of the unemployed are too high (in which case the unemployment is of the voluntary type), or that the wage is not at the market clearing level, due to various distortions in the South African economy"(Wittenberg, 2001: 1).

But Walker (2003) disagrees with the voluntary unemployment argument by showing that the reservation wages of the unemployed are below the predicted wages of the employed with similar characteristics. Using data of the 2000 Khayelitsha/Mitchell's Plain Survey, his findings indicate that the labour market status, i.e. being employed or unemployed, is not determined by the reservation wage but rather that the reservation wage is a function of the labour market status. He concludes that "there is no evidence that the unemployed are out of work due to excessive wage aspirations, in relation to the wage they could command in employment". Moreover, the reservation wage falls continuously with the length of unemployment indicating that "people are responding rationally to the adverse labour market conditions"(Ibid: 52-53).

If the reservation wage analysis is limited in explaining South Africa's unemployment problem, what factors determine the level of participation of the South African unemployed to engage in the labour market? Walker suggests that "in a country where unemployment is low, and where there are a sufficient number of job vacancies, knowing the determinants of reservation wages may be useful for explaining whether relatively high reservation wages are reducing the supply of labour. However, in South Africa the problem in the labour market is rather inadequate demand for unskilled labour"(Ibid: 52). This is supported by the study of the DPRU (2004) which claims that the high unemployment rate is due to "slow employment growth relative to labour force growth"(DPRU, 2004: 3).

2.2 Unemployment Search in South Africa

Considering that the reservation wage analysis fails to account for the high unemployment rate with market wages exceeding reservation wages, one has to rethink the factors that influence job search. Various studies in South Africa have started to shed light on the search behaviour of the unemployed and have thereby contributed greatly to the unemployment definition debate. These studies have been guided by the idea that job search is not frictionless and costless and that individuals do not operate purely on market signals but rather through non-market interactions. (Wittenberg, 2001). The decision therefore to engage in search is dependent on the probability of finding a job and the cost of search.

The majority of the unemployed show the following characteristics. Unemployment runs mainly along racial, gender, spatial, age and educational lines. More Africans than any other racial group are unemployed, more females than men, more younger people than older, more rural than urban living, and finally, the unemployed are on average less educated than the employed. In terms of the non-searching,

approximately 62% are females and over 90% are African. Only one third of them are older than 35 years of age and although the majority of the non-searching have poor educational background, only 7% had no education while more than 60% had more than primary education. Finally, the majority of the non-searching unemployed live in rural households. (DPRU, 2004). Given these characteristics, what factors influence the search behaviour of the unemployed?

Kingdon and Knight (2000) analyse whether the non-searching unemployed are distinctly different from the searching unemployed. As most non searching unemployed live in low income households they argue that non search is not the outcome of "high income households supporting their poorer members according to need [which creates an] incentive to remain needy and a disincentive to do job-search"(Kingdon and Knight, 2000:1). Non-search is rather the outcome of discouragement as "job-search is hampered by impediments such as poverty, cost of search, long duration of unemployment, and adverse local economic conditions" (Ibid: 1-2).

Furthermore, recruitment methods of employers and the consequent job search methods adopted by the unemployed might explain the lack of active search. "A good deal of unskilled labour recruitment in South Africa has traditionally been via employers arriving in the rural areas by truck to recruit people on the spot. The main way for Africans living in the former 'homeland' areas to secure employment is to wait, either for word of a job from an employed relative or friend living in the non-homeland parts or for recruiters to visit. Accordingly, job search may be passive rather than active" (Ibid:5).

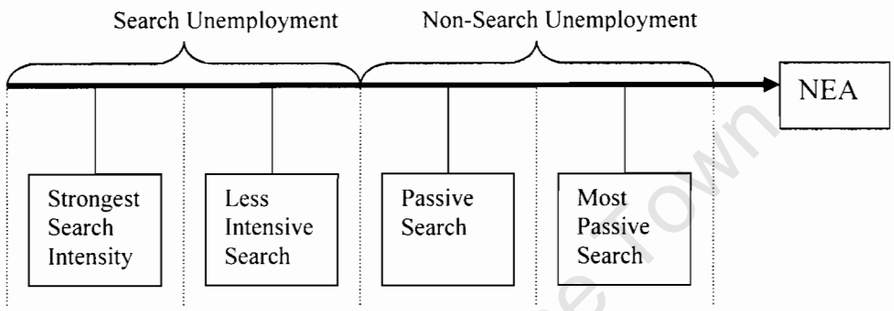
Kingdon and Knight conclude "that persons least likely to search are those in poverty (who are unable to fund job search), those living in high unemployment areas (who have become discouraged), and those living in remote areas (for whom the cost of job search is high)"(Ibid: 9). Based on their findings they propose the adoption of the broad definition of unemployment as this would give a more precise picture of South Africa's labour force participation.

Wittenberg (1999) analyzes job search in South Africa in an era of mass unemployment. With the use of a simple search model he shows how the probability of finding a job and the cost of search determine if the individual will engage in job search. Considering that rural areas have the lowest number of job opportunities and that search cost in terms of travelling would be high, he is not surprised that search is spatially organized. We therefore see "higher levels of search activity and higher levels of employment in the urban areas and higher levels of not economically active people in the rural areas"(Wittenberg, 1999: 41). He furthermore suggests that employment success is influenced by informal networks. Firstly, matric qualifications are "highly variable between individuals" which has reduced the signalling function of educational attainment and secondly, "in a situation in which large numbers of the unemployed all posses the matric, its utility as a potential sorting device for an employer is reduced"(Ibid: 32). The outcome is that education matters little in the employment process and that employers therefore increasingly rely on informal networks to source workers. Standing, Sender and Weeks (1996) report that close to 42% of firms "relied on friends and relatives of existing workers" to recruit new workers (Standing, Sender & Weeks, 1996: 338). Thus, insider households with close

ties to the labour market through an employed household member, "reduce search costs and [generate] a higher probability of [employment] success"(Wittenberg, 1999: 41).

Dinkelman and Pirouz (2001) accept the search-constraint argument as the basis of their paper and claim that the simplistic dichotomy of search versus non-search is misleading. They argue that because of constraints imposed on the unemployed to participate in the labour market, the South African labour force has to be studied according to "several degrees of labour force attachments" (Dinkelman & Priouz, 2001: 4). Attachment is described as a continuum of "the degree of active participation by the jobless in the labour market in terms of search activity and willingness to work" (Ibid: 8). These degrees of labour force attachment are represented on a scale in terms of search intensity.

Figure 1. Degrees of Labour Force Attachment according to Search Intensity



Source: Dinkelman & Pirouz (2001)

Search intensity is a combination of the search method and the access to market information, which the search method facilitates. Access to relevant market information increases the attachment of the individual. Normally, active search methods should yield the highest degree of attachment, but "in an environment of mass unemployment, non-searchers with contacts within the labour force may even have a closer attachment to the labour market than some actively searching individual, because of the information channel, which is presumably opened up by the labour market contact" (Ibid: 9).

Using data from the OHS 1997 Dinkelman and Pirouz analyze individual, household and community level characteristics which explain a person's degree of labour market attachment. Their results show that the weakest labour force attachment is experienced by young African females living in rural areas.

They suggest that this pattern of labour market attachment can be explained by the access to market information.

> "The net benefits of search are likely to be low when individuals are not able to access the correct type or quality of labour market information to ensure successful search. Information barriers in the labour market are generated through the individual characteristics of an unemployed person, as well as household and community or regional characteristics. For example: in South Africa, the costs of search facing a second-language English speaker living in rural Kwazulu-Natal in a household with no access to a telephone or regular newspapers, and with no other employed relatives are presumably very high. Add to this the reduced probability of this individual finding a job without matric or tertiary qualification and with no prior work experience, then the choice of non-search or the onset of discouragement may indeed be rational"(Ibid:8).

More recent papers have increasingly concentrated on the impact of different household characteristics on the success of search. Dinkelman (2004) investigates transition rates of unemployed searchers into employment using the 1993 Project for Statistics on Living Standards and Development and the 1998 Kwazulu-Natal Income Dynamics Study. Besides individual characteristics she identifies four possible ways in which the household impacts on the search success. Households function as private security nets, productive units, information networks, and as creators of a work and/or search culture.

When the household functions as a private security net unemployed members of the household are financially supported which can decrease the search activity of the unemployed member. This is confirmed for the male unemployed whose search success probability falls with an increase in the number of pensioners in the household. For the female unemployed the employment probability falls with the existence of a male pensioner but rises with the existence of a female pensioner which suggests that female search behaviour is also determined by their roles in the household. This refers to the second function of the household. When households function as productive units different members of the household have particular duties to fulfil. Thus, less domestic duties in terms of child care or the existence of other people who can fulfil this role like a female pensioner increase the probability of females to participate in the labour market. Dinkelman's results indicate that an increasing household size decreases the search success probability of females as a bigger household can be associated with more housework.

A household can also reduce search cost as well as increase the probability of finding a job. It can be a "privileged source of information for the unemployed, if it contains existing labour market links"(Dinkelman, 2004: 515). Her results though are inconclusive as it depends on the net effect of increasing the private security net function of the household and increasing access to labour market information. While the former reduces the search success probability, the latter should increase it. Finally, she finds that large part of the residual accounts for unmeasured household effects. "These effects may be emanating from the household providing labour market

information, or from the culture of the household, or some combination of the two"(Ibid: 516).

Wittenberg (2001) using 1995 October Household Survey data pursues a similar objective by analysing the impact of household and neighbourhood effects on the probability of finding employment. He argues that the employment probability is strongly influenced by the structure of the household. It "impacts on all the variables involved in the decision: the value of finding a job, the cost of searching as well as the value of non-market activities"(Wittenberg, 2001: 5) He suggests that "individuals who do engage in search from households where there is already someone employed have an advantage in finding employment"(Ibid: 6).

Furthermore, entire neighbourhoods can influence the participation behaviour of individuals. The behaviour and expectations of households and communities (neighbourhoods) can create a culture when "there is a history of working, individuals are expected to show effort in finding employment, while perhaps in communities where there is a more patchy history of work, it is not anticipated that job search will be successful, so effort is lower"(Ibid: 6).

He finds that household employment matters in increasing the probability of finding a job. This though is more significant for rural households than in urban. The findings also seem to indicate the existence of social roles in terms of domestic duties. More children as well as old men have a negative effect on the probability of females finding employment which suggest that females have to look after the young and the sickly. This confirms Woolard and Leibbrandt's claim (1999) that the time for females to participate in the labour market is severely restricted through household activities. According to the Participatory Poverty Assessment "women are often singly responsible for child-care, cleaning the house, fetching and heating water, washing and ironing, shopping, collecting firewood, cooking and washing dishes" (Woolard and Leibbrandt, 1999: 23).

Wittenberg concludes his findings with the suggestion that "if some households have better information or are better able to signal their quality to an employer, then the costs of making a successful match is reduced. This would lead to much higher probabilities of finding work"(Wittenberg, 2001: 14).

Duff and Fryer (2004) present a preliminary analysis of job search activities in Duncan village, a pre-urban township close to East London. They focus on factors which determine the choice of the search method. For them "job search is the external labour market, in the sense that it defines the way in which employees and employers locate each other, and, as such, it is one of the most important factors determining the information structure of the labour market"(Duff & Fryer, 2004: 2).

They distinguish between three forms of search: formal search (newspapers and/or employment agencies); word-of-mouth (assistance from relatives and friends, i.e. social networks); and place-to-place (direct contact of job searchers by going to factories and/or knocking on doors). The breakdown along these search categories is according to the search method's ability to transmit information. Formal search is possible if all relevant information about the job and the job-seeker can be transmitted through "impersonal, strictly market channels of applications and agencies"(Ibid: 5).

When job-seekers are "unable to provide employers with a credible signal of their quality"(Ibid: 6), they have to rely on social networks to get access to the labour market with the help of referrals of friends and relatives. Finally, job-seekers will have to use place-to-pace search when they have no access to formal search or social networks.

Place-to-place is the most used search method while word-of-mouth is the least used method, but the most successful, as most currently employed found their jobs through social networks. For them this suggests "that [networks and formal search] give better access to the labour market"(Ibid: 11). Their findings support their argument. Network searchers are least educated with slightly less years of education than the place-to-place searchers while formal searchers are the most educated. Nevertheless, the probability of finding employment is the highest for network searchers and the lowest for place-to-place searchers. Networks and formal search methods are used by more or less the same amount of unemployed men and women while more men travel from place to place. In terms of wages, workers employed through formal methods receive the highest wages which are close to their evaluation of their market value. Wages of network employed workers and place-to-place employed workers are significantly lower than wages of formal method employed workers. Also their current wages are significantly below their evaluation of their own market value. Finally, on average, network searchers have been searching for the least time of all unemployed.

The authors are surprised that despite the obvious success rate of social networks the search method itself is under utilized by both men and women. They conclude that people do not choose different search methods. "If a searcher can generate a signal which employers trust using formal methods, that searcher will do so. If they cannot generate signals they use social networks, which are by nature exclusive, but are also by nature likely to provide a very limited set of information about jobs"(Ibid: 16).

To summarize the findings of the existing literature on search in South Africa, there is a growing consensus that search is determined by the conditions the job-seeker faces which either constrain or facilitate access to information in the labour market characterised by mass unemployment. The job-seeker has to gather information about vacancies and be able to signal his or her qualifications to the employer. Both these problems can be solved with various search methods which yield different success rates in fulfilling these functions. The cost of pursuing the search method in terms of financial costs and other opportunities forgone further constrain the ability of the searcher to actively search. The literature therefore suggests that in these circumstances the use of informal information networks is a highly successful search method. Having contacts with employed friends and relatives increases the probability of finding a job significantly while it reduces the cost of search.

The main limitation of the existing literature on job search in South Africa has been the inadequacy of the survey data to investigate factors which influence the decision to search. In particular, the breakdown of active search methods and passive search methods is problematic. For example, the OHS survey design can lead to an under sampling of network searchers. "The question about the method of job-search comes after the question about whether a person did any job search in the past week/4weeks. Since people who are waiting to be called by employed relatives or friends (or indeed

people waiting for recruitment lorries to arrive) would not know whether such waiting would constitute a valid form of job search in the eyes of the enumerator, they may well say 'no' to the question asking whether they engaged in any job-search in the relevant period"(Kingdon and Knight, 2000: 5). The problem is that this question is a 'hurdle' question, thus, respondents who said 'no' are not asked about their 'actual' search activities. This would explain why Dinkelman and Pirouz (2001) have a very low percentage of social network searchers while queuing at a workplace is reported as the dominant search method.

A further problem is the fact that most labour force surveys do not ask the employed how they got their jobs. Thus, while Wittenberg (2001) can show a significant correlation between the probability of finding employment and the existence of an employed member in the household, he cannot show that the employed household member actually functioned as an information transmitter, i.e. that household employment leads to employment through social networks. The data simply does not allow this kind of investigation.

In addition, Wittenberg's studies (1999, 2001) as well as Dinkelman and Pirouz (2001) and Dinkelman (2004) focus on transition states of unemployed people into employment. While we can draw some conclusions about the search behaviour of the unemployed, their studies focus on factors which lead to successful search. Of these studies only Dinkelman (2004) used panel data to analyse transition states, i.e. she traced the success of the searching unemployed over time.

Finally, only Duff and Fryer's study (2004) investigates factors which determine the choice of the search method. Most studies do not concern themselves with the details of the ways in which the unemployed actually look for a job and which factors influenced their choices. Duff and Fryer's study (2004) is so far the only explanation for the pursuit of different search methods in South Africa.

Following the findings of the above studies, the present thesis focuses on factors that determine the choice of the search method and in particular the decision to use social networks. To identify possible factors that determine the choice of the search method we have to establish a theoretical framework which explains the decision to search and the choice of the search method. Secondly, we use the 2000 Kayelitsha/Mitchell's Plain (KMP) survey to analyse factors which characterise groups who use different search methods. The design of the KMP survey proves very useful. Employed workers were asked how they got their current job, and unemployed workers were asked to report all search methods they use to look for a job. Neither group had to pass some kind of 'hurdle' questions.

3. Job Search: A Theoretical Framework

The unemployed individual has to decide how to organize his or her search activity to yield the best results in terms of the probability of finding employment. Various factors which either constrain or facilitate the job-seeker's search activity force the job-seeker to choose a search strategy which enables him or her to participate in the labour market.

The following model is a 'partial' equilibrium model as we only focus on the supply side of the labour market[2]. This thesis tries to identify factors which constrain or facilitate effective participation of job-seekers in the labour market. Demand side factors of the employer are taken into account as influences on the behaviour of the job-seeker. However, we do not know which variables affect the employer's decision during the recruitment process. Therefore we do not attempt to explain the factors which determine the success of search methods in finding employment.

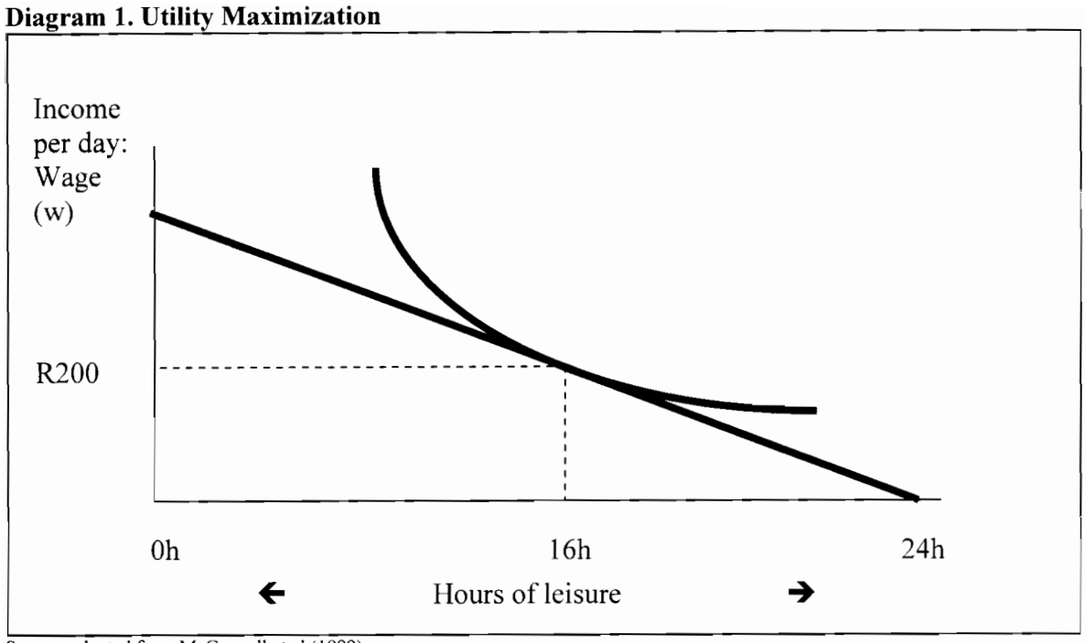
3.1 The Classical Labour Market and Participation

The simple labour market model referred to by Wittenberg (2001) perceives the unemployed as atomistic individuals who simply have to choose between working and consuming leisure. This basic model of the 'work-leisure' decision would argue that an "individual, having a fixed amount of time available, must decide how that time should be allocated among work ('labour market activity') and leisure ('non-labour market activity')" (McConnell, Brue & Macpherson, 1999: 15). This decision would be derived from a utility maximizing function which takes the individual's preferences and his or her budget constraint into account. The individual's willingness to work is hence dependent on his or her taste, i.e. his or her preference between on the one hand consuming leisure as well as home made goods and on the other hand market produced goods, which he can only buy with money from an income i.e. his or her market earnings.[3]

The decision to participate in the labour market is reflected in a reservation wage which would allow the individual to be compensated for forgone leisure. This compensation would allow the individual to consume market goods instead. This relationship is shown in diagram 1.

[2] Recent matching models developed by Pissaridis (2000) and Calvo-Armengol (2003) show factors which influence the supply side as well as the demand side during the matching process. In this paper, our focus lies on factors which influence the supply of labour in terms of search activity.
[3] For a detailed discussion of the allocation of time between work and leisure see Becker G.S. (1965).

Diagram 1. Utility Maximization



Source: adapted from McConnell et al (1999)

Leisure can be expressed as the value of unemployment:

U_i = Value of Unemployment
= $A_{i\ non\text{-}market} + Inc_{non\ wage}$ [eq. 1]

where U_i is the value of unemployment of individual i and $A_{i\ non\text{-}market}$ is the individual i's value of non-market activity and $Inc_{non\ wage}$ shows all income sources of individual i other than wages[4].

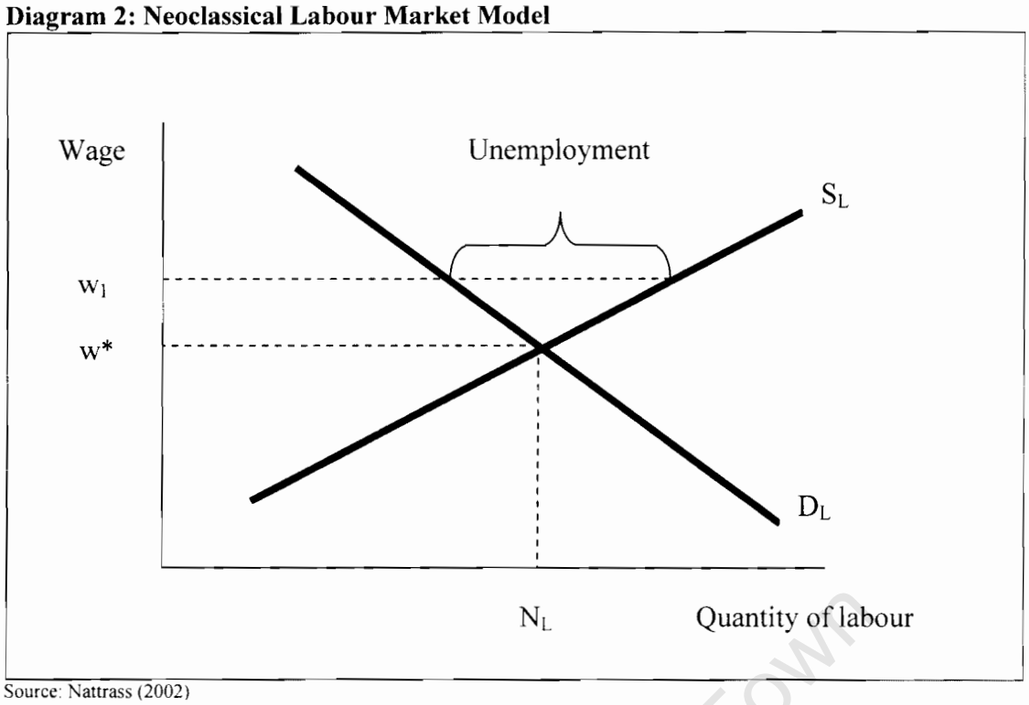
Once the wage is equal or marginally greater than the value of unemployment, the individual has an incentive to supply his or her labour to the market and accept the job offer. Thus, when $w > U_i$ the individual will change his or her employment status. "The optimal work-leisure position is achieved where MRS [of labour for income] is equal to the wage rate", simply "where the individual and the market are in agreement as to the relative worth of leisure and real income at the margin" (McConnell, Brue & Macpherson, 1999: 22).

The underlying assumption of this model is that all agents are homogenous and have perfect information about the job market. From the supply side this leads to the acceptance of the job offer being simultaneously the decision to participate by entering the market. The individual knows where and when the given wage is equal or just marginally above his or her value of unemployment. He or she can then immediately pick up any job which will give him or her the reservation wage. From

[4] For the time being we assume that there is no household income through other household members as an income source. This will be treated in section 2.2 of this chapter.

the demand side the homogeneity of the workforce and perfect information lead to a frictionless employment procedure with no risk.

Diagram 2: Neoclassical Labour Market Model



Source: Nattrass (2002)

In a world with perfect information, everyone would know what they want and how to get it. Perfect information about what is available, where it is available and how to obtain it would result in everyone's daily actions instantly optimising whatever they want to achieve. In the case of the labour market this would translate to "the notion of an auction market in which workers are openly and continuously competing for jobs and, conversely, firms persistently bid to attract and retain labour services" (Ibid: 495). The result would be an equilibrium condition in the labour market as shown in diagram 2 with full employment level N_L and market clearing wage rate w*.

Given the design of this model there exist only two labour market statuses: employed and not participating. The moment the wage is equal or marginally exceeds the reservation wage, a non-participant will change into employment. Unemployment therefore is voluntary. W_1 in diagram 2 for example would indicate voluntary unemployment as the reservation wage exceeds the market clearing wage.

3.2 Institutional Views of the Labour Market and Participation

Unfortunately, the neoclassical idea of the perfectly competitive labour market adjusting frictionlessly to full employment level via the price adjustment mechanism does not seem to hold very well in the real world. The individual's decision to participate cannot simply be reduced to the prevailing market wage. As Wittenberg (2001) mentiones, job search is plagued by information imperfections and uncertainty. Furthermore, individuals do not live in a vacuum but rather are a part of a social structure which impacts on the individual's behaviour.

Although the utility maximization principle is clearly driving the individual's decision to participate in the labour market and wages do function as signals of demand and supply, various other factors will influence the behaviour of the job-seeker as well as that of the employer. Informed by an institutional economics perspective "the behaviour of the individual can only be analysed within an institutional context"(Himmelweit, Simonetti & Trigg, 2001: 14). Therefore, one has to take into account the existence of transaction costs caused by imperfect information and the impact of social governance structures. Such structures can determine the relationship between the individual and other members of society in terms of norms, rules and customs as well as the individual's access to resources.

3.2.1 Search Unemployment with Imperfect Information

The question thus is what happens to the decision process when people do not know where and when the going wage is equal to their reservation wage? How do they decide to participate in the labour market?

Most times people cannot rely on perfect information to guide their actions. Hence, to match what people want and what is available implies obtaining relevant information and search costs. "A key problem in achieving effective coordination and adaptation is that the information needed to determine the best use of resources and the appropriate adaptations is not freely available to everyone… No single person in society has all – or even a significant fraction – of the needed information. Instead, information is localized and dispersed throughout the economy"(Milgrom & Roberts, 1992: 26).

The idea of investigating the impact of search costs on the ability of markets to clear has only been incorporated to the study of economics in the last 30 to 40 years[5]. Markets characterized by imperfect information require that the market participants engage in the gathering and acquisition of relevant market information in order to make informed decisions.

The labour market is no exception. According to Pissaridis:

> "Trade in the labour market is a nontrivial economic activity because of the existence of heterogeneities, frictions, and information imperfections. If all workers were identical to each other and if all jobs were also identical to each other, and if there was perfect information about their location, trade would be trivial. But without homogeneity on either side of the market and with costly acquisition of information, firms and workers find it necessary to spend resources to find productive job matches. The heterogeneities may be in the skills possessed by workers, on the one hand, and those required by firms, on the other. They may be in the information possessed about the job. Or, they may be in the location of jobs, and workers and in the timing of job creation in different locations. In

[5] See, for example, Ackerlof (1970) and Stigler (1962).

> this environment there is uncertainty about the arrival of good jobs to job-seekers and good workers to hiring firms, and firms and workers have to decide whether to accept what is available, wait for a better alternative, or influence the arrival process itself by spending resources on the acquisition of information, retaining employees, or changing location"(Pissaridis, 2000: 3-4).

The consequence is that higher search effort increases the probability of finding a job. But at the same time, more search leads to higher search costs. "A worker will search for wage offers until the expected marginal return equals the marginal cost of search" (Stigler, 1962: 96).

The expected value of search unemployment is specified as:

$$U_s = \text{expected value of search unemployment}$$
$$= P_i*(E[w_i]) + U_i - C(s) \qquad \text{(eq.2}^{6}\text{)}$$

where P_i refers to the individual's probability of finding a job multiplied by the expected wage $E[w_i]$, while U_i refers to the individual's value of unemployment and C(s) to the costs of search. What the equation also shows is that the unemployed will start searching when $P_i*(E[w_i]) > C(s)$.

3.2.2 Search Unemployment within Social Structures

To fully understand the individual's search behaviour we have to include the social structure which on the one hand influences the individual's access to resources while on the other hand constrains his or her freedom to choose independently as an individual because of his or her embeddedness in the social group[7]. This is in line with Dinkelman's (2004) discussion of household effects on search behaviour.

Following Becker[8], when an individual is a member of a household, his or her participation in the labour market might be influenced by his or her interaction with other household members, i.e. the 'role' within the social structure. By being a member of a group, where his or her actions have a direct impact on the welfare of the group as a whole, the individual's decision will be influenced by his productivity in non-market activities and his or her access to income accumulated by the total household (Sapsford & Tzannatos, 1993): 11. Going back to our original value function of unemployment this extends eq.1 to:

$$U_i = [1 + 1/(A_{hh\ non\text{-}market} - A_{i\ non\text{-}market})]*A_{i\ non\text{-}market} + m_i*Inc_{hh} \qquad \text{(eq.3)}$$

---

[6] Adapted from Walker (2003).
[7] For the purpose of this paper we follow a 'unitary' household model rather than 'non-consensus' models of household behaviour. For a discussion of the various models with a South African application see, Black P.A. (2004).
[8] See Becker G.S. (1981).

A_{hh} refers to the value of non-market activity of the entire household. We assume that the individual's role in fulfilling household duties i.e., non-market activities, is driven by his or her comparative advantage relative to other household members rather than a function of custom and tradition. For simplicity, we will refer to the individual's non-market activity and his or her comparative advantage in the household $[1 + 1/(A_{hh} - A_i)]*A_i$ simply as A_{iCA}.

Inc_{hh} is the total income of individual i's household including individual i's non-wage income, as well as all income sources of other household members in individual i's household. m_i is the share of total household income available to individual i. Given the design of the survey and the questions asked, for this thesis it is assumed that all household members have equal access to total household income, hence $m_i*Inc_{hh} = Inc_{hh}$ / size of household.

The rules and norms governing the relationships between members of the household will influence the individual's access to resources, i.e. the total household income, as well as the role of the individual in terms of household activities. [9] This also includes the "added worker effect" where assigned roles in the household might change. The interplay between the total household income and the assigned social roles can change if the household experiences an increase in unemployment. Thus, females or teenagers who were responsible for household activities might have to enter the labour market when the main breadwinner looses his or her job[10]. The question should also be to what extent search activities are divided among household members. It could be that the household assigns the task of search to one household member who then shares this information with other unemployed members of the household. Wittenberg (2001) and Dinkelman (2004) account for these spill-over effects in their analysis through the unmeasured social effects.

Incorporating the social aspects of household interactions, the expected value of search unemployment is affected by two aspects. Firstly, the expected value depends on the difference between access to total household income (m_i*Inc_{hh}) and the financial cost of pursuing a search method ($C_{S_{net}}$). Higher household income can therefore either increase search activity, because it can be used to finance the search activity or it could reduce the search activity by raising the reservation wage of the unemployed. The impact depends on the net effect of the two. Secondly, engaging in search activity directly reduces the time available for other non-market activities. This opportunity cost can be expressed in terms of non-market activity forgone: t_s*A_{iCA} where t_s refers to the time spent on the search activity.

Including equation 3 we can rewrite the expected value of search unemployment in equation 2 as:

$$Us = Pi*(E[wi]) + A_{iCA} - t_s*A_{iCA} + (m_i*Inc_{hh} - C_{S_{net}}) \quad \text{(eq.5)}$$

[9] It would be interesting to investigate the impact of traditional roles within the household like gender or age roles on the search behaviour.
[10] See Lundberg S. (1985)

An unemployed individual has an incentive to start searching when $U_s - U_i > 0$, i.e., when

$$P_i*(E[wi]) - t_s*A_{iCA} - C_{S_{met}} > 0 \qquad \text{(eq.6a)}$$

The same relationship has been identified by Wittenberg (1999). He claims that assuming risk neutrality, an unemployed individual would engage in search when:

$$P(w)*V(w) > c + Vopp \qquad \text{(eq.6b[11])}$$

Where P(w) is the equivalent to P_i and V(w) represents the expected value of employment.

Although we assume that Wittenberg implied with Vopp the cost of other activities forgone, the specification in equation 6a shows explicitly how search generates costs in terms of financial costs ($C_{S_{met}}$) as well as the reduction of time for other non-market activities. The opportunity cost therefore is not only a function of the quality of the non-market activity (A_{iCA}) but also determined by the intensity of search in terms of time (t_s).

3.3 The Probability of Finding a Job and Job Search

Referring back to equation 6a we see that the search value depends on the success of finding a job with an expected wage w_i ($P_i*(E[w_i])$) and the cost of searching for this job ($C_{S_{met}}$ and t_s*A_{iCA}). Wittenberg makes an important observation about the willingness to search when one looks at the inequality in equation 6b. "It suggests that in a period of mass unemployment, i.e., if p(w) is sufficiently reduced, we will see many individuals ceasing to search" (Wittenberg, 1999: 39). Thus, there is a major difference between "someone who is not economically active because Vopp > V(w)" and someone where V(w) > Vopp but p is small enough that $V(w)*p < Vopp$. (Ibid: 39). This kind of behaviour is described as the discouraged worker effect where the probability of finding a job is so small that the unemployed perceives the benefits of search not worth the cost of search and therefore ceases to search.

In most search theory literature the probability of finding a job (P_i) is said to depend on the individual's characteristics (e.g., race, age, gender, education level etc), macroeconomic climate (especially the existing local unemployment rate), and the labour demand of the employers (Walker, 2003).

[11] Adapted from Wittenberg M. (1999).

We find that the "probability of finding a job" needs to be more thoroughly defined. It seems that no distinction is made between the search process and the process of getting a job. We argue that locating a job is a prerequisite to getting a job. The probability of 'finding a job' therefore is a two-stage process: without locating a vacancy, one cannot get a job. Both states are influenced by different factors.

The search literature in South Africa identifies both processes without explicitly separating them. Wittenberg (2001) is the closest to differentiating between the two probabilities. He argues that "if some households have better information or are better able to signal their quality to an employer, then the cost of making a successful match is reduced. This would lead to much higher probabilities of finding work"(Wittenberg, 2001: 14). 'Better information' increases the probability of locating a job, while 'able to signal their quality' increases the probability of getting a job. In this regard, the attachment categories of Dinkelman and Pirouz (2001) are a perfect example of factors influencing the probability of locating a job. They define attachment to the labour market through the ability of the job-seeker to get information about vacancies. Duff and Fryer (2004), on the other hand concentrate in their theoretical framework on the probability of getting a job by being able to send a reliable signal. In their discussion of the survey data though, they describe both processes. More importantly, Duff and Fryer argue that especially social networks might have counterproductive effects on the two probabilities. Social networks can positively impact on the probability of getting a job by transmitting a reliable signal. "However, reliance on social groups of limited size is likely to provide individuals with a much smaller set of information"(Duff and Fryer, 2004: 8). Social networks therefore can increase the probability of getting a job while at the same time reducing the probability of locating a job. This, though, depends on the quality of the network as well as the recruitment method of the employer as will be shown later.

The following is an illustration of the factors influencing the probability of finding a job, i.e. the combination of the probability of locating a job and the probability of getting a job.

Locating a job depends on the availability of jobs in the job market which match the job-seeker's characteristics. If no company has any matching vacancies the probability of locating a job is zero. If all companies have matching vacancies the probability of locating a job is 100%. Thus, let $P(v|C_i)$ be the probability of making contact with a company which has a vacancy that matches the characteristics of the job-seeker 'C_i'. We can therefore rewrite the probability of finding a job P_i simply as the probability of locating a job $P(y) = P(v|C_i)$. This probability is dependent on the number of vacancies and the unemployment rate.

Knowing which company has vacancies and which company has no vacancies increases the probability of contacting companies with vacancies. To simplify one could say that $P(y) = k^n * P(v|C_i)$, where k is a constant and $n >= 0$. An increase in information is represented in an increase in n. If $n = 0$, there is no information to distinguish between companies that have matching jobs and companies that do not have matching jobs, the probability of locating a job is simply determined by the number of companies with matching vacancies relative to companies with no matching vacancies $P(v|C_i)$. The more one knows about companies that have matching vacancies, the higher is the probability of locating a vacancy.

Therefore, as n increases so does the probability of locating a job. "n" itself is a function of search intensity: $n = f(S_{int})$ which is, as described above, simply the search method (S_{met}) and the time spent on searching (t_s). Assuming for simplicity that there is a linear relationship, the search intensity is simply the time spent pursuing the chosen search method: $S_{int} = t_s * S_{met}$. Thus, the probability of locating a job P(y) can be expressed as:

$$P(y) = k^{f(S_{met} * t_s)} * P(v|C_i)^{12} \qquad \text{(eq.7)}$$

The probability of locating a job is a representation of Dinkelman and Pirouz's labour market attachment categories. More time spent searching should yield more information while different search methods allow unequal access to information. Once one has *located* a vacancy, various other factors will determine if one *gets* the job. Here your individual 'job getting' characteristics[13] will affect your probability of getting the job:

$$P(z) = (P(emp|C_i^{jg}) \qquad \text{(eq.8)}$$

where 'emp' refers to getting the job, i.e. being chosen by the employer over other applicants. This is conditional on 'C_i^{jg}' which represents the individual i's job getting characteristics that make him or her 'different' to other applicants who also fit the 'job description'. These characteristics are more related to positive aspects of the personality of the applicant like 'hard working' and 'trustworthiness'. The probability of getting a job depends on the ability of the applicant to communicate this private information to the employer.

The probability of finding a job then is the product of the probability of locating a job P(y) and the probability of getting a job P(z).

$$P_i = P(emp|C_i^{jg}) * [k^{f(S_{met} * t_s)} * P(v|C_i)] \qquad \text{(eq.9)}$$

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[12] With no search at all $f(S_{int}) = 0$ which leads to $k^{f(S_{int})} = 1$. In this case $k^{f(S_{int})} * P(v|C_i)$ would simply be $P(v|C_i)$. Once the search intensity is greater than 0, the increase in the information gathered is positively increasing the probability of locating a job.

[13] It is already assumed that the individual found a job which matches the individual's characteristics. This means that all applicants fit the job description and are homogenous. The 'job getting' characteristics reflect the individual's advantage in terms of the ability to communicate other information like personality traits which will influence the employer 'positively' in favour of the applicant's employment chances.

Finally, given the breakdown of the probability of finding a job P_i, we can rewrite the added value of search function as:

$$(P(emp|C_i^{jg})*[k^{f(S_{met}*t_s)}*P(v|C_i)])*(E[wi]) \quad - \quad t_s* A_{iCA} \quad - \quad C_{S_{met}} > 0 \text{ (eq.10)}$$

3.4 Which Search Method Should One Choose?

The choice of the search method is dependent on four factors: the ability to locate a job, the ability to get the job, the financial cost of pursuing the search method, and the opportunity cost of pursuing the search method.

The choice of the search method and the time spent on pursuing this method determine the expected added value of the job search. But which search method should the unemployed use? Considering the financial and time constraints of the search method ($C_{S_{met}}$ and t_s*A_{iCA} respectively) as well as the probability of finding a job, the choice of the search method is a compromise between what is perceived to be effective and what is feasible.

The probability of finding a job is dependent on a range of individual, household and local labour market characteristics which make the search method 'effective' in the eyes of the searcher. A highly skilled IT specialist will not wait on the side of the road to be picked up for a computer programmer job. No matter how much time he or she will spend pursuing this search method, the expected success to find an appropriate job is very small. Similarly an unskilled worker will most probably have a lower success rate finding a job through the internet than by walking from factory to factory and directly asking for a job.

Clearly the probability of locating a job is strongly dependent on the recruitment process of the employer. If computer programmers were to be picked up on a daily basis on the side of the road, this search method would be highly successful compared to others. Also, if more companies were to advertise more jobs for unskilled workers on the internet, utilizing the internet as a search method would be very effective for the unemployed unskilled worker.

Hence, 'locating a job' is very much the outcome of the labour market's modus operandi of how information about vacancies and available workers are communicated. Recruitment methods of the employer are dependent on cost benefit calculations. Generally, the literature on recruitment methods suggests that "firms invest more search effort in filling positions that require more education and training" (Osberg, 1993: 351). Companies have an incentive to increase search costs the higher the productivity of the desired worker and the lower the number of workers with the desired characteristic. Similar to the search of the job-seeker, companies will search until the expected marginal return equals the marginal cost of search. Recruitment of skilled workers therefore is mostly done through formal channels while unskilled workers are hired through cheaper channels with the main search cost imposed onto the job-seeker (Stigler, 1962). When information is not available through formal

channels, unskilled workers have to rely on informal channels or have to directly contact the employer.

The probability of getting a job is dependent on the ability of the job-seeker to use the search method to communicate reliable signals about his ability to the employer. When the paper qualification is a sufficient signal, formal methods can transmit the information. Formal channels will be inappropriate when the paper qualification is not sufficient because of high variability of the signal. This confirms Duff and Fryer's argument that job-seekers use the search method which allows them to send a reliable signal. At the same time, formal channels can also fail when the job requires particular personality characteristics which formal channels cannot communicate. "While the formal market is quite good at signalling worker skills – education, worker training programmes, and skill certifications – the formal job market is a very poor provider of other information desired by employers, such as worker reliability, willingness to follow direction, attitude, and trustworthiness"(McEntarfer, 2003: 51). In this case informal channels, social networks especially give the job-seeker an advantage. The problem is that some methods which increase the probability of locating a job and the probability of getting a job are not available or feasible for some job-seekers.

It was already indicated that the time spent pursuing certain search methods reduces the time available for other non-market activities. Furthermore, the financial cost of pursuing the search method might be so high that the expected benefit from search does not cover the cost. At the same time, individual characteristics as well as household characteristics might not make certain search options feasible. Health problems or physical impediments can hinder the unemployed to actively pursue more 'appropriate' methods. Lack of formal educational, especially the inability to read and write, reduces the ability of the searcher to gather printed information and to respond in writing.

The effect of household structure on the feasibility of search methods arises out of the ability of the rest of the household to facilitate conditions which allow the unemployed to search. This includes giving the unemployed access to financial resources to finance the search method or to release the unemployed from domestic duties in order to have enough time to search. A household can also facilitate search if its characteristic is a necessary condition for the search method itself, as is the case with social networks.

Generally, the search literature defines the following methods of job search:

1) Employment agency (public or private)
2) Advertisement on internet
3) Advertisement in newspaper
4) Advertisement on notice board
5) Contacted companies or factories directly
6) Contacted previous employer
7) Wait on the side of the road
8) Social networks of friends and family

Source: list composed from various job search internet sides, McConnell et al (1999)

Each of the above search methods is characterized by a different probability of finding a job, i.e. locating and getting a job, and financial and opportunity cost.

Following the South African search literature, social networks function as a major search method. They impose the least costs with regard to financial and opportunity costs while their ability to positively impact on the probability of finding a job is dependent on a range of factors. The following chapter therefore establishes factors which constrain and facilitate the use of social networks by job-seekers.

4. Social networks and the labour market

Given the importance of social networks in the Cape Town labour market as has been suggested by the KMP survey data, it is crucial to get a more detailed understanding of the functioning of social networks and their impact on labour market outcomes.

4.1 Theories of Social Networks in Labour Markets

As indicated in the previous chapter, the choice of the search method is a compromise between constraint and effectiveness. While effectiveness is determined by the probabilities of locating and getting a job based on the recruitment process of the employer as well as the overall macroeconomic conditions, constraint is a question of the individual, the individual's household and the individual's broader social network.

The success of a search method is normally measured by how many people actually found employment through that method. This measurement can be misleading with regard to social networks. It is true that successful employment through active channels requires that the seeker was using the method to look for a job. For example, one has to respond to a newspaper advertisement in order to make contact with the employer who placed it. This procedure does not necessarily have to happen with social networks. According to a study by Granovetter (1974):

> "For 57.9 percent of the individuals finding their job through contacts (N=157), the interaction during which job information was passed was, in fact, initiated by the contact. In about half these cases, he knew that the respondent was looking for a new job; *this means that a little over a quarter of the time, initiative come from someone who had not been approached and did not know whether his friend would even be interested.* In another 20.9 percent of the instances, the respondent contacted his friend, asked him if he knew of anything, and was told about the job he subsequently took; *8.3 percent of the respondents were contacted by someone they did not know and were told that they had been recommended for a job. The person doing the recommending turned out to be a personal contact of the respondent*"(Granovetter, 1974: 33, italics added).

The matching process of employers with unemployed through social networks is dependent on the overlap of two networks. According to Tilly and Tilly (1994:301), "matching results from the connection of recruitment networks, through which employers seek workers, with supply networks, through which potential workers seek jobs." The interplay of the two networks will determine the probability of finding a job. Although these networks will of necessity overlap, considering the way in which networks work, members of each type of network can be to some extent distinct from one another. "Both kinds of networks differ dramatically by gender, ethnicity, race, age, citizenship, and residence; their articulation therefore has a strong impact on what sorts of workers actually get into given firms" (Ibid: 301).

The advantage of social networks lies in their ability to reduce the transaction costs of search for employers as well as for job searchers. This allows both sides to gather and communicate information which other channels fail to provide. Bartus (2000)

distinguishes between three mechanisms through which social networks impact on the labour market: extensive search, intensive search and favouritism. The first two mechanisms refer to "two distinct information problems: becoming aware of various job opportunities (extensive search), and collecting in-depth information about the quality of one particular opportunity (intensive search)" (Bartus, 2000: 72). The first problem impacts on the probability of locating a job, while the second information problem influences the occurrence of a match between an open vacancy and the job-seeker. Intensive search is done by the job-seeker as well as by the employer. Thus, the second information problem also impacts on the probability of getting a job. The third mechanism refers to favouritism of applicants by employers. "Even when employers wish to select on a meritocratic base, they may not be able to do so because their social obligations create incentives to favour the friends of their friends, and the bargaining power of their employees pushes them toward favouring the friends of their employees"(Ibid: 72). Favouritism therefore directly impacts on the probability of getting a job. These mechanisms occur in two different network structures.

4.1.1 Demand Side or Recruitment Networks

Manwaring (1984) describes the use of social networks as a recruitment method as the "extended internal labour market [where] the knowledge of vacancies available to employees of a firm is extended beyond the firm, through social networks, to friends and relatives of the present workforce within the local community" (Manwaring, 1984: 161).

An employer could rely on recruitment networks for various reasons. Besides the fact that recruitment networks are the cheapest method of extensive search (Rees, 1966), employers can use networks for intensive search. Asymmetric information between the employer and the job-seeker can lead to an adverse selection problem. In order to identify the best possible match between the vacancy and the job applicant, employers have to rely on various screening devises to make an informed decision as to whether the applicant fits the job description. Because of imperfect information, the employer still has to rely on trust that the applicant's signals are honest and not deceptive. It is this problem of trust which makes social networks so important.

According to a study by Miller and Rosenbaum (1997) the employer's own judgement during interviews or references from sources known to the employer were preferred and more trusted than high school grades and recommendations from teachers and former employers. "In particular, they found that the employer's favourite source of information about applicants is their current employees. Employers believe that employees have self-interested reasons for recommending good future employees: one employer stated, "nobody wants to send someone in who's going to make them (the referring employees) look bad" (McEntarfer, 2003: 4). This group pressure phenomena has also been identified by Manwaring. "The person who recommends the friend or relative is under pressure to ensure that the recruit lives up to expectations: 'if they let us down they let their friends down' "(Manwaring, 1984: 168). For a similar reason Montgomery (1991) suggests that hiring through social networks can increase economic profits because referrals are given mainly to higher ability workers.

A further advantage of recruitment networks for the employer lies in the higher productivity of the workforce. Manwaring argues that "management attempt to recruit a stable core of employees with tacit skills. ... Efficient performance requires that those skills be applied at a sufficiently intensive and sustained rate to meet production targets. This will only be achieved if the new recruit fits into the workgroup within which these skills are learnt and applied. By recruiting through the extended internal labour market, personnel managers are given an indication that candidates can meet these requirements" (Manwaring, 1984: 161). When on-job training is dependent on the good will of the existing workforce, social network recruitment can function as a "informal apprenticeship system ... because the candidate is already integrated into the social relationships with exist within the workgroup" (Ibid: 168). Thus, to keep the existing workforce fairly homogenous in order to reduce conflict among different groups, employers might favour applicants who fit socially into the existing workforce.

Standing, Sender and Weeks (1996) summarized the implications of informal methods for recruitment purposes. "The informal methods may be less costly, and almost certainly reduce transaction costs. It is not altogether clear that there are efficiency gains or losses. Recruiting from a pool of relatives, friends, etc., may promote group solidarity or efficiency, but may also induce a slackness in the factory, More importantly, informal methods are less likely to involve screening in selection based on objective criteria of competence" (Standing, Sender & Weeks, 1996: 338).

4.1.2 Supply Side or Job-seeker Networks

Very little has been written about the reasons why job-seekers use social networks as a search method. Nevertheless, it is possible to establish reasons for job-seeker networks based on the theoretical framework in chapter 3 and the probability of finding a job.

Having access to social networks as a job-seeker allows the unemployed to gather relevant information at a very low cost. Assuming that the contacts are maintained automatically within a social network, one can say that this method implies no financial costs. In terms of creating an opportunity cost, relying on social networks do not subtract time from any other activity.

In terms of the probability of finding a job, friends and relatives can increase the information flow between job-seekers and employers. Depending on the openness of other search channels, social networks can give searchers an advantage in receiving more and faster information about available jobs faster. Manwaring (1984) claims that

> "For working-class job-seekers, the extended internal labour market provides access to the 'social community' of the workgroup. Workers are able to give advice on the precise conditions of work, which as personnel managers recognise, is far more likely to be trusted than is their own advice. Workers are able to notify friends and relatives of jobs coming up, often even before vacancies are announced, because they know that someone is leaving, These processes establish the process of self selection amongst applicants,

> as job-seekers weigh up those salient factors about which they can get information and which are seen to vary between firms: the severity of managerial discipline, the value of the relationships within the 'social community' and the adequacy of the wage offer"(Manwaring, 1984: 170).

Social networks thus directly impact on the probability of locating a job as they facilitate intensive as well as extensive search for the unemployed.

Once a vacancy has been located the job-seeker again uses social networks for his benefit. Job-seekers use social networks for similar reasons as employers. While recruitment networks reduce the transaction cost of screening for the employer, job-seeker networks reduce the transaction cost of signalling. Screening and signalling through social networks are two sides of the same coin. The type of information about the candidate which the employer receives is exactly what the applicant wants to communicate to the employer. Being able to communicate information about the personality of the applicant can give the candidate an advantage over other applicants who cannot communicate such personal information. As was indicated above, employers are more likely to distrust paper qualifications and references of outsiders and prefer recommendations of their existing workforce. Furthermore, "people who have heard about the job through an employee will increase their advantage since they receive insider information about how to behave during the interview, or how to present their CV"(Bartus, 2000: 73). Finally, having direct contacts to people in decision making positions (high status contacts) can positively impact on the job-seeker's application as the contact can positively influence the application by recommending the applicant or by putting pressure on the personnel manager. Thus, the job-seeker can use social networks to increase the probability of getting a job.

4.2 Social Networks and Labour Market Outcomes

The impact of social networks on labour market outcomes has been thoroughly documented. Various economic and sociological studies in the US have shown that about 50% of all jobs are acquired through social networks. (McEntarfer, 2003: 1) The use of social networks seems, despite its presence in all professions, inversely related to the level of education and skill, while it increases "with the amount of professional networking inherent in the worker's profession" (Ibid: 1). In terms of skill levels, a study of the 1970 Chicago labour market by Rees and Schultz shows that unskilled labour uses social networks to get their first job where "85% of manufacturing workers are hired through someone they know, compared to 30% of accountants"(Ibid: 51). The use of social networks by less skilled workers is confirmed in South Africa by Duff and Fryer (2004).

Furthermore, social networks seem to allow especially younger job-seekers to get access to the job market. "Young workers in particular use kinship networks to access opportunities in the labour market. As young workers have had little opportunity to develop cross-generational contacts outside their own family, the use of relatives in finding work is especially prevalent among youths"(McEntarfer, 2003: 8).

In a study of social networks in China, Bian (1997) shows that job-seekers use strong ties with contacts in positions of authority to find employment. He claims that the probability of getting a job is more important than the probability of locating a job. Because job assignments are state controlled, "personal networks are used to gain influence from job assigning authorities rather than to gather employment information, because even when they have information, job-seeker cannot apply for jobs [as] jobs are secretly assigned by officials as favours to those who are directly or indirectly connected to them"(Bian, 1997: 367).

While most studies have shown which groups of people get an advantage though social networks, various other studies have analysed the negative impact of social networks with regard to the exclusion of certain groups from the labour market.

Patterson (1998) argues that Afro-Americans have been systematically excluded from "essential network resources that most other Americans take for granted"(Patterson, 1998: 17). While it seems that other ethnic groups have successfully developed networks which allow them access to the labour market, Patterson claims that Afro-Americans were excluded from this process through the systematic implementation of institutional obstacles in terms of segregation policies. He sees affirmative action as one solution to address the "unfair isolation"(Patterson, 1998: 20). Affirmative action should be implemented until a self-sustaining group has developed which allow disadvantaged groups have enough access to the labour market.

Reingold (1999) investigates the employment problems of urban poor in areas of Chicago and argues that racial differences have a significant impact on the success of finding employment through social networks. Employment of friends and relatives are important in expanding employment opportunities for Whites and Puerto Ricans, while a higher percentage of employed friends does not increase the probability of employment through social networks for Blacks and Mexicans. He suggests that either employers do not trust references of employed friends and families of Blacks and Mexicans or that in both these groups employed workers are reluctant to function as an information broker. His findings would disprove Patterson's argument that affirmative action can level the playing field.

In the South African context, Standing, Sender and Weeks (1996) argue that:

> "[social networks] are more likely to promote or perpetuate forms of paternalistic labour relations, and are more likely to perpetuate forms of segmentation and stratification, for any group entrenched in some job strata is likely to encourage recruitment of others from that group. There may also be implications of the pattern of unemployment. With informal methods, it is more likely that someone will obtain employment if there is already someone in the household or kinship circle who is employed"(Standing, Sender and Weeks, 1996: 338).

The implication of this is that job creation programmes might not benefit the most marginalised households but rather households "who already have a firm foothold in the labour market" (Wittenberg, 1999: 37).

4.3 Social Networks: Facilitators or Constraints?

Given the importance of social networks in determining labour market outcomes, a major problem of networks is that "different social networks do not provide the same access to ideas, influence, and information" (McEntarfer, 2003: 5). What factors determine whether different network structures increase the probability of locating a job or the probability of getting a job?

Network analysis looks at different types of social networks and how they generate social capital. Social capital here is considered a "metaphor in which social structure is a kind of capital that can create for certain individuals or groups a competitive advantage in pursuing their ends" (Burt, 2000: 3). In this respect we can consider social capital as the "contextual complement to human capital" (Ibid: 2). Being part of a social network therefore becomes "an asset in its own right" (Ibid: 2) where capital refers to the "sum of resources, actual or virtual, that accrue to an individual or group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition"(Bourdieu & Wacquant in Burt, 2000: 2)

Although scholars agree on the social capital metaphor, they disagree on how these networks generate an advantage. When and how does the network create an advantage? What does it mean to be 'better connected'?

The structure of a social network describes the number and quality of links between individual A with other individuals. The quality of a link between two individuals is dependent on their relationship with one another. The more intensive their relationship the stronger is the link between them. According to Granovetter the strength of a tie can be defined by "a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (Granovetter, 1973: 1361).

It follows the simple idea that "the more frequently persons interact with one another, the stronger their sentiments of friendship for one another are apt to be"(Homan in Granovetter, 1973: 1362). Hence, one will associate friendships with people who are alike and the intensity of the interaction will increase the strength of this tie.

A weak tie would therefore be a question of degree whereby the combination of frequency and emotional interdependence is far less than for a strong tie. In other words, a "relative" or a "close friend" would be considered a strong tie because one would assume that the frequency and emotional interdependence of the relationship is high. Someone referred to as an "acquaintance" on the other hand would constitute a weak tie. The emphasis should lie on the word 'combination' with a higher weighting on the emotional interdependence. Even a high frequency relationship with an acquaintance still would constitute a weak tie if it does not lead to 'stronger sentiments of friendship'.

The probability that close friends of individual A, which whom she has got frequent contact, know each other and have also developed closer ties is very high. A group of people linked to one another by strong ties are called a 'clique'. Weak ties on the other hand are individuals who are not only unknown to the rest of individual A's

network, but who have ties to people which are unknown to individual A herself. (Ibid):1370.

How do networks facilitate access to resources which allows individual A to successfully pursue her goals? Two theories of social capital have developed out of this question. One theory looks at 'brokerage' between groups while the other focuses on the 'closure' of groups.

Scholars including Granovetter (1973, 1974) and Burt (2000) claim that 'brokerage' leads to information diffusion and therefore enhances the individual's access to a broader pool of information. They see social capital as a "function of brokerage opportunities" between different cliques. The gap between the two cliques, which leads to an interruption of the information flow, is described as a "structural hole"(Burt, 2000: 5). The function of the broker is to bridge this gap. "People on either side of a structural hole circulate in different flows of information. Structural holes are thus an opportunity to broker the flow of information between people, and control the projects that bring together people from opposite sides of the whole" (Ibid: 5).

The advantage of a weak tie is the opportunity to get access to a wider pool of information and reduce the risk of stagnation and exposure to redundant information. Burt identifies two sources of redundancy. "Cohesive contacts (contacts strongly connected to each other) are likely to have similar information and therefore provide redundant information benefits. Structurally equivalent contacts (contacts who link a manager to the same third parties) have the same sources of information and therefore provide redundant information benefits"(Ibid: 5)

Weak ties allow the individual to have access to information and ideas which are "socially distant from [the individual]" (Granovetter, 1973: 1371). According to the brokerage argument, social networks increase the probability of locating a job as more non-redundant information is circulated through the bridging of structural holes.

The main problem with the brokerage-as-social-capital argument is that it cannot explain the motivation which leads to the transmission of information from one closed network to another. Why would a member of a clique feel motivated to pass on information to an 'acquaintance' of another clique? Burt himself raises the issue by claiming that "information can be expected to spread across the people in a market, but it will circulate within groups *before* it circulates between groups"(Burt, 2000: 4 italics added). He continues to support this argument by stating that "a generic research finding in sociology and social psychology is that information circulates more within than between groups" which eventually results in the fact that "people are not simultaneously aware of opportunities in all groups. Even if information is of high quality, and eventually reaches everyone, the fact that diffusion occurs over an interval of time means that individuals informed early or more broadly have an advantage"(Ibid: 4).

It seems that the question of motivation is better answered by the 'closure' argument. "A closed network is one whose members have close connections to one another with no or relatively few connections outside the group. Within a closed network, the transmission or sharing of information is facilitated by the close links between

members, and sanctions facilitated by network closure reduce the risks associated with trusting fellow members. By facilitating the transmission of information within a network, network closure is a source of social capital for its members" (King & Waldegrave, 2003)

The main advantage of a closed network is the creation of non-tangible values like trust, solidarity and obligation. The high level of interdependence is created by the fact that either the welfare of the entire group will change with the actions of the individual members or that reputation among the members of the group have created a code of conduct which prevents members from free riding and moral hazard.

The closure argument is directly related to the transaction cost approach in institutional economics. Problems of coordination, motivation and commitment are key issues in the transaction cost approach. Incomplete information and asymmetric distribution of information (private information) give some agents power in the market through opportunistic behaviour. Adverse selection and moral hazard are normally outcomes of this problem where agents either hide information (adverse selection) or alter their behaviour after an agreement has been reached (moral hazard). "Fear of opportunism may deter parties from relying on one another as much as they should for efficiency" (Milgrom & Roberts, 1992: 128-129).

Why then are closed networks better equipped to address the problem of motivation? As Coleman puts it, "the consequence of [this] closure is ... a set of effective sanctions that can monitor and guide behaviour. Reputation cannot arise in an open structure, and collective sanctions that would ensure trustworthiness cannot be applied" (Coleman in Burt, 2000: 8-9).

Hence, while the governing rules of the strong tie seem to create stronger incentives for individuals to share with their other links, it seems that weak ties are more crucial in the diffusion of information through the bridging of strong networks. Granovetter illustrates this paradox of the workings of social networks. "A natural a priori idea is that those with whom one has strong ties are more motivated to help with job information. Opposed to this greater motivation are the structural arguments ... those to whom we are weakly tied are more likely to move in circles different from our own and will thus have access to information different from that which we receive" (Granovetter, 1973: 1371). This explains the counterproductive effect social networks can have on the probability of finding a job as was identified by Duff and Fryer (2004). Nevertheless, various examples as well as Granovetter's study have shown "the primacy of structure over motivation" (Ibid: 1371). As he recalls, "it is remarkable that people receive crucial information from individuals whose very existence they have forgotten" (Ibid: 1372)

The most effective network structure is a mixture between closure and brokerage. While bridging structural holes creates opportunities for the broker as well as for the closed network of the broker by giving the bridging individual access to new, non-redundant information, it is closure and the enforcement of motivation which ensures the actual distribution of the information. Burt concludes that "while brokerage across structural holes is the source of value added, closure can be critical to realizing the value buried in the structural holes"(Burt, 2000: 25).

Given the conflict between the closure and the brokerage argument, what conditions would make the use of social networks most effective? Boorman (1975) developed a model showing the transmission of job information through contact networks. His assumption about the dynamics of job information transmission follows a "hierarchical priority rule:

Priority rule:

a) If individual A needs a job, and hears directly of a vacancy, she takes it;
b) If individual A does not need it herself, she reviews her strong contacts and their needs; if any of these strong ties needs a job, individual A allocates the job at random to one of these contacts;
c) If none of individual A's strong contacts needs the job, the allocation rule b) is repeated using individual A's weak instead of her strong contacts" (Boorman, 1975: 222)

The priority rule shows that the probability of finding a job is higher the closer the job-seeker is to individual A given that the information about the vacancy is mainly transmitted through the recruitment network.

One can also assume that the motivation to give a contact a reference would follow a similar priority rule. It is more likely that individual A is willing to give a strong link a reference than a weaker link. According to Granovetter, the shorter the chain the higher is the probability of contacts "putting in a good word" (Granovetter, 1974: 58). At the same time one can assume that employers are more inclined to trust a reference of an existing employee for a relative or a close friend rather than for an acquaintance.

Thus, the potential to take advantage of one's social capital is dependent on one's position within various network structures. The further away from a particular individual that one wants to reach, the higher the costs of reaching and the lower the possible advantage generated through this contact. "There may be a distance (length of path) beyond which it is not feasible for [person A who needs the information] to communicate with [person B holding the information] because the costs or distortions entailed in each act of transmission. If A does not lie within the critical distance, then he will not receive messages originating from B" (Haray et al in Granovetter, 1973: 1364-1365).

The implication of the closure argument and Boorman's priority rule is that the success of social networks is determined by the proximity of the job-seeker to individuals who are either employed or members of the recruitment network. "The opportunities presented to individuals in the labour market are not easily separated from the individual's position in the social infrastructure. The worker's social network will determine what job opportunities he hears about as well as his likelihood of obtaining a particular job" (McEntarfer, 2003: 7). The main problem of the recruitment network is its exclusive nature. "The extended internal labour market is regarded as being the most 'closed' channel because a job-seeker has to have a friend or a relative in the firm in order to be able to find out about a job"(Manwaring, 1984: 162). Although weak ties might lead to higher information diffusion through brokerage, in times of high unemployment such crucial information like the knowledge of open vacancies are less likely to leave the circle of a closed network, i.e. the probability that the information will be passed on through weak ties is

reduced. The implications are significant. The search success is determined by the overlap of the job-seeker network with the recruitment network. The better the overlap between the two networks, the higher is the probability of locating and getting a job, and vice versa. Even a broad network will not generate an employment advantage to the individual when the contacts themselves are not part of the recruitment network.

In conclusion we can say that social networks are facilitators as well as constraints. Simply being part of a social network does not give equal access to the labour market compared to members of other social networks. The proximity of the job-seeker to the recruitment network is crucial. Thus, having friends and family who are employed increases the overlap of the supply side network and the recruitment network. Not having these contacts renders the use of social networks less effective for the job-seeker. We can therefore assume that the availability of contacts determines the decisions of the job-seeker to utilize these social networks.

In the following study we concentrate on the quantity of contacts not on the quality of networks. Although the quality of networks is crucial in the analysis of social networks, the data of the unemployed job searchers did not generate sufficient information to do this kind of investigation. We do have some information on the quality of networks from workers who got employed through networks. Therefore, when it is possible we also interpret the results with respect to the quality of the network

5. Empirical Analysis of Search Activity in the Khayelitsha/Mitchell's Plain Survey

In 2000 the Southern African Labour and Development Research Unit (SALDRU) in collaboration with the Institute for Social Research (ISR) of the University of Michigan developed and conducted a survey in the magisterial district of Mitchell's Plain. This area houses almost three quarters of the African and over a fifth of the Coloured Cape Town metropolitan population.

The aim of the survey was to establish a better picture of labour market issues by exploring "the extent to which livelihoods, and in particular labour market behaviour, involved individuals in multiple activities [because] high poverty and unemployment rates in South Africa necessitate that households involve their members in multiple activities as part of their livelihood strategies"(SALDRU, 2003: 2).

Although the survey is neither representative of the Cape Town metropolitan area nor of South Africa as a whole by only looking at an urban sample of mainly members of the African and coloured working class, it can give valuable insights into factors which influence the search behaviour of the semi- and unskilled unemployed.

5.1. Descriptive Analysis of Search Activity in Khayelitsha/Mitchell's Plain

In total, 2644 adults in 1176 households responded to questions about their individual characteristics and their labour market activities. For the purpose of this thesis, we will concentrate on the previous search activities of currently wage employed workers and the search activities of the unemployed to identify the importance of various search strategies and the factors which constrain or facilitate the pursuit of these search strategies.

5.1.1 Successful Employment Methods of the Currently Wage Employed

Table 2. summarises how currently employed workers found their jobs.

Table 2: Breakdown of how the Employed found Current Wage Job

Successful Employment method	Number	Percentage
1 Newspaper ad	77	9,8
2 HH member told me about job	77	9,8
3 Different HH told me about job	304	38,5
4 HH member got me a job	32	4,1
5 Different HH got me a job	83	10,5
6 Went to factory	87	11,0
7 Knocked on gates/doors	68	8,6
8 Employment agency	30	3,8
9 Previous employer	23	2,9
10 Waited side of the road	3	0,4
11 Notice boards	5	0,6
Total	789	100

Source: KMP 2000, own calculations

Around 63% of the currently employed workers found employment through social networks, i.e. where friends or family either told the job-seeker about a job or organized a job for the job-seeker at the contact's workplace. It is interesting to see the significance of networks outside of the own household. Friends and relatives of a different household are an important factor in job search. Almost 50% of the currently employed found employment through friends and family living in different households. Of these, it shows that having a wide network of friends and family gives job searchers better access to the labour market and to relevant market information. Of the employed, 38.5% reported that they received information about available jobs from friends and family outside of the job-seeker's household.

As the table shows, networks in general fulfil the crucial role of an information transmitter which increases the probability of locating a job. Close to 50% of the currently employed were informed about an available job by household members or by members of a different household. Contacts function to a lesser extent as a direct entrance into employment, i.e. the probability of getting a job. Less than 15% of the employed had contacts who could organize a job for the job-seeker at the contact's workplace. Again, contacts outside of the job-seeker's household were more important in facilitating direct access to employment (10.5%) than household members (4.1%).

In this thesis we are concerned with the ways in which the unemployed can get access to wage employment. We therefore have to distinguish between the employment methods of the currently employed who were employed before they changed to their current job and workers who were unemployed before they started their current job. We refer to the first group as 'on-job-searchers' who did not change their labour market status, and the second group as 'previously unemployed' who changed their labour market status from unemployment into employment.

Table 3: Breakdown of 'On-job-searchers' and 'Previously Unemployed'[14]

Successful Employment method	On-job-searcher		Previously unemployed	
	Number	%	Number	%
1) Newspaper advertisement	39	11.8	37	8.7
2) HH member told me about job	31	9.4	44	10.4
3) Different HH told me about job	121	36.5	164	38.7
4) HH member got me a job	12	3.6	20	4.7
5) Different HH got me a job	39	11.8	41	9.7
6) Went to factory	28	8.5	56	13.2
7) Knocked on gates/doors	28	8.5	37	8.7
8) Employment agency	15	4.5	15	3.5
9) Previous employer	13	4	7	1.7
10) Waited side of the road	2	0.6	1	0.2
11) Notice boards	3	0.9	2	0.5
Total	331	100[15]	424	100

Source: KMP 2000, own calculations

[14] Total number of on-job-searcher and previously unemployed do not add up to total number of currently employed because of missing observations.
[15] Percentages do not perfectly add to 100% because of rounding.

Looking at table 3 we can see that the majority of members in both groups found employment through the help of friends and relatives. Slightly more previously unemployed found employment through social networks (63.5%) compared to on-job-searchers (61.3%). Interestingly, it was more important for the previously unemployed to get access to information about open vacancies. Almost 50% of the previously unemployed found employment after friends and relatives told them about the vacancy compared to 45.9% of the on-job searchers.

On-job searches are more successful in the use of formal channels in that 16.2% of them found their current employment through answering newspaper advertisements or employment agencies compared to 12.2% of the previously unemployed. On the other hand, more previously unemployed were successful in finding employment through going to factories.

Table 4: Characteristics of the Previously Unemployed

Search method	Race		Gender		Age		Education (years)		Total
	Afr	Col	M	F	Med	Mean	Med	Mean	
Newspaper	**24** (8; 65)	**13** (10; 35)	**15** (7; 40)	**22** (11; 60)	**28**	**30**	**12**	**10.5**	**37**
HH Info	**23** (8; 52)	**21** (17; 48)	**19** (9; 43)	**25** (12; 57)	**26**	**27**	**10**	**9.5**	**44**
Oth HH Info	**107** (36; 65)	**57** (46; 35)	**77** (36; 47)	**87** (42; 53)	**29**	**31**	**9**	**8.8**	**164**
HH job	**18** (6; 90)	**2** (2; 10)	**10** (5; 50)	**10** (5; 50)	**26**	**27**	**9**	**9**	**20**
Oth HH job	**29** (10; 70)	**12** (10; 30)	**27** (12; 66)	**14** (7; 34)	**28**	**30**	**9**	**8.5**	**41**
Went to factory	**49** (16; 88)	**7** (6; 12)	**40** (18; 71)	**16** (8; 29)	**28**	**30**	**9**	**8**	**56**
Knocked on gates/doors	**33** (11; 89)	**4** (3; 11)	**19** (9; 51)	**18** (9; 49)	**29**	**31**	**8**	**8**	**37**
Empl agency	**11** (4; 73)	**4** (3; 27)	**8** (4; 53)	**7** (3; 47)	**28**	**29**	**11**	**10**	**15**
Previous Employer	**4** (1; 58)	**3** (2; 42)	**2** (1; 29)	**5** (2; 71)	**29**	**30**	**10**	**9**	**7**
Side of road	**1** (0; 100)	**0** (0; 0)	**0** (0; 0)	**1** (.5; 100)	**No obs.**	**No obs.**	**0**	**0**	**1**
Notice board	**1** (0; 50	**1** (1; 50)	**2** (1; 100)	**0** (0; 0)	**39**	**39**	**12**	**12**	**2**
Total/Avg	**300** (100; 71)	**124** (100; 29)	**219** (100; 52)	**205** (100; 48)	**28**	**30**	**9**	**8.9**	**424**

Source: KMP 2000, own calculations, **Number** (Column %; Row %)

The majority of African workers (60%) used networks with 44% getting an advantage by increasing their probability of finding a job and 16% using networks to improve their probability of getting a job. Among the coloured workers, 75% used networks to get employed. Of these, 63% were informed about vacancies while for only 12% the job was organized by the contact. Thus networks are far more important for Coloured job-seekers in terms of creating an advantage in locating a job. In terms of active methods, a significantly higher proportion of Africans goes from place to place. More than one quarter of the African workers (27%) went to factories and/or knocked on doors while only 9% of the coloured workers were travelling to find work.

Women are slightly more successful in getting employed through social networks than men with 66% of the female workers compared to 62% of the male workers. Getting access to information and thereby increasing the probability of locating a job was more important for women with 54% of the female employed getting informed about job opportunities compared to 45% of all men. On the other hand, getting into the job through the reference of a contact was more important for men with 17% of the male employed compared to 11% of all female employed. Females are more successful in getting employed through formal channels while 27% of all men found employment through directly contacting the employer.

In terms of age, most of the previously unemployed were around 30 years old at the time of their employment. The exceptions to this are the workers who got employed either by a member of the household telling them about a vacancy or where a household member organized employment for them at the household member's workplace. These were on average 3 years younger than all other workers. In line with McEntarfer's claim (2003) this might indicate that older household members look out for their younger members or that networks are still quite limited to the household for younger work seekers while older work-seekers have a more extended social network on which they can draw.

Educational levels do not differ significantly among the workers. Nevertheless, the results support Duff and Fryer's findings (2004) that formal methods correlate with higher educational attainments. What is interesting is the similar pattern of the network searchers. Workers who found employment through household members have slightly more years of education than workers who found employment through the help of members of different households. This might again suggest that the workers who got help from household members might be younger workers with higher educational levels, but who need some support to get into the job market.

Therefore, how effective are certain search methods in terms of the duration of unemployment as well as wage differentials?

Table 5: Characteristics of the Previously Unemployed

Search method	Wage[16]		Length of unemployment		HH Empl. While Unemp.		Total
	Med	Mean	Med	Mean	Yes	No	
Newspaper	**1634**	**2188**	**12**	**24**	**10** (8,27)	**27** (9,73)	**37** (9,100)
HH Info	**1550**	**1617**	**12**	**23**	**24** (20,55)	**20** (7,45)	**44** (10,100)
Oth HH Info	**1375**	**1650**	**24**	**31**	**59** (50,35)	**105** (34,64)	**164** (39,100)
HH job	**1290**	**1382**	**30**	**36**	**8** (7,40)	**12** (4,60)	**20** (5,100)
Oth HH job	**1200**	**1630**	**18**	**32**	**7** (6,17)	**34** (11,83)	**41** (10,100)
Went to factory	**1400**	**1615**	**23**	**34**	**4** (3,7)	**52** (17,93)	**56** (13,100)
Knocked on gates/doors	**1200**	**1344**	**15**	**24**	**2** (2,5)	**35** (11,95)	**37** (9,100)
Empl agency	**1634**	**1847**	**12**	**29**	**2** (2,13)	**13** (4,87)	**15** (4,100)
Previous employer	**980**	**1090**	**6**	**12**	**3** (3,43)	**4** (1,57)	**7** (2,100)
Side of road	**360**	**360**	**16**	**16**	**0** (0,0)	**1** (0,100)	**1** (0,100)
Notice board	**2600**	**2600**	**95**	**95**[17]	**0** (0,0)	**2** (1,100)	**2** (0,100)
Total/Avg	**1400**	**1646**	**16.5**	**30**	**119** (100,28)	**305** (100,72)	**424**

Source: KMP 2000, Own Calculations, **Number** (Column %; Row %)

Wage differentials of different employment methods can evolve from various factors. These include different economic sectors, time spent on the job, educational levels, race and gender. Nevertheless, the findings do seem to support Duff and Fryer's argument that the search method is to some extent a proxy for the ability to send a signal of quality. Formal channels yield the highest wage rates while place-to-place methods give access to low paid jobs. Wages of social network jobs are below wages of formal channels but significantly higher than place-to-place jobs.

One measure of the effectiveness of a search method could be the length of time the person was unemployed before finding employment. This has to be treated with caution as we do not know for how long the unemployed had pursued the search method. He or she might also have pursued other search methods before the method which eventually enabled him or her to get employed. Generally, people are on average unemployed for two to three years. Except for household members telling the job searcher about a job, all other network methods take very long to get a job-seeker employed. It is possible that job-seekers start off looking for work through active channels and as the duration of their unemployment prolongs they rely increasingly

[16] 'Wage' was calculated using 'basic wage' (e9) and the payment modus (e8). The basic wage was multiplied by 28 for a daily wage, by 4 for a weekly wage, by 2 for a biweekly wage, and by 1 for a monthly wage.

[17] Two observations: 3 and 186 months

on social networks to find employment. Another explanation might be that there is no pressure on the unemployed to find employment. The third column shows how many of the previously unemployed lived in households which had at least one employed member. Proportionally more network employed lived in households with employment than active channel employed did. This could mean two things: firstly, household employment does give better access to the labour market and these contacts are used to gain an advantage, at the same time household employment might extend the length of unemployment as it raises the reservation wage.

As we want to understand how search affects the probability of getting employed, it is crucial to look at the search activities of the previously unemployed. The previously unemployed were asked in the survey if they had engaged in any kind of search activity during the last month of their unemployment.

Table 6. Search Methods used by Previously Unemployed while Unemployed

Successful method of employment	**Search Methods used while Unemployed**											
	1	2	3	4	5	6	7	8	9	10	11	Total[18]
1) Newspaper	34	27	26	25	25	19	17	17	16	3	15	37
2) HH Info	29	36	39	36	39	21	16	10	9	8	18	44
3) Oth HH Info	97	144	162	148	155	104	96	53	57	37	68	164
4) HH Job	9	17	17	18	17	14	11	7	5	6	5	20
5) Oth HH Job	18	30	36	29	34	26	22	17	14	11	16	41
6) Going to factories	22	42	44	44	45	51	39	17	19	15	25	56
7) Knocking on doors/gates	15	24	25	23	25	27	29	9	9	11	14	37
8) Empl agency	7	7	7	9	8	5	5	9	3	2	4	15
9)Prev. Employer	4	6	7	5	7	5	5	1	6	1	2	7
10) Side of road	1	1	1	1	1	1	1	0	0	1	1	1
11)Notice boards	1	0	0	0	0	1	1	1	1	0	2	2
Total	237	334	364	338	356	274	242	141	139	95	170	424

Source: KMP 2000, own calculations

These results have to be interpreted with caution. The average time passed since the previously unemployed engaged in these search activities is around five years. One has to wonder therefore to what extent the respondents can still remember their activity in the last month of their unemployment. Especially, one might expect that they remember all activities which they have ever engaged in without necessarily being able to place these activities in a particular time period. This then would be one explanation for the high number of mix strategy searchers.

Nevertheless, the majority indicates that they did engage in the search activity which eventually has led to their employment (shaded area). Furthermore, it is interesting to see that workers who got employed through active channels also pursued passive search methods and vice versa.

[18] We cannot say how many respondents answered this question as multiple answers were possible.

But which search methods do they actually consider to be most appropriate for their level of skill and experience?

Table 7. Best Search Method for Skill Level (Previously Unemployed)

	Best search method for skill level and experience												
Successful method of employment	1	2	3	4	5	6	7	8	9	10	11	Other	**Total**
1) Newspaper	20	0	2	0	0	1	0	7	1	0	0	3	34
2) HH Info	6	11	5	3	1	3	3	1	0	0	0	2	35
3) Oth HH Info	28	17	53	0	4	12	15	10	3	0	2	3	147
4) HH Job	5	2	1	3	1	2	4	0	0	0	0	0	18
5) Oth HH Job	7	1	7	0	10	3	1	0	1	0	1	3	34
6) Going factories	9	2	8	2	1	15	3	3	0	0	0	2	45
7) Knock on doors	5	2	2	2	2	2	14	3	0	0	0	1	33
8) Empl agency	4	0	0	0	0	2	2	3	0	0	0	1	12
9) Prev. Employer	3	0	1	0	0	0	0	0	0	0	0	2	6
10) Side of road	0	0	0	0	0	0	0	0	0	1	0	0	1
11) Notice boards	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	87	35	79	10	19	40	42	27	5	1	5	17	367

Source: KMP 2000, Own Calculations

Only the respondents who were either picked up at the side of the road or looked at notice boards to find employment consider this search method to be the most appropriate for their experience and level of skill. Among the workers who found employment through newspaper advertisements, 41% said that this is not the best search method for their level of skill and experience. Only 6% of them would use social networks as their main search method, while 20% would use employment agencies. A similar pattern is reported by the workers who went through employment agencies. Both groups consider social networks as less appropriate for looking for a job. If one considers all types of social networks as one search method, it is still remarkable that almost 50% of all successful social network employed consider active search methods as more appropriate. This either indicates that they pursued active as well as passive search methods during their unemployment (as was indicated in table 6) or that various factors hindered them from using active search methods. A similar question could be asked about the direct-contact employed. Between 25% and 30% of them consider social networks as more appropriate.

If it is the case that most previously unemployed pursued active as well as passive search methods, what factors distinguish the workers who found employment through active channels from the workers who found employment through social networks?

Table 8: Logistic Regression of Employment Method

Logit: Network employed '1' Active Employed '0'	
Male	**-.2402** (.2446)
Coloured	**.3679**† (.2723)
Age	**-.0052** (.0134)
Education	**-.0859*** (.0464)
No Education	**-1.7508**** (.6910)
Married	**-.5339**** (.2585)
Unemployment Length	**.0030** (.0030)
HH Employment (at time of getting employed)	**1.1975***** (.2931)
Wage (Basic)	**-8.04e-06** (.0001)
Constant	**1.414*** (.7482)
Number of observations	**396**
LR chi2(9)	**41.34**
Prob > chi2	**0.0000**
Pseudo R2	**0.0800**

Significance levels: † between 10-20%, * 10%; ** 5%; and *** 1%

The most striking result of the regression is the significance of employment in the household at the time when the currently employed found employment. It is interesting that the most significant difference between passive and active method employed is the presence of at least one employed household member. This gives support to the argument that the position of the job-seeker with regard to the recruitment network is crucial.

It is surprising how little individual characteristics explain the employment method. Gender and age are statistically insignificant. Race is only weakly significant but it suggests that more members of the coloured community are successfully employed through social networks. This might be explained by the fact that the coloured community has got a lower unemployment rate[19] (broad unemployment rate of 35%) compared to the African community (broad unemployment rate of 51%) and that social networks are still mainly along racial lines. Generally, the statistical insignificance of these individual characteristics might be the outcome of the

[19] Broad unemployment rate for KMP calculated with all employment categories (not only wage employment) and broad unemployment.

aggregation of the various search methods. A more disaggregated breakdown might give better insights.

Although the regression indicates that social network employed are less involved in close relationships (married or living with partner), this result has to be interpreted with caution as this variable refers to the current marital status of the respondent, not to the status at the time of looking and finding employment. We do not know if the marital status of the respondent changed. It could have been that the marital status had an impact on the search method. On the other hand, it could also be that the marital status changed after the respondent got employed.

The results also seem to support the claim that years of education do explain the difference between the two groups. More education would increase the probability of the searcher using active search methods. By controlling for some education compared to no education at all, network employed nevertheless exhibit more exposure to education. Again, this seems to support Duff and Fryer's argument (2004) that the search method is an indicator of ability with highly educated job-seekers using formal channels and less educated job-seekers having to rely either on social networks or on directly contacting employers.

The inclusion of the wage variable in the regression is problematic. Wage differentials themselves are explained by gender, race, age, education and maybe even the search method itself. Excluding the wage variable did not change the outcome of the regression or the coefficients significantly. The insignificance of the wage variable might also be the outcome of the aggregation of the whole range of all search methods into only 2 strategies. Duff and Fryer's breakdown (2004) might give better insights into the relationship between the search method and the wage differentials. Nevertheless, for the purpose of this thesis, we are less concerned with the success of the search method measured in wages but rather with factors influencing the choice of the search method.

In summary we can say that the main distinction between workers who got employed through social networks and workers who got employed through active channels was their position in the various network structures. Network employed seemed to have been closer to the recruitment network.

5.1.2 Unemployed Searchers and Their Search Methods

Given the above results what kind of search behaviour do the currently unemployed engage in?

Table 9. : Search Strategies of Currently Unemployed in KMP Survey

Search Strategy	Number	Percentage
Exclusive Active	235	24
Exclusive Passive	143	15
Mixed Strategy	260	27
Non Searching	334	34
Total	972	100

Source: KMP 2000, own calculations

These categories have been adapted from Nattrass (2003). The main difference lies in the breakdown of the active searchers into exclusive active searchers and searchers who use active channels as well as social networks. The latter group is referred to as mixed strategy searchers. This allows us to investigate more precisely the factors which influence the choice of the searcher to employ either active search methods or passive search methods. Respondents were allowed to give multiple answers which make an even more disaggregated breakdown of the search methods of the unemployed impractical.

The data shows that more than one third of the unemployed who want a job are not searching. Of all the unemployed, 24% use exclusively active search methods, 15% rely exclusively on the assistance of friends and relatives while the remaining 27% use a mixed strategy of active and passive search channels.

It was argued in the theoretical framework that the choice of the search method is a mixture of feasibility and effectiveness. The survey asked the unemployed to evaluate the effectiveness of certain search methods for the respondent's level of skill and experience. Respondents were not asked directly about the feasibility of certain search options except for some general questions on aspects which can impact on the ability to search. We therefore do know which search methods the respondents perceive to be the most effective for them. In addition, we know which search methods they pursue, but we do not know why they chose these methods, or more particularly, why some searchers do not pursue methods which they perceive to be more appropriate. Respondents were not asked why they decided not to pursue certain search methods. Hence, we do not know the mental state of the respondent and what factors led to the decision to engage in a particular search strategy.

Nevertheless, following the theoretical framework with regard to aspects which make a search option effective and feasible, we can analyse characteristics of the different search groups in order to deduce possible reasons for choosing the type of search activity.

Table 10. Individual Characteristics of Currently Unemployed

Search method	Race		Gender		Age		Education (Years)		Total
	Afr	Col	M	F	Med	Mean	Med	Mean	
Excl. active	**185** (24; 79)	**50** (25; 21)	**100** (29; 43)	**135** (21; 57)	**27**	**31**	**9**	**8.6**	**235**
Excl passive	**109** (14; 76)	**34** (17; 24)	**47** (13; 33)	**96** (15; 67)	**28**	**30**	**9**	**8.3**	**143**
Mix Strategy	**214** (28; 82)	**46** (23; 18)	**118** (34; 45)	**142** (23; 55)	**27**	**30**	**9**	**8.9**	**260**
Non search	**264** (34; 79)	**66** (34; 21)	**85** (24; 25)	**249** (40; 75)	**29.5**	**33**	**8**	**7.9**	**334**
Total/Avg	**771** (100; 80)	**196** (100; 20)	**350** (100; 36)	**622** (100; 64)	**28**	**31.4**	**9**	**8.4**	**972**

Source: KMP 2000, own calculations, **Number** (Column %; Row %)

Table 10 shows the individual characteristics of the unemployed who want a job. The total racial breakdown mirrors the demographic characteristic of the Mitchell's Plain magistrate. Proportionally, the same amount of African unemployed and Coloured unemployed are either non-searching or exclusively active searchers. More Coloured

searchers rely on exclusive network search while more African Unemployed pursue a mixed strategy of active and passive search.

In terms of gender differences, in the entire sample there are almost double as many females as men. Females are proportionally more represented in the non-searching group compared to men with a ratio of 3:1. Active and mixed strategies are more important for men while females rely more on social networks to find a job. Thus, gender seems to strongly determine the intensity of search with females having to rely on passive search or do not search at all.

The unemployed are on average 30 years and older with the majority of the searchers being younger than 30. Non-searchers are the oldest group which might indicate discouragement while the searching unemployed do not show any particular age differences.

None of the unemployed groups exhibit very high levels of education with an average number of 8.4 years. The non-searching unemployed show the lowest level of education followed by the exclusive network searchers. The mixed strategy searcher received the highest level of education. These results can be misleading because of the aggregation of the search methods. Following Duff and Fryer (2004), one could expect that newspaper advertisement searchers and unemployed workers registered with an employment agency might have more years of education.

Table 11.: Individual Characteristics of Currently Unemployed

Search method	Length of Unemployment		Local (CT)		Total
	Med	Mean	Yes	No	
Excl. active	**24**	**38**	**54** (25,25)	**165** (24,75)	**219** (32,100)
Excl passive	**24**	**38**	**40** (19,30)	**95** (14,70)	**135** (15,100)
Mix Strategy	**24**	**34.5**	**53** (25,22)	**191** (28,78)	**244** (27,100)
Non search	**24**	**50**	**69** (32,23)	**230** (34,77)	**299** (33,100)
Total/Avg	**24**	**41**	**216** (100,24)	**681** (100,76)	**897**

Source: KMP 2000, own calculations, **Number** (Column%; Row%)

The majority of the unemployed have been unemployed for up to 2 years. The length of unemployment according to the search method is difficult to interpret. The reason that mixed strategies have the shortest length of unemployment might either indicate that this is the most effective search method in finding employment or that searchers pursue all possible search methods in the beginning of their unemployment while they focus on either active or passive search as the unemployment spell drags on. It could also indicate that mixed strategy search is the more successful search strategy. A breakdown of the different lengths of unemployment though does not reveal any particular pattern (see Appendix Table A1).

Proportionally, locally born job-seekers are more inclined to rely on social networks exclusively while more migrants pursue a mixed strategy.

In the theoretical framework we argued that household characteristics have a crucial impact on the choice of the search method as they either constrain or facilitate search. Table 12 shows various household characteristics which can influence the search behaviour of the unemployed.

Table 12. Household and Labour Market Characteristics of Currently Unemployed

Search method	HH employment		Labour Market contacts		HH Income per Cap[20]		HH Adult size	HH Child size	Total
	Yes	No	Yes	No	Med	Mean			
Excl. active	**116** (25; 49)	**119** (24; 51)	**95** (21; 40)	**136** (27; 60)	**200**	**273.2**	**3.41** (1.71)	**1.72** (1.81)	**235**
Excl passive	**77** (16; 54)	**66** (14; 46)	**86** (19; 60)	**53** (10; 40)	**233**	**318.4**	**3.52** (1.66)	**1.67** (1.57)	**143**
Mix Strategy	**117** (25; 45)	**143** (28; 55)	**153** (34; 59)	**107** (20; 41)	**200**	**270.2**	**3.40** (1.63)	**1.56** (1.41)	**260**
Non search	**157** (34; 48)	**177** (35; 52)	**117** (26; 35)	**215** (42; 65)	**211**	**286.4**	**3.13** (1.56)	**1.82** (1.59)	**334**
Total/Avg	**467** (100; 48)	**505** (100; 52)	**451** (100; 46)	**511** (100; 53)	**200**	**283.5**	**3.33** (1.64)	**1.7** (1.62)	**972**

Source: KMP 2000, own calculations, **Number** (Column%; Row% or Standard Error)

Exclusive network searchers are the only group which has a positive household employment ratio. More exclusive network searchers live in households with employment than without. As mentioned above, this could either mean that passive searchers are living off other employed members of the household or that the employed member increases the probability of locating and getting a job with very low search costs. What is surprising is that of all the different search groups, mixed strategy searchers have the lowest household employment ratio. This might indicate that they have to rely more on the assistance of friends and family in other households.

This seems to be confirmed when one looks at the number of unemployed who claim that they have contacts that can get them access to the labour market. Non searchers have got the lowest number of contacts to the labour market, followed by the exclusive active searchers. Exclusive network searchers as well as mixed strategy searchers have a positive ratio of labour market contacts with exclusive network searchers being the most connected group of the unemployed. This suggests that the choice of the search method is strongly influenced by the number of labour market contacts. The more contacts are available the lower is the incentive to search actively. The less contacts that are available the more likely is the job searcher to start to engage in active search until the searcher either relies exclusively on active search or stops searching.

Household income per member of the household is the smallest for mixed strategy searchers. Exclusive active searchers have on average only slightly more per capita household income compared with the mixed strategy searchers. Non searchers and exclusive network searchers live in households with significantly higher per capita household incomes, of which the exclusive network searchers have got the highest per capita household income. Although this could be the outcome of outliers in the data, the higher median indicates that the majority of the households do show higher incomes per person. This might indicate that non-searchers are voluntarily

[20] This is not adjusted for children or economies of scale (adult equivalence).

unemployed and social network searchers have little incentive to search more intensively.

On average, social network searchers live in households with more adult members. Exclusive active and mixed strategy searcher households have only slightly less adult members in the household while non-searchers live in households with the lowest number of adults. In terms of children, mixed strategy searchers have the lowest number of children in the household and non searchers have the highest number of children. Non searchers therefore might be constrained in pursuing active search because of being tied up in domestic duties while they lack the labour market contacts to rely on social networks.

Table 13. Search Behaviour of other Household Members

Search method	HH Active Search		HH Passive Search		HH Mixed Strategy Search		Total
	Yes	No	Yes	No	Yes	No	
Excl. active	**42** (26; 18)	**193** (24; 82)	**19** (22; 8)	**216** (24; 92)	**46** (24; 20)	**189** (24; 80)	**235**
Excl passive	**18** (11; 13)	**125** (15; 87)	**23** (26; 16)	**120** (14; 84)	**25** (13; 17)	**118** (15; 83)	**143**
Mix Strategy	**48** (30; 18)	**212** (26; 82)	**28** (32; 11)	**232** (26; 89)	**69** (37; 27)	**191** (25; 73)	**260**
Non search	**54** (33; 16)	**280** (35; 84)	**18** (20; 5)	**316** (36; 95)	**49** (26; 15)	**285** (36; 85)	**334**
Total/Avg	**162** (100; 17)	**810** (100; 83)	**88** (100; 9)	**884** (100; 91)	**189** (100; 19)	**783** (100; 81)	**972**

Source: KMP 2000, own calculations, **Number** (Column%; Row%)

Table 13 shows the number of searchers living in households which have at least one other household member who engages in search[21]. Thus, 42 exclusive searchers live in households were at least one other household member engages in exclusively active search. The majority of mixed strategy searchers (56%) live in households with at least one other member engaging in search. Only 46% of both exclusive active and exclusive passive searchers live in households with other searching members while only 36% of the non searchers live in households where at least one member reports to engage in some kind of search activity.

Among the exclusive active searchers and the mixed strategy searchers, 18% of each group live in households where other household members pursue exclusive active search. Social network searchers have the lowest number of exclusive active searchers in their households. In terms of passive search, proportionally more social network searchers live in households where at least one more member is an exclusive network searcher than any other search group, followed by mixed strategy searchers. With regard to mixed strategy search in households, all searching groups have, compared to other household search methods, more mixed strategy searching members in their household. More than one quarter of the mixed strategy searchers (27%) live in households with other mixed strategy searchers. The above findings suggest that the choice of the search method is a household-level characteristic. The household seems to create some kind of search culture.

[21] The variable shows a rough indicator of other search activity in the household. The search behaviour of the respondent is subtracted from the household search for the same search strategy in order to prevent double counting.

After we have established the individual and household characteristics of the various unemployment groups, the question is which search method do they perceive to be the most appropriate.

Table 14: Best Search Method for Skill Level (Currently Unemployed)

Best Search method	Non Search	Excl Pass	Excl Act	Mix Str.	Total
1) Newspaper	**67** (21,30)	**26** (19,12)	**73** (33,33)	**55** (21,25)	**221** (23,100)
2) HH Info	**53** (16,44)	**20** (14,17)	**19** (9,16)	**28** (11,23)	**120** (13,100)
3) Oth HH Info	**56** (17,34)	**42** (30,25)	**26** (12,16)	**43** (17,26)	**167** (18,100)
4) HH Job	**7** (2,17)	**7** (5,17)	**5** (2,13)	**21** (8,53)	**40** (4,100)
5) Oth HH Job	**19** (6,33)	**4** (3,7)	**14** (6,25)	**20** (8,35)	**57** (6,100)
6) Going factories	**44** (14,33)	**15** (11,11)	**35** (16,27)	**38** (15,29)	**132** (14,100)
7) Knock on doors	**41** (13,41)	**11** (8,11)	**26** (12,26)	**22** (9,22)	**100** (11,100)
8) Empl agency	**10** (3,29)	**4** (3,12)	**9** (4,26)	**11** (4,32)	**34** (4,100)
9) Prev. Employer	**5** (2,38)	**2** (1,15)	**3** (1,23)	**3** (1,23)	**13** (1,100)
10) Side of road	**0** (0,0)	**0** (0,0)	**1** (0,33)	**2** (1,66)	**3** (0,100)
11) Notice boards	**4** (1,44)	**1** (1,11)	**1** (0,11)	**3** (1,33)	**9** (1,100)
Other[22]	**18** (6,38)	**7** (5,15)	**11** (5,23)	**11** (4,23)	**47** (5,100)
Total	**324** (100,34)	**139** (100,15)	**223** (100,24)	**257** (100,27)	**943**

Source: KMP 2000, own calculations, **Number** (Column%; Row%)

Table 14 reports the search methods which the currently unemployed perceive to be the best way to find a job given their skill level and experience. Non-searchers do not show any particular pattern of preference with 41% of them considering passive search methods to be the best way to look for a job. Mixed strategy searchers indicate that all methods are appropriate with 44% of them stating that passive search is the best way.

It is surprising that 47% of the exclusive network searchers consider active search methods as the best way of looking for a job (non-shaded area of exclusive network search column), while 29% of the exclusive active searchers report the use of social networks as the most effective way of finding a job (non-shaded area of exclusive active search column). This clearly indicates that the choice of the search method is to some extent constrained, i.e. the search strategy is a compromise between what is perceived to be the best way to look for a job and what is feasible.

[22] 23 of the "Other" methods refer to participate in training courses, while the rest is a mainly a mixture of not knowing, approaching Trade Unions, or starting an own business.

What constrains the searchers from pursuing more active search?

Table 15. Constraints to Search

Search method	Domestic Duties	Health Problems		Hunger		Total
		Yes	No	Yes	No	
Excl. active	**0.73** (1.20)	**24** (22; 11)	**201** (24; 89)	**46** (24; 21)	**178** (23; 79)	**225** (24,100)
Excl passive	**1.14** (1.46)	**25** (23; 18)	**116** (14; 82)	**33** (18; 23)	**108** (14; 77)	**141** (15,100)
Mix Strategy	**0.68** (1.18)	**20** (18; 8)	**235** (28; 91)	**50** (27; 20)	**205** (27; 80)	**255** (27,100)
Non search	**1.10** (1.48)	**42** (38; 13)	**282** (34; 87)	**58** (31; 18)	**268** (35; 82)	**324** (34,100)
Total/Avg	**0.9** (1.35)	**111** (100; 12)	**834** (100; 88)	**187** (100; 20)	**759** (100; 80)	**945**

Source: KMP 2000, own calculations, **Number** (Column%; Row% or Standard Error)

Looking at table 15 we can see that the various search methods experience different levels of constraints. Exclusive network searchers are mainly tied up in domestic duties which seems to give them no time to pursue more active search methods. Non searchers, also having on average the highest number of children in the household, are also constrained by domestic duties but not as much as exclusive network searchers. Exclusive active searchers and mixed strategy searchers are the least constrained groups with respect to domestic duties.

A similar picture emerges when we look at health problems. Again, social network searchers are most hampered by health problems with 18% of them reporting that health problems have more than occasionally interfered with their ability to look for a job. Search groups which pursue more active search methods are less hindered by health problems.

Finally, although proportionally more social network searchers have indicated that hunger interfered with their ability to search for a job, all search groups seem to experience this problem to some extent.

Respondents were asked to evaluate a set of conditions by indicating if a change in the condition would impact on the search behaviour. Although we cannot conclude from the answer to a hypothetical change in a condition that the respondent would really behave in such a way, this can give us some insights into the mental state of the respondent and the perception of what influences the search behaviour.

Table 16: Conditions Affecting Job Search Behaviour of the Unemployed

Condition	Non Search	Excl Pass	Excl Act	Mix Str.
Search not worth money of transport	**3.43** (1.24)	**3.27** (1.33)	**3.44** (1.24)	**3.40** (1.35)
High unemployment, thus pointless searching	**2.93** (1.31)	**2.76** (1.53)	**2.71** (1.39)	**2.87** (1.42)
Employer favour friends and family of employed	**4.10** (1.06)	**4.27** (1.03)	**4.15** (1.04)	**4.26** (.98)
Generally: more jobs more search	**4.13** (.99)	**4.32** (.83)	**4.10** (.99)	**4.32** (.93)
More jobs, more act search	**4.29** (.81)	**4.51** (.65)	**4.43** (.72)	**4.49** (.68)
More money, more act search	**4.13** (1.05)	**4.32** (.87)	**4.31** (.88)	**4.41** (.77)
Family support	**2.19** (1.25)	**2.22** (1.42)	**2.04** (1.20)	**2.11** (1.36)
Family suffers bec unemployed	**3.48** (1.28)	**3.51** (1.25)	**3.48** (1.27)	**3.70** (1.26)
Family starves bec unemployed	**3.40** (1.28)	**3.35** (1.28)	**3.39** (1.33)	**3.62** (1.32)

Source: KMP 2000, own calculations, **Number** (Standard Error)

Each of these questions was evaluated by the respondent by indicating agreement on a scale from one to five. When respondents disagreed strongly the variable takes on the value of one, when they agreed strongly the value is five while indifference is indicated by the value three.

Generally all groups seem to be fairly similar in their perception of how certain conditions impact on search. Thus, only subtle differences between the search groups are detectable. All search groups weakly agree with the statement that search is not worth the cost one spends on transport. The most surprising aspect is that exclusive network searchers are most indifferent of the unemployed about the cost of transport. This might indicate that the choice of relying on social networks is not the outcome of financial constraints.

All unemployed weakly disagree with the statement that high unemployment renders search pointless. In this case the non searchers are closest to being indifferent which seems to suggest that they experience some degree of discouragement. Exclusive active searchers disagree the strongest with this statement.

There is strong agreement among all unemployed that employers recruit friends and family of their existing workforce. Although one would expect that exclusive network searchers as well as mixed strategy workers would think so, it is interesting that non-searchers and exclusive active searchers also agree strongly. This might once again be an indication that searchers are constrained in their choice of search methods. As we saw before, using social networks as a search method is dependent on the availability

of contacts. With no contacts available, the searcher has to resort to exclusive active search or ceases to search.

All unemployed would search more actively if there were more jobs in the labour market. While the searching unemployed are very similar in this regard, the non searching unemployed are slightly less forceful in their agreement, which might suggest that they are less optimistic of finding a job even if there were more available jobs. A similar picture evolves when asked about financial constraints. Everyone agrees that they would search more actively if they had more money with the mixed strategy searchers being the most forceful group. Non searchers once again agree to a lesser degree.

Respondents were asked to evaluate the statement that "it is not so bad to be out of work because other people support me". Exclusive active searchers were the most forceful group to disagree with the statement followed by the mixed strategy searchers. Non searchers and exclusive network searchers also disagreed with the statement but not as strongly as the other two groups. As mentioned before this might suggest that the last two groups exhibit some level of voluntary unemployment, or in other words are not under severe pressure to find employment. This interpretation is supported by the remaining two questions. When asked if the family is worse off or has to starve because of the respondent being unemployed mixed strategy searchers agreed most with the other three groups being fairly even. Thus, the last two points might indicate the respondent's access to total household income as well as the position of the job-seeker as one of the main bread winners. Hence, it is more urgent for the mixed strategy searchers to find employment.

5.2 Regression Analysis

We have established in the descriptive analysis certain factors which can be seen as facilitators or constraints to the choice of search method. In the following regression we want to test the statistical significance of the various factors. The aim is to understand why unemployed job-seekers pursue certain search strategies.

5.2.1 Methodology

In this case the best way to test variables which determine different outcomes is by using a multinominal logit model (MNLM). The advantage of the MNLM is that it "simultaneously estimate[es] binary logits for all comparisons among the dependent categories"(Long and Freese, 2001: 172). This allows us to compare the different search strategies against the independent variables which we established above. Here we deal with four different search strategies: non-searchers, exclusive network searchers, exclusive active searchers and mixed strategy searchers. The main focus of this thesis is to understand why some unemployed rely exclusively on passive search methods rather than pursue other search strategies. Thus, we use exclusive network searchers as the base category against which we compare other search strategies.

The main problem of the MNLM is the possibility of including categories which have an impact on the comparison of two other categories. This is described as the

assumption of the independence of irrelevant alternatives (IIA) and implies that "adding or deleting outcomes does not affect the odds among the remaining outcomes"(Long and Freese, 2001: 188). Thus, for example, excluding non-searchers from the multinominal logit regression should not alter the odds ratio between exclusive network searchers and any of the remaining two search strategies if the IIA holds. In order to control for the IIA we perform a Hausman test.

Furthermore, we have to test for the possibility of combining different outcome categories. If the independent variables do not explain the difference between two outcomes at a statistically significant level, we can assume that the two outcomes are indistinguishable. "If two outcomes are indistinguishable with respect to the variables in the model, then you can obtain more efficient estimates by combining them"(Long and Freese, 2001: 184). This test is particularly interesting for this thesis as we want to examine factors which explain the choice of different search strategies. We can expect to see a significant overlap between exclusive network searchers and mixed strategy searchers as well as between exclusive active searchers and mixed strategy searchers. The Wald test for combining outcomes can show if the distinction we made between the different search strategies is justified.

Finally, we test for the significance of specific variables themselves. Again utilizing a Wald test for testing the effects of the independent variables we can identify individual variables which explain the choice of the search method.

5.2.2 Analysis

We run two regressions. The first one establishes the factors which determine the choice of the search method. Motivated by the theoretical discussion as well as the descriptive analysis, we include individual and household variables which either constrain or facilitate the use of a search method.

In the second regression we control for variables which we consider to be relevant in the determination of the search method and compare the perception of the unemployed of various conditions and how these conditions impact on their search behaviour.

As discussed above, in order to control for the independence of irrelevant alternatives, we performed the Hausman test of IIA. The results show that we cannot reject the Null hypothesis that IIA holds (See Appendix Table A3). We further examined whether some of the dependent categories could be combined into one, i.e. to what extent the categories are statistically different from one another. The Null hypothesis that 'all coefficients except intercepts associated with given pair of outcomes are equal (i.e., categories can be collapsed) can be rejected for almost all pairs of categories at a 1% significance level except for one pair. The only pair for which the Null hypothesis cannot be rejected at a statistically significant level, is the combination of exclusive active searchers and mixed strategy searchers (see Appendix Table A4). Despite the suggestion that these two outcomes should be combined, we continue to use them separately. The reasons for this decision will be discussed later.

Table 17: MNLR: Exclusive Network Searchers compared to other Search Strategies

Multinomal logits	**Regression 1** (Base Group : Excl Network Searchers)		
	Non Search	**Excl Act**	**Mix Str.**
Male	**-.6658****	**.2786**	**.2246**
	(.3013)	(.2971)	(.2836)
Coloured	**.3995**	**.4539**	**-.0272**
	(.4650)	(4763)	(.4685)
Age	**.0215†**	**.0165**	**.0194**
	(.0149)	(.0158)	(.0155)
Married	**-.2819**	**-.1941**	**-.2314**
	(.2921)	(.3124)	(.3040)
Education	**-.0104**	**.0563**	**.0788**
	(.0472)	(.0502)	(.0486)
Domestic Duties	**-.1857****	**-.2758*****	**-.2832*****
	(.0909)	(.1016)	(.0969)
Health Problems	**-.4666**	**-.3357**	**-.6760†**
	(.3957)	(.4168)	(.4192)
Hunger	**-.7428****	**-.2131**	**-.1774**
	(.3373)	(.3413)	(.3210)
Unemployment Length	**.0035**	**.0010**	**-.0008**
	(.0028)	(.0032)	(.0032)
Contacts	**-.9251*****	**-.7680*****	**-.2206**
	(.2599)	(.2713)	(.2606)
Local	**-1.1603*****	**-.7009†**	**-.7130***
	(.4372)	(.4401)	(.4230)
HH Employment	**-.4814***	**-.2416**	**-.4584†**
	(.2898)	(.3045)	(.2909)
HH Income per capita	**-.0000**	**-.0005**	**-.0003**
	(-.0004)	(.0004)	(.0004)
Child size	**.0568**	**.0369**	**.0129**
	(.0877)	(.0929)	(.0905)
Adult size	**.0653**	**.0013**	**.0017**
	(.1086)	(.1124)	(.1082)
HH Active Search	**.6927†**	**.4773**	**.6731†**
	(.4385)	(.4540)	(.4338)
HH Network Search	**-1.2043*****	**-1.3292*****	**-.6204†**
	(.4295)	(.4595)	(.3910)
HH Mixed Strategy Search	**-.8587****	**-.0171**	**.1433**
	(.4001)	(.3861)	(.3632)
Constant	**1.4458***	**.4414**	**.3153**
	(.7941)	(.8426)	(.8209)
Observations	**649**		
LR Chi2 (36)	**135.39**		
Prob>chi2	**0.0000**		
Pseudo R2	**0.0770**		

Significance levels: † between 10% and 15%; * at the 10% level; ** at the 5% level and *** at the 1% level

A main limitation of the regression estimations has been the loss of a significant number of observations. Unfortunately, the high number of lost observations is the outcome of the accumulation of missing observations of various variables. Thus, it is not possible to single out one variable and simply exclude the variable to increase the number of observations again.

The personal characteristics of the individuals do not seem to explain the differences between the different search groups. Although some significance might have been lost with the low number of observations, the individual's race, age, marital status and the number of years of education are not significant in explaining the difference between exclusive passive search and other search behaviour. Even a breakdown of different educational attainment levels has not shown any significance in any equation. Thus, the characteristics of the individuals seem to be fairly unimportant in choosing exclusive passive search rather than any other search method. The only individual characteristic which has some significance is gender. More females are non-searching than exclusively passive searching.

This rather surprising finding can also be seen in the Wald test for independent variables which shows that the Null hypothesis, that all coefficients associated with given variables are 0, cannot be rejected for most individual variables (See Appendix Table A5). Except for gender all other individual characteristics are not statistically significant in explaining the choice of the search strategy.

The first regression does support the main argument of this thesis. The choice of the search method is determined by factors which either constrain or facilitate the pursuit of a search method. The most significant constraint on the ability of passive searchers to pursue other search methods is the obligation to do domestic duties. Domestic duties reduce the likelihood of being an exclusive active searcher or a mixed strategy searcher at a 1% significance level. Even non-searchers seem to be less restricted by domestic duties. This can be interpreted as implying that exclusive network searchers simply do not have the time to pursue other search methods. The significance of domestic duties is not reduced even when we control for household size of children and adults. What is rather surprising is how unimportant the children household size and the adult household size is for the choice of the search method.

In terms of health problems exclusive network searchers are more constrained by health problems than mixed strategy searchers although this is only weakly significant. Health problems do not explain the difference between exclusive passive searchers and non-searchers or exclusive active searchers.

Exclusive passive searchers have experienced hunger as an obstacle to search. This contrasts with the non-searchers. Thus, hunger as a constraint to search reduces the likelihood of being a non-searcher compared to an exclusive network searcher at a 5% significance level. What is interesting is the fact that hunger as a search constraint is not different for all searching unemployed. All searching unemployed have experienced hunger as an obstacle for search compared to non-searchers (see Appendix Regression A6). This might indicate that non-searchers are in general better off than searching unemployed.

In terms of facilitating passive search the availability of contacts significantly explains the difference between passive search and other search methods. Contacts to other workers in the labour market increase the likelihood of being an exclusive network searcher rather than a non searcher or an exclusive active searcher at a 1% significance level. As expected, contacts do not explain the difference between exclusive passive searchers and mixed strategy searchers as both groups use these contacts to increase their probability of finding a job. Interestingly, contacts are the

main difference between exclusive active searchers and mixed strategy searchers (see Appendix Regression A7). The Wald test for combining outcomes suggests that the two groups are not statistically different except for these contacts. This finding is exactly the point of this thesis. The difference between choosing to use social networks or pursuing active search is determined by the availability of social contacts. When such contacts are available people will use them.

More household employment decreases the likelihood of being in a different search method than passive search. This though is only weakly significant for non searchers and mixed strategy searchers while household employment does not explain the difference between exclusive network searchers and exclusive active searchers. These combinations make the interpretation of the results slightly more difficult. Considering that exclusive active and exclusive network searchers have other employed members in their household, household employment seems to affect the search strategy in different ways. It can on the one hand increase the information flow or on the other hand give access to financial resources which again can either finance active search or reduce search intensity. The last point is not supported by the regression as there is no statistical difference among the search groups with respect to household income per capita. Nevertheless, household employment does influence the search behaviour of the unemployed. It rather seems that household employment gives access to finance in order to pursue active search but when people are time constrained because of domestic duties, then households function mainly as information transmitters.

The use of social networks is strongly determined by the embeddedness of the job searcher. Being a migrant reduces the likelihood of being an exclusive network searcher. Thus, exclusive network searchers seem to be embedded into a locally defined social network. Migrants on the other hand have to build these networks first. Especially for non-searchers the distinction between being locally born and having migrated to Cape Town is highly significant. As was already established, non-searchers have the lowest number of contacts to the labour market as well as the lowest number of household employment. Following Dinkelman and Pirouz, non-searchers therefore have the weakest degree of attachment to the labour market. Being a local also reduces the likelihood of being an exclusive active searcher or a mixed strategy searcher although both are only weakly significant.

Finally, households seem to create some kind of search culture. More exclusive passive searchers find themselves in household where other household members also rely exclusively on social networks. In terms of active search, exclusive network searchers have fewer household members who pursue exclusive active search compared with other search groups. Thus, it does not seem that there is a division of labour in terms of the search activity where some household members search actively and the rest rely on the information which comes back to the household. Rather the structure of the household creates conditions which are conducive for the adoption of a particular search strategy. Again, one could speculate that the search strategy of the household seems to be closely related to the availability of contacts to the labour market.

In summary, we can say that being an exclusive network searcher rather than pursuing any other search strategy is not affected by individual characteristics but is the

outcome of constraints and facilitators. Domestic duties in particular restrict the passive searcher from spending time on active search. At the same time, because the passive searcher is so strongly embedded into a locally defined social network with a high level of household employment and local contacts, it is possible for them to rely on friends and family to get access to the labour market.

The second regression establishes a picture of the mental state of the various search groups. We control for certain variables which we consider to be influential in the choice of the search method as well as the mental state of the searcher. We then include a variety of conditions which the respondents had to evaluate in terms of the effect these conditions might have on their search behaviour. Respondents indicated if they disagreed or agreed on a scale from one to five to the conditions and the effects these conditions might have on their search behaviour. Because the variables were not created as dummy variables, the second regression can only be seen as a preliminary analysis of the perception variables. More tests with different classifications of the variables would be a more appropriate approach to testing the significance of these variables. For this reason we excluded the second regression from the main analysis (see results in Appendix Table A7).

Nevertheless it is interesting to see that only the perceived availability of jobs and its impact on search intensity is different at a statistically significant level. Exclusive network searchers agree more forcefully than exclusive active searchers to the statement that "if there were more jobs available, more people would look for work". The response is not statistically different between exclusive network searchers and non-searchers or mixed strategy searchers. Thus, all three groups seem to have the same perception of the availability of jobs. It is therefore remarkable that exclusive network searchers would respond most positively to an increase in available jobs by increasing their search intensity. They agreed the strongest compared to all other search groups with the statement that "if there were more jobs to be had, I would search for employment more actively". This is not too surprising given the fact that they do not search actively at all. Nevertheless, it indicates that exclusive network searchers perceive themselves to be constrained by the lack of available jobs and thus rely on passive search.

6. Conclusion

The aim of the thesis was twofold. Firstly, we have tried to develop a theoretical framework which allowed us to account for the various factors which influence the job search process. Secondly, using the 2000 Khayelitsha/Mitchell's Plain Survey we investigated factors which either constrain or facilitate the pursuit of certain search strategies.

The literature review on the South African debate around the most appropriate definition of unemployment has argued that search activity in the South African context is determined by constraints. Mass unemployment forces the unemployed to carefully consider the benefits and the costs of search. A low probability of finding a job and high search costs have led to a spatial division of search with low search activity in remote rural areas and higher search activity in urban areas. The main problem of search is the unequal access to information. Various factors have been identified to constrain or facilitate access to labour market information. The use of social networks is seen as a response to the adverse conditions of the labour market.

Out of these findings we developed a more formal search model which accounts for the various aspects which can influence search activity. We argue that the decision to engage in search and the choice of the search method is determined by four aspects: the probability of locating a job, the probability of getting a job, the financial cost of the search method and the time spent pursuing the search method. Various search methods create different degrees of access to the labour market in terms of providing information and their ability to transmit information between the employer and the job-seeker. At the same time each search method generates different amounts of financial and opportunity costs. The choice of the search method is therefore the compromise between what the searcher perceives to be the most effective search strategy and what is feasible for the searcher. Individual, household and labour market characteristics will either facilitate or constrain the pursuit of certain search strategies.

Because of the importance of social networks in the South African labour market, we established factors which constrain or facilitate the use of social networks. We argued that the usefulness of social networks depends on the overlap of supply networks through which job-seekers look for a job and recruitment networks through which employers use their existing workforce to source new labourers. The position of the job-seeker within the network structures in terms of proximity to the recruitment network is crucial. The closer the job-seeker is to the recruitment network the higher is the probability that the job-seeker will locate a job and get a job. In terms of search costs, social networks generate the least financial burden on the household while it still allows the job-seeker to pursue other non-market activities.

The Khayelitsha/Mitchell's Plain Survey of 2000 allows us to analyse factors which influence the search process. The main findings of the analysis support the argument of this thesis that the choice of the search method is the outcome of constraints and conditions which facilitate the use of the search method. Especially exclusive strategy searchers indicated that they perceive other search strategies as more effective but they seem to be constrained in pursuing these. For exclusive active searchers the main constraint to pursue passive search is the lack of contacts to the labour market while

for exclusive network searchers the constraint to pursue active methods is the lack of time. Exclusive passive searchers are time constrained because they have to perform domestic duties.

The central theme of this thesis has been the argument that the proximity of the job searcher to the recruitment network is crucial. The findings show that the choice of the search method is strongly influenced by the availability of contacts with the labour market. Thus, when contacts are available they will be utilized to get access to the labour market. The main reason that exclusive active searchers use only active search methods is the lack of contacts. However, because they are not bound to the household they can pursue active search methods. As the availability of contacts increases so does the use of social networks. Mixed strategy searchers are very similar to exclusive active searchers except for the fact that they reported to have more contacts in the labour market. Immediately we see that the search strategy includes passive search methods. Exclusive network searchers are the best connected group in the labour market. Their reliance on social networks to find employment is justified by the fact that they are closest to a locally defined recruitment network. That they are not pursuing active channels might be the outcome of not having time because of domestic duties. It could also be the case that their position within the social networks gives them the time to concentrate on domestic duties. Thus domestic duties could be the outcome facilitated by social networks rather than being the constraint to active job search.

It is surprising how little explanatory power the personal characteristics of the individuals seem to have in explaining the choice of the search method. Clearly the loss of observations might have impacted on this finding; nevertheless the only significant individual characteristic is gender in determining the difference between the searching unemployed and the non-searching unemployed. This again confirms that females, and especially female migrants, are the most marginalised group of unemployed in the labour market. Their position is exacerbated by the fact that they have very few contacts in the labour market. Thus, the decision not to engage in search seems to be the outcome of a very low probability of finding a job.

Finally, mixed strategy searchers seem to be the least constrained group of searchers and, as the currently employed have shown, mixed strategy searchers are the most likely group to find employment. This though can only be analysed properly when the panel data of the second wave of the KMP Survey becomes available.

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Appendix

Table A1: Length of Current Unemployment in Months

Search method	0 – 6 months	7 – 12 months	1 – 2 Years	2 – 4 Years	4– 8 Years	8+ Years	Total
Excl. active	**45** (28; 20)	**45** (26; 20)	**42** (23; 18)	**45** (25; 20)	**27** (19; 11)	**26** (25; 11)	**230**
Excl passive	**20** (12; 15)	**30** (17; 21)	**30** (17; 21)	**28** (16; 20)	**19** (15; 14)	**13** (12; 9)	**140**
Mix Strategy	**48** (30; 19)	**48** (27; 19)	**52** (29; 21)	**44** (25; 18)	**39** (31; 16)	**16** (15; 6)	**247**
Non search	**48** (30; 16)	**53** (30; 17)	**57** (31; 18)	**62** (35; 20)	**39** (31; 13)	**50** (48; 16)	**309**
Total	**161** (100; 17)	**176** (100; 19)	**181** (100; 20)	**179** (100; 19)	**124** (100; 13)	**105** (100; 11)	**926**

Source: KMP 2000, own calculations, **Number** (Column%, Row%)

Table A2: Marital Status of Currently Unemployed,

	Non Search	Excl Pass	Excl Act	Mix Str.	Total
Never Married	**174** (53; 31)	**84** (60; 15)	**136** (61; 24)	**164** (66; 29)	**558** (59,100)
Married	**82** (25; 42)	**26** (19; 13)	**42** (19; 22)	**45** (18; 23)	**195** (21,100)
Married (trad.)	**32** (10; 33)	**17** (12; 18)	**23** (10; 24)	**25** (10; 26)	**97** (10,100)
Living with Partner	**16** (5; 43)	**7** (5; 19)	**7** (3; 19)	**7** (3; 19)	**37** (4,100)
widow	**12** (4; 48)	**2** (1; 8)	**8** (4; 32)	**3** (1; 12)	**25** (3,100)
Divorced	**7** (2; 39)	**3** (2; 17)	**4** (2; 22)	**4** (2; 22)	**18** (2,100)
Separate	**6** (2; 46)	**1** (1; 8)	**4** (2; 31)	**2** (1; 15)	**13** (1,100)
Total	**329** (100; 35)	**140** (100; 15)	**224** (100; 24)	**250** (100; 27)	**943**

Source: KMP 2000, own calculations, **Number** (Column %, Row#)

Table A3: Hausman Test for IIA

Omitted	chi2	df	P>chi2	evidence	
0	-2.804	36	1.000	for Ho	
2	4.501	36	1.000	for Ho	
3	-2.347	37	1.000	for Ho	
1	2.663	36	1.000	for Ho	

Source: KMP 2000, own calculations

Table A4: Wald Test of Possibility of Combing Outcomes

Categories	tested	chi2	df	P>chi2
0-	2	36.584	18	0.006
0-	3	61.267	18	0.000
0-	1	54.343	18	0.000
2-	3	16.473	18	0.560
2-	1	32.801	18	0.018
3-	1	32.285	18	0.02

Source: KMP 2000, own calculations

Table A5: Wald Test for Independent Variables

wantjob_unemp chi2		**df**	**P>chi2**
Gender	16.950	3	0.001
Race	2.043	3	0.564
Age	2.202	3	0.532
Marit	0.967	3	0.809
Education	6.115	3	0.106
Dom_Duties	10.496	3	0.015
Health	2.769	3	0.429
Hunger	6.050	3	0.109
Len. Unemp	3.743	3	0.291
Contact	18.932	3	0.000
Local	7.068	3	0.070
HH Emp	3.576	3	0.311
HHinc_percap	1.495	3	0.683
Childsize	0.561	3	0.905
Adultsize	0.664	3	0.882
HH active Search	2.817	3	0.421
HH Network Search	11.445	3	0.010
HH Mix Search	9.877	3	0.020

Source: KMP 2000, own calculations

Table A6: MNLM Regressions of Constraints and Facilitators of Search Strategies

Multinomal logits	Regression A6 (Base Group : Non-Searchers)			Regression A7 (Base Group : Excl Act Searchers)		
	Excl Network	**Excl Active**	**Mix Strategy**	**Non Search**	**Excl Network**	**Mix Strategy**
Male	**.6658** (.3013)	**.9444*** (.2588)	**.8905*** (.2499)	**-.9444*** (.2588)	**-.2786** (.2971)	**-.0539** (.2453)
Coloured	**-.3995** (.4650)	**.0543** (3993)	**-.4267** (.4053)	**-.0543** (3993)	**-.4539** (4763)	**-.4811** (.4147)
Age	**-.0215**† (.0149)	**-.0050** (.0121)	**-.0021** (.0120)	**.0050** (.0121)	**-.0165** (.0158)	**-.0029** (.0128)
Married	**.2819** (.2921)	**.0877** (.2548)	**.0504** (.2501)	**-.0877** (.2548)	**.1941** (.3124)	**.0372** (.2703)
Education	**.0104** (.0472)	**.0668** (.0417)	**.0892**** (.0406)	**-.0668** (.0417)	**-.0563** (.0502)	**.0224** (.0434)
Domestic Duties	**.1857**** (.0909)	**-.0901** (.0891)	**-.0975** (.0862)	**.0901** (.0891)	**.2758*** (.1016)	**-.0073** (.0971)
Health Problems	**.4666** (.3957)	**.1308** (.3659)	**-.2094** (.3814)	**-.1308** (.3659)	**.3357** (.4168)	**-.3402** (.3989)
Hunger	**.7428**** (.3373)	**.5296*** (.3069)	**.5653*** (.2926)	**-.5296*** (.3069)	**.2131** (.3413)	**-.0357** (.2909)
Unemployment Length	**-.0035** (.0028)	**-.0025** (.0024)	**-.0044** (.0025)	**.0025** (.0024)	**-.0010** (.0032)	**-.0019** (.0028)
Contacts	**.9251*** (.2599)	**.1571** (.2292)	**.7044*** (.2185)	**-.1571** (.2292)	**.7680*** (.2713)	**.5473**** (.2281)
Local	**1.1603*** (.4372)	**.4593** (.3935)	**.4473** (.3902)	**-.4593** (.3935)	**.7009**† (.4401)	**-.0120** (.3899)
HH employment	**.4814*** (.2898)	**.2398** (.2571)	**.0230** (.2473)	**-.2398** (.2571)	**.2416** (.3045)	**-.2168** (.2602)
HH income per cap	**.0000** (-.0004)	**-.0004** (.0004)	**-.0002** (.0004)	**.0004** (.0004)	**.0005** (.0004)	**.0001** (.0004)
Child size	**-.0568** (.0877)	**-.0199** (.0763)	**-.0438** (.0751)	**.0199** (.0763)	**-.0369** (.0929)	**-.0239** (.0793)
Adult size	**-.0653** (.1086)	**.0640** (.0970)	**-.0636** (.0941)	**-.0640** (.0970)	**-.0013** (.1124)	**.0003** (.0966)
HH Active Search	**-.6927**† (.4385)	**-.2153** (.3320)	**-0555.** (.3165)	**.2153** (.3320)	**-.4773** (.4540)	**.1598** (.3316)
HH Network Search	**1.2043*** (.4295)	**-.1249** (.4642)	**.5839**† (.4002)	**.1249** (.4642)	**1.3292*** (.4595)	**.7088*** (.4271)
HH Mixed Strategy Search	**.8587**** (.4001)	**.8416**** (.3530)	**1.0021*** (.3332)	**-.8416**** (.3530)	**.0171** (.3861)	**.1604** (.3125)
Constant	**-1.4458*** (.7941)	**-1.0043** (.6791)	**-1.1304** (.6668)	**1.0043** (.6791)	**-.4414** (.8426)	**-.1261** (.7145)
Observations	**649**			**649**		
LR Chi2 (36)	**135.39**			**135.39**		
Prob>chi2	**0.0000**			**0.0000**		
Pseudo R2	**0.0770**			**0.0770**		

Significance levels: † between 10% and 15%; * at the 10% level; ** at the 5% level and *** at the 1% level

Table A7: MNLR of Perceptions

Multinomal logits	**Regression A8** (Base Group : Excl Network Searchers)		
	Non Search	**Excl Act**	**Mix Str.**
Male	**-.7475** (.2975)	**.0584** (.2966)	**.2745** (.2808)
Coloured	**.2903** (.4524)	**.4345** (.4619)	**.0549** (.4566)
Education	**-.0502** (.0439)	**.0489** (.0473)	**.0789*** (.0457)
Domestic Duties	**-.1276**† (.0898)	**-.2427**** (.1012)	**-.2693***** (.0968)
Health Problems	**-.3112** (.3703)	**-.3034** (.3972)	**-.8158**** (.4153)
Hunger	**-.5743** (.3294)	**-.2246** (.3427)	**-.2041** (.3243)
Contacts	**-.9082***** (.2617)	**-.6884**** (.2763)	**-.1730** (.2655)
Local	**-.8636**** (.4256)	**-.4672** (.4332)	**-.6078**† (.4222)
HH employment	**-.3483** (.2671)	**-.3869** (.2837)	**-.5987**** (.2713)
HH income per cap	**-.0002** (.0003)	**-.0004** (.0004)	**-.0001** (.0003)
Search Not Worth Money	**.0801** (.0990)	**.0919** (.1058)	**.0081** (.0985)
High unemployment	**.1096** (.0964)	**.0068** (.1028)	**.0908** (.0966)
Generally: More jobs more search	**-.1454** (.1543)	**-.3252**** (.1569)	**-.0512** (.1606)
Individually: More jobs More search	**-.4058*** (.2184)	**-.3892*** (.2313)	**-.5046**** (.2297)
More money More search	**-.0806** (.1590)	**-.0657** (.1705)	**.1558** (.1761)
Family support	**-.0256** (.1008)	**-.0775** (.1091)	**-.0288** (.1020)
Family worse	**-.0346** (.1712)	**.0106** (.1800)	**.0821** (.1764)
Family starves	**.1086** (.1717)	**.0797** (.1814)	**.1651** (.1761)
Constant	**4.4859***** (1.2679)	**3.9385***** (1.3412)	**1.5469** (1.3137)
Observations	**647**		
LR Chi2 (36)	**124.21**		
Prob>chi2	**0.0000**		
Pseudo R2	**0.0711**		

Significance levels: † between 10% and 15%; * at the 10% level; ** at the 5% level and *** at the 1% level