

UNIVERSITEIT UTRECHT

# Youth unemployment in The Netherlands

*The role of network effects and individual characteristics in explaining youth unemployment.*

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## **Introduction**

In an international perspective the youth unemployment rate in the Netherlands is relatively low at a level of about 10,7 per cent (CBS, 2009). Although we are facing the consequences of a severe financial crisis, only recently the CBS noticed a small increase in the youth employment rates (CBS, 2009). Moreover the numbers of youth unemployment (i.e. adolescents between 15 and 23), are still at a much lower level than they were in 2005, when the youth employment was around 15 per cent. Adjacent to it youth unemployment is still more than two times as high as the adult unemployment and lowering these numbers maintains one of the main goals of the Dutch government. Their aim is to make sure that also young starters keep on profiting from the generally decreasing unemployment rates (Taskforce jeugdwerkloosheid, 2006). Therefore new measures like the ‘werkleerplicht’, which forces unemployed people younger than 27 to return to school or accept any job which is provided by the employment office in order to be able to apply for social assistance.

Youth unemployment is recognized as a serious societal problem, but it also has other repercussions. Having a job and being in a working environment provides opportunities for developing social contacts and self-reliance, learning and showing initiative. Unemployment is expected to have a negative influence on the general well-being of the individual (De Goede, Spruijt, Maas & Duindam, 2000). Adolescents are especially vulnerable for the negative effects of unemployment, since adolescence is seen as an important life stage in terms of psychological development and identity formation in particular (De Goede, Spruijt, Maas & Duindam, 2000). Being unemployed in this period can start a process of social exclusion, with potential long-term effects. It is for this reason that youth unemployment has been high on the political as well as the scientific agenda since the unemployment rates among the youth increased sharply within the eighties. The research-field has developed several theories on various analytical levels which try to explain the emergence of youth unemployment.

First there are factors of influence on a macro-level which are also referred to as structural explanations for unemployment (Hammer, 1997). Structural explanations focus on the characteristics of the labour market and the institutional context, like rules, regulations and the social welfare system. Moreover they occur on a level that is

beyond individuals' control (Nordenmark, 1999) and are assumed to determine cross-national variation in unemployment (Breen, 2005).

At the micro-level, individual factors influence the chance of becoming unemployed. Various theories such as the human capital theory aim to clarify the influence of personal characteristics on the likelihood of becoming unemployed. Human capital refers to the stock and knowledge embodied in the ability of a person specifically with regard to his or her occupation or in general. It is the skills and knowledge gained by workers through education and work experience (Becker, 1964). It is generally believed that more education, vocational or university, will lead to better job opportunities (Breen, 2005) and education is expected to provide an insurance against unemployment (Fernandez, 2006). Especially adolescents without any certificate or diploma have great problems finding a job (Beker & Merens, 1994). Adolescents, who lack a proper starter's qualification, have great problems finding a job (see Hammer, 1997; De Goede et al, 2000; Christensen et al, 2005; Fernandez, 2006; Daly et al, 2007). Besides education, work experience is another way in which the individual can accumulate more human capital and will increase the chance of finding a job quick.

Finally, explanations at the meso-level discuss the influences of the social networks on the chances of becoming unemployed. For instance social networks can be used to find jobs and provide support during the job search process. In the Netherlands it has been found that 31 percent of Dutch male employees found their first job through informal channels in 1981. This number increased to 45 percent in 1991 (Flap et al, 2001). The amount of information about vacancies within a person's network depends heavily on the composition of the network (Holzer, 1988). The quality of the network in terms of facilitating the job search depends most importantly on the number of employed people within the network. Besides providing resources that can help find vacancies, social networks can also influence a person's norms and values by means of socialization processes. The effects of personal networks on being unemployed can be positive as well as negative, depending on what kind of norms are promoted in one's network (Erickson, 2001).

This paper will mainly focus on explanations at the micro- and meso-level. Explanations at the macro-level will be neglected and they will be considered as given. Macro-explanations are generally used to explain differences between different countries and our focus will mainly be on the Dutch labour market, therefore these

macro explanations will be less relevant. Specifically the influence of a person's social network on the chance on being unemployed will be examined. It is expected that a person's social network can influence the likelihood directly by providing instruments during the job-search process, but also indirectly by influencing the motivation to work with mechanisms of socialization. Motivation is expected to be an individual characteristic that influences the effort that is put into finding a job. Furthermore attention will be paid on levels of educational attainment, which is a factor of influence that has been discussed more over in earlier research (De Goede et al, 2000).

The aim of this study is to study the influence of personal characteristics and a person's social network on the chance of becoming unemployed. On the individual-level the following sub-questions are stated: *What is the role of a person's level of educational attainment when explaining youth unemployment?* and *What is the role of a person's motivation and commitment to work when explaining youth unemployment?* and *What is the role of a person's work experience when explaining youth unemployment.* On a network level we focus on explanations which discuss the influence of a person's social network and the resources that are provided by the network. Therefore the subquestion about meso-level explanations will be: *What is the role of a person's social network when explaining youth unemployment.* Both levels of explanations are to some extent interdependent. Especially when we discuss a person's work motivation and commitment to work, it seems that this micro level explanation depends heavily on circumstances at the meso level. Therefore the last subquestion will be: *What influence can a person's social network have on the motivation and commitment to work?*

In this paper multiple regression analyses will be applied to test hypotheses concerning the influence of social capital and individual characteristics. The data originate from a research that is performed by the Dutch institute of social-scientific research (IVA) in 1986 on the influence of work ethic, levels of educational attainment and retraining of Dutch unemployed adolescents on their occupational status.

## **Theory**

### ***Human capital***

Human capital theory argues that a workers earning potential and productivity is dependent on all the knowledge and skills a worker has acquired during his or her life

course so far (Becker, 1964). Most of an individual's skills and knowledge are acquired during the educational career, though additional human capital can be gained during the work career through experience and training (Roman, 2006).

One way in which human capital is influencing chances of unemployment can be found in the signalling power it provides during the job search process (Roman, 2006) During the different stages of the application procedure employers try to get insight in the future productivity of the job applicant. They look for reliable information or signals that can give them an indication about the productivity of the potential employee. Often the only measurable or verifiable measures of achievement are educational attainment and work experience. Since this information does not give guarantees about productivity and is based on proxies, the information only gives a signal (Roman, 2006).

In the Netherlands on average around 12 percent of the adolescents become unemployed as soon as they leave school (CBS, 2009), making this a problem of entering the labour market where the necessary qualifications for obtaining a job do not agree with the young people's own qualifications (Carle, 1986). In this case the actual cause for becoming unemployed can be found in the educational career of the job applicant. Three aspects of the educational careers are indicated to be relevant to a person's position in the labour market: the level of educational attainment, the specific specialization and the diploma attained (De Goede et al, 2000). Our focus will mainly be on the level of educational attainment, while the influence of the other aspects are depending heavily on the labour market circumstances and institutions, which are not our focus.

Generally the level of educational attainment is seen as the most important factor of influence when explaining youth unemployment. It is expected that as the level of educational attainment increases, the chance of becoming unemployed decreases. In other words, better qualifications lead to better chances to find a job quickly after leaving school. Qualifications act as a signal for productivity and capabilities, which are important matters for an employer who is looking for a capable employee (Breen, 2005; Carle, 1986). Others say that the level of educational attainment is less important (Carle, 1986; Beker & Merens, 1994). They argue that adolescents will at least need to have obtained a diploma which can show they have learned some basic skills. It is not the level of educational attainment, but the qualification itself that influences the chance of becoming unemployed (Carle, 1986).

Considering the aspects that are mentioned and the signals about productivity that are provided by the level of educational attainment, the following hypothesis can be formulated.

*Hypothesis 1a: Adolescents with a higher educational attainment will be unemployed less often.*

Human capital can not only be acquired by means of following education, but also on the job. It is expected that over time there is an erosion of human capital that is acquired during the educational career. The obtained human capital ages. This aging of human capital is compensated through additional skills and knowledge in the form of general human capital, but also job specific capital, which are acquired while working. (Roman, 2006). Having worked in a certain profession, makes the person more experienced in the specific profession and in most cases more capable. Having the experience, provides a positive signal of productivity. Job specific capital is a type of capital which is less useful for other companies, but at the same time specifically valuable for the companies in which the capital is acquired. In general the following hypothesis can be formulated:

*Hypothesis 1b: Adolescents with more work experience will be unemployed less often.*

### ***Motivation to work***

Besides the effect of human capital, another factor of influence is the extent to which person is motivated and committed to work and find a job. It sounds obvious that in order to find and keep a job, the adolescent job applicant needs to be motivated and must feel a commitment to work. If the adolescent himself does not feel like making the transition from school to work and prefers to rely on his parents or social welfare, it can be expected that the chance he will successfully participate on the labour market will be smaller. Researchers have tried to determine whether motivation indeed influences the successfulness of the transition from school to work (Wiener, Oei & Creed, 1999; De Goede et al, 2000). They have distinguished three different factors that determine a person's motivation.

The most common known factor is the extent to which a person's values promote a working career. Society in general tries to foster a work ethic were people

are expected to be economically independent (Rosseel, 1985). After institutional provisions have provided the adolescents with opportunities to earn a starter qualification, people are expected to become independent as much as possible. A lower work ethic is accompanied with passivity regarding the job search and application process, but also a critical attitude towards the jobs that are available (De Goede et al, 2000). Adolescents with a strong work ethic will work harder and be more motivated to find a stable job, while they value a successful working career as very important. In case they become unemployed they are expected to work harder to find a job and will also be less critical towards the jobs that are available (Hammer, 1997; De Goede et al, 2000). This expectations have led to the following hypothesis:

*Hypothesis 2a: Adolescents who have a higher work-ethic will be unemployed less often.*

The strength of the job search and the motivation to work furthermore depends on the need for a job, which is driven by financial requirements. Especially when others are depending upon the income of the unemployed or when the person is used to a certain level of income, he or she will feel more obliged to find a job quick (Wiener et al, 1999). Research on the effect of marriage on wages has indicated that the wages of men on average increases as soon as they get married (Korenman & Neumark, 1991). It is expected that due to the increased responsibility for the wealth of his spouse as well as potential descendants, they will perform better and be more productive. This increased productivity will also lead to a decreased chance to become unemployed. The following hypothesis discusses the influence of having financial responsibilities on the chance of being unemployed:

*Hypothesis 2b: Adolescents who have higher financial responsibilities will be unemployed less often.*

Finally, motivation is influenced by mental health. A low mental health is characterized by recurrent feelings of powerlessness, hopelessness, low self-esteem, and so forth (Taris, 2002). Having a low mental health is furthermore assumed to be related with negative judgements about a person's own capabilities to organize and execute courses of action required to attain designated types of performance. These judgements are not directly related to the actual skills one has. People with a low

mental health are expected to feel discouraged to enter the labour market for reasons that they believe there will not be a job for them while they think they lack the skills or are afraid that they will not be able to cope with the expectations. (Wiener et al, 1999). In similar fashion, it is expected that unemployed with a low mental health will feel less able to influence aspects of their state of unemployment than others. The expectation of success is an important determinant of the intention to conduct a particular behaviour. Those who will feel less able to change their situation will be less motivated to do so and will be less inclined to search actively for a job. Therefore the following hypothesis is formulated:

*Hypothesis 2c: Adolescents who have more self-esteem and a good mental health will be unemployed less often.*

Furthermore, next to individual characteristics, people's social environment is expected to have an influence on job seeking behaviour and people's values. This relation will be discussed more extensively in the next paragraph..

### ***Social capital theories***

A person's social environment is likely to have an influence on the likelihood of finding a job a person within that social environment. Researchers have developed various theories that point out ways in which a person's social environment can provide resources, influence values and provide support. We will focus on social capital theories. Social capital can be defined by all entities that facilitate individual or collective action, generated by networks of relationships, reciprocity, trust, and social norms. More specifically social capital can consist resources that are concealed within a person's personal network which can be provided and used by the members of this network (Lin, 1986; Boxman et al, 1991; Flap & Völker, 1999). It is a combination of the number of people who can provide support and the resources those people have at their disposal (Flap, 2001). A person's network can be used as an instrument in order to find the proper job, but besides providing such resources it can also influence a person's norms and values or work ethic by mechanisms of socialization (Hammer, 1997) and the morale during the job search process by providing support (Ultee, Dessens & Jansen, 1988).

One of the most important theories that deal with the influence of a person's social capital on his or her job opportunities is the informal job search networks theory.

Research has shown that within the job-search process social contacts provide important opportunities to find a job. The role of social networks within the job search process has been discussed since a long time by several sociologists and it is well known that between one-third and two-third of the people hear about or obtain jobs through friends and relatives (Granovetter, 1973; Holzer, 1988; Boxman et al, 1991, 1991; O'Regan, 1993; Kelly, 2002; Fontaine; 2008). Moreover jobs which are found through informal contacts have been associated with higher earnings and more prestigious occupations (Granovetter, 1974).

The effectiveness of the search for jobs by using social networks seems to depend heavily on the kind of social links (Fontaine, 2008). For instance jobs can be found through strong ties (close friends and family) or weak ties (acquaintances or employee referrals). Weaker ties tend to result in a broader range of jobs that can be reached and therefore increase the chance of finding a job that suits the adolescents qualifications, but stronger ties increase the likelihood of hearing about a certain vacancy (Granovetter, 1973; Lin & Dumin, 1986). Furthermore networks can defer in the effectiveness of locating employment quicker, or locate better jobs. Networks with more people with a higher socio-economic status are expected to be more effective (Lin, 1986). Even more important than the socio-economic status is the number of people that are unemployed within a person's network. The chance that a person hears about vacancies diminishes heavily when a person is unemployed (Flap et al, 2001).

Based on these theories the following hypothesis that concern the influence of social capital on the chance of becoming unemployed can be formulated:

*Hypothesis 3: Adolescents with a network that contains more ties that can lead to vacancies will increase the likelihood of finding a job and will therefore be unemployed less often.*

### ***Interdependence social capital and motivation***

Sofar individual as well as network effects on the chances of becoming unemployed have been discussed separately. It is however expected that individual and network influences are to some extent interdependent. Besides providing a network, it is assumed that social capital can also influence the motivation to work and the effort a person puts in searching for a job on the individual level. Researchers have noticed the phenomenon of unemployment concentration within families and friendship networks.

The phenomenon unemployment concentration exists when unemployment is concentrated among two or more members of a family or among a number of people within a network of friends (Nordenmark, 1999). Research pointed out that unemployed people have significant more contact with people who are also unemployed. Besides researchers found a tendency for employed husbands to have employed wives and for unemployed parents to have unemployed children (Ultee et al, 1988; O'Regan, 1993; De Goede et al, 2000).

Therefore it is expected that longer unemployment can also in itself affect people's lifestyle and behaviour and that unemployed young people may develop subcultures (Hammer, 1997). Within such subcultures people develop attitudes towards work and obligations that are in opposition to attitudes which stimulate working and being part of the labour force (Carle, 1987; Hammer, 1997; Chuprov, 1999). Moreover successive periods of unemployment may therefore be explained by reproduction of norms and values in such subcultures that lead to little investment in stability, work and the traditional way of life (Carle, 1987). In sum we expect the following:

*Hypothesis 4: An adolescent with a network that contains more employed friends, will more important to find a job and will therefore be unemployed less often.*

### **Analytical model**

The model that will be tested consists of three main explanatory aspects. First of all educational attainment as well as work experience are expected to have mainly a direct effect due to the signals about productivity and capabilities it provides. This direct effect is indicated by line A.

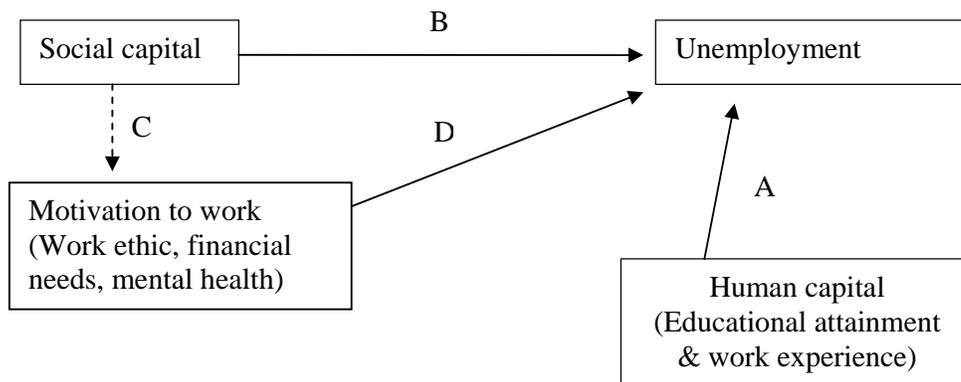
Furthermore social capital is expected to have also a direct effect on the time a person is unemployed, by means of providing leads to vacancies. Within this research the aim is to determine whether adolescents who have a larger network with more leads to jobs, are indeed less often unemployed. Furthermore the amount of information about vacancies within a person's network depends heavily on the composition of the network (Holzer, 1988). The social network can be indicated as a

resource that provides opportunities for instrumental action during the job search process. This relation is indicated by line B.

At the same time social capital can influence motivation. In case of a high concentration of unemployed friends within a social network, it is expected that values will arise that are inconsistent with having a good work ethic. Being unemployed will be accepted more easily in cases in which many network members are unemployed themselves. This interaction effect is indicated by line C.

Other aspects, besides work ethic that determine the motivation are the financial need for a job and mental health, which are expected to have mainly a direct effect and depend less on characteristics of the social network. Motivation as a whole is expected to influence unemployment as it determines the effort that is being put in finding a job. This relation is represented by line D. Schematically the analytical model can be represented with the following model:

Figure 1: Analytical model



## Method

### *Subjects*

The subjects for this study were participating in a longitudinal research project performed by the Dutch institute for scientific social research (IVA). Originally the study consisted of two waves. The first wave was obtained in May 1984 by a face-to-face interview and consisted of 856 respondents. The sample contained Dutch youths, aged 15 to 27 years, who were unemployed and not following full-time education around the time of the interview. The same group was interviewed two years later in November 1986 again. Due to a response-rate of 69 percent there were 592

respondents left in the second wave. Unfortunately only the second wave of the original two waves was available for this research.

The sample of 592 subjects (54% male and 46% female) has an average age of about 25 years. All of the respondents have experienced periods of unemployment and had left school with or without a diploma. In 1986, 11,1 % of the respondents has returned to full time education since 1984 and 5,6 % is still following this full-time education. In November 1986, at the time the second wave was obtained, 32,1 percent of the respondents was unemployed.

The sample in use is created by focusing on unemployed youth. All the respondents have an age between 15 and 27 years old and have experienced at least one period of unemployment. Therefore it has to be concluded that it is a very selective subsample of the population. That means that all the conclusions that will be drawn from the results are only applicable for adolescents who are making the transition from being unemployed or still at school towards being employed. Nevertheless, this is the transition in which we are interested in and it is important to understand how their transition can be supported.

### *Measures*

The variable '*percunemployed*' measures the percentage of time the respondent has been in the labour force as an unemployed and will be used as the dependent variable. This variable has been constructed by dividing the number of months the respondent has been unemployed by the total amount of months the respondent has been in the labour force. On average the respondents have been unemployed for 36,5 percent of the time they have been in the labour force.

We indicated work experience as well as the level of educational attainment as two forms of human capital that influence unemployment. The level of educational attainment is ideally measured as an ordinal variable with for each respondent a value for the highest attained diploma. Due to the fact that the first wave was not available, the data lacks such information. It has been possible to construct a variable that measures the years of education. Respondents indicated the last year they have followed full-time education. In combination with the year of birth it is possible to make an estimation about the years of education. The validity of this variable has been tested by running a Pearson correlation test with the expected salary. The variable '*Expectedsalary*' provides information about the salary the adolescent is expecting to

earn when he or she has found a job that suits his or her level of educational attainment. Both variables showed to have a positive and significant correlation ( $Rho = .328$ ), therefore it is assumed that the variable is a valid measure for years of education.

The second variable that provides information about human capital, i.e. work experience. Work experience has been measured by counting the total number of months the respondent has worked in a profession with a tenure of more than 20 hours a week. Only tenures after the respondent has left full-time education are included in the variable, while within the data too little information about tenures during the educational career is provided. It was impossible to determine whether these tenures increased the work experience and have learned the respondent valuable skills and knowledge.

**Table 1. Mean scores and standard deviations of variables (N=592)**

	<i>Mean</i>	<i>SD</i>
<i>Percentage of time unemployed</i>	0.37	0.25
<i>Years of education</i>	13.55	2.61
<i>Experience (in months)</i>	33.55	30.93
<i>Quality of network</i>	9.73	11.41
<i>Number of friends</i>	6.39	6.59
<i>Work ethic</i>	2.80	.72
<i>Mental health</i>	2.65	.31
<i>Financial needs (Married)</i>	5.79	8.63
<i>Financial needs (Kids)</i>	2.47	6.38
<i>Financial needs (Alone)</i>	2.51	5.28
<i>Financial needs (Parents)</i>	4.61	10.04
<i>Network motivation interaction</i>	.90	1.33
<i>Age</i>	24.37	2.68
<i>Male (dummy)</i>	.54	.50
<i>Unemployed first months (dummy)</i>	.58	.49

Adjacent to the level of educational attainment and work experience, the motivation to work has been indicated as another factor of influence at the individual level. The extent to which an adolescent feels motivated to work is depending on three different factors. First of all we discussed the general work-ethic. The survey contains 9 items that discuss the extent to which the respondent sees work as an obligation to society and an important part of life; for example: “Working is a duty to society” and

“Working is more important than leisure time”. The additional 7 items are added to the appendix. Answers were given in 5 different categories that ranged from ‘totally agree’ till ‘totally disagree’. With the nine items a scale has been constructed that showed to have a Cronbach’s alpha of .806. Since all items are seen as equally important, the scale has been constructed by calculating the mean of the nine items.

Second the need for a job has been indicated as a factor that determines motivation. The need for a job is expected to be closely linked to financial requirements. The survey contains an item that provides information about the minimum amount of salary the respondent needs in order to earn a living for the entire household, given the living conditions they are used to. While it is expected that the weight of these requirements depends on the composition of the household, four dummies for the household composition have been created. The dummies that are constructed indicate whether the respondent has children, is married, living alone or still lives with his or her parents. These dummies will be used to test for an interaction effect with the financial requirements.

Furthermore self-esteem or mental health is expected to influence the effort a person is putting into finding and keeping a job. The survey contains 13 items that question the presence of various psychical and mental conditions that relate to mental health. A reliability test showed the items to be suitable to construct a scale, with a reliability of  $\alpha = .815$ . A scale for mental health has been constructed by computing the mean over the 13 different items. The items that are used can be found in the appendix.

Finally we discussed the influence of social networks as instruments for finding a job and the influence friends and relatives can have on the motivation and work ethic specifically. The quality of network depends on the number of friends as well as the occupational status of these friends. The survey contains items that concern the number of friends the respondent has and also provides information about how many of these friends are working. In order to construct a scale that measure the quality of the network, each working friend is multiplied by two and each unemployed friend is multiplied by zero. Some of the friends are still at school, they were given the value 1. The variable ‘*Qualitynetwork*’ provides information about the quality of the network and gives the opportunity to test whether having more working friends has a positive influence on employment. In order to test the expectation that only working friends can provide links to vacancies, we will add another variable to the model, that only

provides information about the number of friends. The variable '*Numberfriends*' gives the number of friends the respondent has.

Besides it has been indicated that friends can influence values like the respondents' work ethic. It is expected that when the majority of friends is being unemployed this will have a negative influence on work ethic. The respondent has a value 1 when the minority of his friends is working. An interaction variable has been constructed by multiplying '*minorityem*' by the work-ethic scale.

Additional personal factors that are added to the regression as control variables are '*male*' for gender and '*age*' (15-27). Besides the variable '*unemfirstmonths*' is added which indicates whether the adolescent was unemployed in the first 6 months after leaving school. According to earlier research, people with a higher educational attainment, search longer for a suitable job and most of the time lack opportunities to continue working after an internship (Fernandez, 2006).

### ***Analysis***

For this research ordinary least square multiple regression analyses will be used to test the hypothesis. OLS regression can only be used when the observations are independent. Like was mentioned the data originally contained of two waves from which only the second wave was still available. The rate of response for the second wave was 76%. The original 856 respondents were randomly chosen from a group of 856 unemployed adolescents between 15 and 27 year. The 592 respondents who were left in the second wave still proved to be a randomly chosen sample of adolescents, while the drop-outs were indicated by the IVA as a non-selective group. Therefore we can assume that the data consists of a non-selective group of respondents and the observations are independent.

Furthermore also a logistic regression could have been used. The chance of being unemployed would then have been the dependent variable instead of the percentage of time a person has been unemployed since the moment he or she has entered the labour market. We argue that '*percunemployed*' contains more information, because it covers information about the duration of unemployment.

Finally the dependent as well as the independent variables have been checked for multicollinearity by running a correlation matrix. The highest correlation was found between years of education and age ( $R = 0.332$ ,  $\text{sig} = 0.000$ ), which indicates that there is no problem with multicollinearity.

## Results

The results of the ordinary least square regression analyses (see table 2) were examined with respect to the hypotheses. Each analytical level is separately added to the model, in order to notice possible changes in the results after adding another analytical level. If we look at model 1 (HC) we consider the influence of human capital while controlling for age and gender. It was hypothesized that work experience as well as years of education would have a negative effect on the percentage of time an adolescent is unemployed. Both hypothesis seem to be supported by the regression analyses. Education has a negative effect on the percentage of time an adolescent has experienced unemployment while being part of the working force. An additional year of education decreases the percentage of time with 3,6 % (beta = -0.036,  $p < .001$ ).

**Table 2. Results of OLS multiple regression analyses.**

	HC		HC/Motivation		HC/Motivation/SC	
	B	SE	B	SE	B	SE
<i><b>Human capital</b></i>						
<i>Work experience</i>	<b>-0.005***</b>	<b>0.000</b>	<b>-0.005***</b>	<b>0.000</b>	<b>-0.005***</b>	<b>0.000</b>
<i>Years of education</i>	<b>-0.036***</b>	<b>0.004</b>	<b>-0.034***</b>	<b>0.005</b>	<b>-0.033***</b>	<b>0.004</b>
<i><b>Motivation</b></i>						
<i>Work ethic</i>	-	-	<b>-0.031*</b>	<b>0.013</b>	<b>-0.027*</b>	<b>0.013</b>
<i>Mental health</i>	-	-	<b>-0.071*</b>	<b>0.030</b>	<b>-0.062*</b>	<b>0.030</b>
<i>Financial needs*kids</i>	-	-	<b>0.002</b>	<b>0.002</b>	<b>0.002</b>	<b>0.002</b>
<i>Financial needs*married</i>	-	-	<b>-0.003*</b>	<b>0.001</b>	<b>-0.003*</b>	<b>0.001</b>
<i>Financial needs*alone</i>	-	-	<b>0.000</b>	<b>0.002</b>	<b>0.000</b>	<b>0.002</b>
<i>Financial needs*parents</i>	-	-	<b>0.001</b>	<b>0.001</b>	<b>0.000</b>	<b>0.001</b>
<i><b>Social capital</b></i>						
<i>Quality of network</i>	-	-	-	-	<b>-0.007**</b>	<b>0.002</b>
<i>Motivation*SC</i>	-	-	-	-	<b>-0.004</b>	<b>0.008</b>
<i>Number of friends</i>					<b>0.010**</b>	<b>0.004</b>
<i><b>Control variables</b></i>						
<i>Age</i>	<b>0.039***</b>	<b>0.004</b>	<b>0.036***</b>	<b>0.004</b>	<b>0.035***</b>	<b>0.005</b>
<i>Gender (1=male)</i>	<b>-0.041*</b>	<b>0.018</b>	<b>-0.028</b>	<b>0.019</b>	<b>-0.026</b>	<b>0.019</b>
<i>Unemployed first 6 months</i>	<b>0.097***</b>	<b>0.021</b>	<b>0.101***</b>	<b>0.021</b>	<b>0.101***</b>	<b>0.021</b>
<i>R Square</i>	<b>.355</b>		<b>.378</b>		<b>.392</b>	
<i>#p &lt; .10 (i.e. approaches significance). *p &lt; .05. **p&lt;.01. ***p&lt;.001</i>						

Furthermore in model 1 (HC) work experience is significantly related with the percentage of time an adolescent has spent as an unemployed (beta = -0.005,  $p < .001$ ). An additional year of work-experience, decreases the percentage of time as an unemployed with 0,5%.

In model 2 (HC/Motivation) variables that concern the three different aspects of motivation have been added. Some support was found for the hypothesis that concerned the influence of motivation, although the effects were less strong in comparison to the human capital variables. The first hypothesis discussed the influence of having values that promote a working career, or in other words discussed the influence of work ethic values on being unemployed. As expected, adolescents who believed in values that are more negative about not-working, were unemployed less often (beta = -0.027,  $p = .039$ ). An increase of one point on the five-point work-ethic scale, reduces the percentage of time as an unemployed with 2,7%. Therefore we can conclude that support has been found for hypothesis 2a. In hypothesis 2b it is assumed that financial needs influence the motivation to have a job. The influence of financial needs is tested for different kinds of civil status. Only in case of being married, the hypothesis is supported ( $b = -0.003$ ,  $p = 0.044$ ). Hypothesis 2c stated that mental health influences unemployment. Mental health is expected to be related with negative judgements about a person's own capabilities to organize and execute courses of action required to attain designated types of performance. The model shows that this hypothesis is supported, though the effect can not be considered as very strong (beta = -0.062,  $p = 0.042$ ).

In the final and third model (HC/Motivation/SC) the influence of social capital has been added. Hypothesis 3 stated that networks can be used as an instrument to find a job. Larger networks with more ties that could lead to vacancies are expected to result in a more efficient job search process and people who possess such networks are expected to find a job quicker and will therefore be unemployed less often. This hypothesis finds support in the model. People with more employed friends are indeed less often unemployed (beta = -0.007,  $p = 0.002$ ). The number of friends did also influence unemployment, though the model shows that people with more friends, unemployed or employed, were unemployed more often. Therefore we can conclude that the network does have influence and that only employed friends can help to prevent the status of being unemployed.

At last the role of the employment status of people within a person's network is examined. It was hypothesized that when a person's network contains a lot of unemployed people, people will find it less problematic to be unemployed themselves and will have values that are less deviant towards not working. We did not find support for an interaction between social capital and motivation. Furthermore we can conclude that separately adding motivation in the second model and Social capital in the third did not change the outcomes much. Some effects decreased slightly, though remained significant.

### **Discussion and conclusion**

This research aimed to clarify the influence of personal characteristics and a person's social network on the chance of being unemployed. We analyzed the effects of various aspects of influence on the micro-level and meso-level. Personal characteristics on a micro-level have been indicated as human capital and motivation. Human capital refers to the stock and knowledge embodied in the ability of a person to perform a certain profession. It is the skills and knowledge gained by workers through education and work experience. These skills and the knowledge provide signals about potential productivity and make the adolescent a more interesting job applicant. The analyses performed in this research showed that people with more human capital have indeed an advantage over others during the job search process. People with more work experience and a higher educational attainment are less often unemployed. Our results indicate that the relation between human capital and unemployment can be seen as very persistent.

Furthermore motivation to work has been indicated as a factor of influence. Three different forms of motivation have been distinguished of which especially having values that promote a working career and having a good mental health showed to be related with unemployment. The financial need for a job only seems to have influence when the adolescent is married. A point for further research is the question whether individual's work ethic is being influenced by the own occupational status or that indeed having a good work ethic influences occupational status.

This research has also looked at the influence of social capital on unemployment. It has been argued that networks can be used as an instrument to find a job. Research has shown that a reasonable percentage of people find a job with the help

of their social network (Lin & Dumin, 1986; Flap & Boxman, 2001). This research-field has had a long history, but most of the time research has focussed on the supply of jobs and tried to determine to what extent job search networks provided opportunities for upward mobility. Little research has tried to indicate whether people with a larger network that could lead to more vacancies, are indeed unemployed less often. By looking at the number of friends and the percentage of friends that is employed we have tried to analyze the influence of the composition of a person's network on the time a person has been unemployed in the past. Our analyses found support for this relation. People with more employed friends were unemployed less often, though the number of friends alone did have a negative influence on the time an adolescent has been unemployed. So the occupational status of friends does make a difference. Having more friends does not mean more ties to vacancies, only in case those friends are employed themselves it does.

Finally we expected an effect of the network on work ethic. Earlier research discussed the potential influence of subcultures (Hammer, 1997) on attitudes and motivation. This relation has been tested, but the model did not support these ideas. Our results indicate several ways in which future research can develop this field of research further. Though the data in use have provided a good opportunity to explore the various mechanism and this research has shown that friends do have an influence on your occupational status, some relations ask for a more detailed examination with more specific data.

Till now most research on youth unemployment has only focused on the influence of human capital and again this research has shown that also in the Netherlands the lack of work-experience and a decent educational attainment can be a strong predictor for chances of youth on the labour market. But motivation and mental health, together with the influence of the social network are factors of influence that should be considered not only for future research but also by policy-makers.

## Appendix A

### *Variables for work ethic scale*

- *'Als je werkloos bent zit maar thuis te zitten'*
- *'Werken is een plicht die je hebt tegenover de maatschappij'*
- *'Als je werkloos bent voel je je nutteloos'*
- *'Doen waar je zin in hebt kun je pas als je je plicht gedaan hebt'*
- *'Er zijn nog belangrijkere dingen in het leven dan werken'*
- *'Werken moet altijd op de eerste plaats komen, ook als het minder vrije tijd betekent'*
- *'Als je werkloos bent heb je moeite om een bepaald levensritme te krijgen'*
- *'Als er geen werk voor je is, betekent dat eigenlijk dat je buiten de normale maatschappij gesloten wordt.'*
- *Als je werkloos bent dan weet je 's morgens niet wat je die dag zult gaan doen.'*

The answer-categories were:

1. Totally agree
2. Agree
3. Not agree, nor disagree
4. Disagree
5. Totally disagree

## Appendix B

### *Variables for mental health scale*

- *'Hoofdpijn'*
- *'Gespannen gevoel, nerveus'*
- *'Moeilijkheden met de spijsvertering'*
- *'Hartkloppingen'*
- *'Een benauwd of pijnlijk gevoel op de borst'*
- *'Last van diarree'*
- *'Neerslachtig, teneergeslagen'*
- *'Piekeren'*
- *'Pijn in de rug'*
- *'Moe/slap of hongerig'*
- *'Humeurig, prikkelbaar'*
- *'Slapeloosheid'*
- *'Duizeligheid'*

The respondents were asked to what extent they experienced these feelings or discomforts.

The answer-categories were:

1. Often
2. Sometimes
3. Never

## Literature

- Allmendinger, J. (1989) Educational systems and labour market outcomes. *European sociological review*, 5, 231-250
- Barera, F. (2006) A star is born? The authors, principles and objectives of analytical sociology. *Papers*, 80, 31-50
- Beker, M. & Merens, J.G.F. (1994) *Rapportage jeugd, 1994*. Rijswijk: Sociaal Cultureel Planbureau.
- Breen, R. (2005) Explaining cross-national variation in youth unemployment. *European sociological review*, 21, 125-134
- Boxman, E.A.W., De Graaf, P.M. & Flap, H.D. (1991) The impact of social and human capital on the income attainment of Dutch managers. *Social networks*, 13, 51-73
- Carle, J. (1987) Youth unemployment – Individual and societal consequences, and new research approaches. *Social science and medicine*. 2, 147-152.
- Cassidy, T. & Wright, L. (2008) Graduate employment and health: Longitudinal analysis of the transition from student. *Social psychology of education*. 11, 181-191
- Chuprov, V.I. (1999) Youth in social reproduction. *Russian social science review*, 40, 52-72
- Christensen, U., Schmidt, L., Kriegbaum, M., Hougaard, C.O. & Holstein, B.E. (2006) Coping with unemployment: Does educational attainment make any difference? *Scandinavian journal of public health*, 34, 363-370
- Centraal Bureau voor de statistiek (2008). *Landelijke Jeugdmonitor: rapportage 1e kwartaal 2008*. Voorburg. Retrieved at 28-11-2008 from <http://www.cbs.nl/nl-NL/menu/themas/bevolking/publicaties/artikelen/archief/2008/2008-jeugdwerkloosheid-art.htm>
- Centraal Bureau voor de statistiek (2009). *Werkloosheid begint op te lopen*. Voorburg. Retrieved at 26-01-2009 from <http://www.cbs.nl/NR/rdonlyres/89CB9864-5605-4746-87D3-03364FE0C8B0/0/pb09n003.pdf>
- Centraal Bureau voor de statistiek (2009). *Werkloosheid verder gestegen*. Voorburg. Retrieved at 25-06-2009 from <http://www.cbs.nl/NR/rdonlyres/CA97F1D4-FEAA-4602-A04A-EA2CC1C8F26B/0/pb09n046.pdf>
- Daly, M.C., Jackson, O. & Valletta, R.G. (2007) Educational attainment , unemployment, and wage inflation. *FRBSF Economic Review*, 45-61
- De Goede, M., Spruijt, E., Maas, C. & Duindam, V. (2000) Family problems and youth unemployment. *Adolescence*, 35, 587-601
- Erbenova, M., Storm, V. & Terrell, K. (1998) Work incentive and other effects of social assistance and unemployment benefit policy in the Czech Republic. *Emperical economics*, 23, 87-120.

- Erickson, B.H. (2001) Good networks and Good jobs: The value of social capital to Employers and Employees. In Lin, N., Cook, K. & Burt, R.S. (2001) *Social capital; Theory and research*. New Jersey, United States of America, Transaction Publishers.
- Fernandez, C. (2006) The role of education vis-à-vis job experience in explaining the transitions to employment in the Spanish youth labour market. *Spanish Economic Review*, 8, 161-187
- Flap, H.D. & Boxman, E.A.W. (2001) Getting started: The influence of social capital on the start of the occupational career. In Lin, N., Cook, K. & Burt, R.S. (2001) *Social capital; Theory and research*. New Jersey, United States of America, Transaction Publishers.
- Fontaine, F. (2008) Why are similar workers paid differently? The role of social networks. *Journal of economic dynamics & control*, 32, 3960-3977
- Granovetter, M. (1973) The strength of weak ties. *American journal of sociology*, 78, 1360-1380.
- Hammer, T. (1993) Unemployment and mental health among young people: a longitudinal study. *Youth an society*, 16, 27, 407-420.
- Hammer, T. (1997) History dependence in Youth Unemployment. *European Sociological Review*, 13, 17-33
- Hammer, T. (1999) The influence of different compensation levels of unemployment benefits on job chances among unemployed youth: A comparative study of Nordic countries. *Acta Sociologica*. 42, 123-134
- Holzer, H.J. (1988) Method use by unemployed youth. *Journal of labour economics*. 6, 1-20
- Kelly, R. & Lewis, P.E.T. (2002) Neighbourhoods, families and youth employment outcomes: A study of the metropolitan Melbourne. *Journal of socio-economics*, 31, 405-408
- Korenman, S. & Neumark, D. (1991) Does marriage really make men more productive? *The journal of human resources*, 26, 282-307.
- Lin, N. & Dumin, M. (1986) Acces to occupations through social ties. *Social networks*, 8, 365-385
- Ministerie van sociale zaken en werkgelegenheid (2007). Beleidsnota werkleerplicht voor jongeren tot 27 jaar. Den Haag: Ministerie van SZW. Retrieved at 29-11-2008 from docs.szw.nl/pdf/35/2007/35\_2007\_3\_11358.pdf
- Müller, W. & Shavit, Y. (1998). The institutional embeddedness of the stratification process: A comparative study of qualifications and occupations in thirteen countries. In Müller, W. and Shavit, Y. *From school to work: A comparative study of educational qualifications and occupational destinations*. Oxford, UK: Clarendon Press
- Nordenmark, M. (1999). The concentration of Unemployment within families and social networks. *European Sociological Review*, 15, 49-59
- O'Regan, K.M. (1993). The effect of social networks and concentrated poverty on black and Hispanic youth unemployment. *The annals of regional science*, 27, 327-342

- Roman, A. (2006). *Deviating from the standard: effects on labor continuity and career patterns*. (Amsterdam) Dutch University Press.
- Rosseel, E. (1985) Work ethic and orientations to work of the young generations: The impact of educational level. *Social indicators research*, 17, 171-187
- Sackmann, R. (2001) Age and labour-market chances in international comparison. *European sociological review*, 4, 373-387
- Taris, T.W. (2002) Unemployment and mental health: A longitudinal perspective. *International Journal of Stress Management*, 4, 43-57
- Taskforce jeugdwerkloosheid (2006). Juist nu doorblijven. Advies aan het nieuwe kabinet. Den Haag: Retrieved at 03-12-2008 from [http://jeugdwerkloosheid.szw.nl/index.cfm?fuseaction=dsp\\_rubriek&rubriek\\_id=190023&menu\\_item=9705](http://jeugdwerkloosheid.szw.nl/index.cfm?fuseaction=dsp_rubriek&rubriek_id=190023&menu_item=9705)
- Torben, M.A., & Vetter, H. (1995) Equilibrium in youth unemployment. *Journal of economics*, 1, 1-10
- Ultee, W., Dessens, J., & Jansen, W. (1988). Why does unemployment come in couples? An analysis of (un)employment and (non)employment homogamy tables for Canada, The Netherlands and the United States in the 1980's. *European Sociological review*, 4, 111-121
- Völker, B. & Flap, H.D. (1999) Getting ahead in the GDR; Social capital and status attainment under Communism. *Acta Sociologica*, 42, 17-34
- Weber, M. (1959) *The Protestant Ethic and the Spirit of Capitalism* (New York): Charles Scribner's Sons
- Wiener, K.K.K., Oei, T.P.S. & Creed, P.A. (1999) Predicting job seeking frequency and psychological well-being in the unemployed. *Journal of employment counselling*, 36, 67-81

