Trends in Labor Market Precarity among Dutch Youth: the Impact of Economic Globalization on Educational Differences

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Abstract

This study addresses the question to what extent there is a trend towards increasing labor market precarity among Dutch youth between 1992 and 2007, particularly among the lower educated labor market entrants. Moreover, we aim to explain this trend and increasing educational differences in this trend by the process of economic globalization, controlled for business cycle effects. Multinomial logistic regression models are estimated using sixteen cross-sections of the Dutch Labor Force Survey (1992-2007), including 82,097 school-leavers entering the labor market. The results show that economic globalization led to an increase in the likelihood of temporary employment, especially among lower educated individuals. Moreover, economic globalization resulted in less unemployment among higher educated people, but in an increase in the likelihood of unemployment among lower educated people. Hence, in a highly globalized world like the Netherlands, all young labor market entrants experience more difficulties in getting a standard, permanent job, but especially the least qualified people. Because of this disadvantaged position of the lower educated, social inequalities will continue to exist, as economic globalization increases.

Introduction

"We cannot always build the future for our youth, but we can build our youth for the future." – Franklin D. Roosevelt

These words, spoken by former American president Franklin Delano Roosevelt, indicate the importance of the young generation for the future. In fact, our youth is the future, as those who are educated today, are the governors of tomorrow. Accordingly, it is extremely important for young people to have good education, which determines to a great extent how successful their entrance on the labor market will be. This, in turn, affects subsequent career development, but also people's family and social life. Having a secure start on the labor market is thus very important, however, modern society underwent some dramatic changes in past decades, which have transformed the transition from child to adulthood considerably (Mills & Blossfeld, 2005). From about the 1980s, a process of economic globalization has taken place. In brief, this implies that firms in advanced economies, instead of competing only within their regional economy, started to increasingly compete against firms from other economies around the world. Internationalization of markets and rising tax competition among welfare states were hence part of the globalization process and 'enforced' employers to seek for greater flexibility through adaptation of the work force (Kalleberg, 2009). For example, more highly-skilled jobs were created and labor costs were reduced through temporary contracts. The process of economic globalization thus led to the development of new employment forms in industrialized countries, and contributed to an increase in labor market precarity from about the 1990s. Most likely, the increase in the number of people confronted with a very insecure, uncertain and risky labor market situation particularly concerns the young and least qualified people, according to previous research providing indications for the fact that the process of labor market flexibilization concentrates on people who already have a weaker position on the labor market, i.e. labor market entrants without a degree or unskilled workers (Breen, 1997; Mills & Blossfeld, 2005). In this study, we aim to give more insight into the rise of employment precarity among young people in the Netherlands since the 1990s by focusing on the role of education. First, we want to answer the following question: to what extent does a trend towards labor market precarity exist among young people in the Netherlands between 1992 and 2007, particularly among the lower educated? Next, we aim to explain this trend through the second research question: to what extent can the trend in employment precarity and the (increasing) educational differences in this trend be explained by the process of economic globalization?

Precarious employment we define as temporary employment and unemployment, both compared to permanent employment. Whereas experiencing unemployment obviously is an undesirable labor

market situation, being in temporary employment is not per definition good or bad. On the one hand, a temporary job offers someone the opportunity to enter the labor market or to stay in touch with it, and it might function as a step towards more permanent employment (Zijl, van den Berg & Heyma, 2004). Although it concerns a temporary job, at least it is a job and hence it might be better than having no job at all. However, quite a large body of literature concerns the negative side of temporary employment, i.e. that people might get 'trapped' in such precarious jobs if they once accept one, which is obviously bad for subsequent career development (Scherer, 2005; Steijn, Need & Gesthuizen, 2006). Irrespective of the fact if temporary employment is positive or negative in the long term, what it has in common with unemployment is that both refer to a precarious employment situation, at least in the short run. People in unemployment or temporary employment do not have any certainty about their employment status in the (near) future, neither about their financial situation consequently. This might complicate the start of making long-term commitments like buying a house or starting a family. Although other non-standard types of employment, like part-time employment, might be considered quite often as marginal labor, they cannot be regarded as precarious in the Netherlands, since many part-time jobs are permanent positions, in contrast to some other European countries and the United States (Remery, van Doorne-Huiskes & Schippers, 2002). Therefore, we only focus on temporary employment and unemployment in this study on employment precarity.

From previous research we learn that especially young people have difficulties in getting a secure and stable job after finishing education (Mills & Blossfeld, 2005; Bukodi, Ebralidze, Schmelzer & Blossfeld, 2008). Labor market entrants are the most vulnerable group to experience labor market insecurity, although much variation in the risk of job insecurity exists between European countries (Van der Velden & Wolbers, 2003; Wolbers 2007; Breen, 2005). But why are especially young people more likely to get involved in precarious work? First of all, young labor market entrants are considered as outsiders in the labor market by firms: they usually lack work experience, seniority, lobby, and networks, which makes it hard for them to get a secure and highly rewarded job. In order to get a job after leaving school, such people need to accept less appreciated, flexible jobs, like jobs with a temporary contract. Another reason why new labor market entrants and young workers are especially concerned with labor market flexibilization is that a temporary contract enables employers to screen the employee's work potential first, so that employees do not need to get dismissed from a permanent contract, which is difficult and costly (De Vreyer, Layte, Wolbers & Hussain, 2000; Bukodi et al., 2008).

In addition to the fact that labor market precarity is concentrated among youth entering the labor market, we just addressed that earlier studies indicated the fact that the likelihood to start in

precarious employment is not equal between all young people in society (Mills & Blossfeld, 2005). It is known that education plays an important role in the allocation of jobs that are available on the labor market for school-leavers (Becker, 1964; Mincer, 1974; Spence, 1974; Thurow, 1975). It seems thus plausible to assume that education will play a determining role in the allocation process of temporary jobs and the distribution of unemployment among young people. Breen (1997) argues for example that especially socially deprived groups in society are the victims of the precariousness of the labor market and that already existing social inequalities are thus intensified as the labor market gets more and more precarious. The process of labor market flexibilization will concentrate on the people who already have a weaker position on the labor market, i.e. labor market entrants without a degree or unskilled workers. Accordingly, this study focuses on differences in employment precarity between people with different educational backgrounds.

Through this research we improve on previous studies in several ways. First, earlier research has investigated the role of globalization in explaining trends in precarious labor market transitions during the early career, controlled for business cycle effects (Raab, Ruland, Schönberger, Blossfeld, Hofäcker, Bucholz & Schmelzer, 2008). However, this study focuses on two single countries, i.e. Germany and the United Kingdom. The Netherlands is generally considered to be a particularly interesting case within Western Europe in studying the effect of globalization, due to its history of being a small open economy with a long tradition in trade, foreign investment and a high concentration of multinational companies (Liefbroer, 2005; Wielers & Mills, 2008). Since it has been integrated into the global economy for a long time, it is expected to be more vulnerable to the forces of globalization than elsewhere. The fact that the process of labor market flexibilization is very well visible in the Netherlands seems to provide evidence for the expected large impact of globalization in this country. However, no comprehensive study as the one of Raab et al. (2008) yet exists for the Netherlands, which seems to be a legitimate argument to focus on this country in this research, especially considering the Dutch labor market background just described.

Second, the study of Raab et al. (2008) only analyzes the unemployment risk after having entered first employment. In our research we investigate labor market precarity by analyzing the likelihood to end up in temporary employment or in unemployment after leaving education simultaneously, both compared to ending up in permanent employment. In this way, we take account of the fact that temporary employment is not just an alternative to permanent employment, but that it is an alternative to unemployment as well. After leaving education, people do not just make the decision whether or not to enter the labor market first (i.e. the choice between employment and unemployment) and then consider whether or not to accept a temporary job, but they can opt for one of these three employment situations right after leaving education. Hence we will study labor

market precarity by analyzing the transition from education to employment likewise, which has not been done previously.

Third, we try to advance on prior research by focusing on differences between lower educated and higher educated people with respect to their likelihood to experience employment precarity. Like discussed before, earlier research has indicated the fact that labor market precarity is concentrated among people with less human capital and that growing labor market precarity reinforces social inequality (Breen 1997; Mills & Blossfeld, 2005). However, the impact of globalization on people with different educational levels, like we will address in this study, has not been investigated empirically earlier.

Theory and Hypotheses

Globalization and Employment Precarity

Modern society went through some rapidly accelerating changes since the 1980s. These macro changes range from social, economical, cultural, political and technological changes, which are commonly described as the process of 'globalization', a term which has become a key concept in social sciences (Raab et al., 2008). Many social scientists have attempted to give a definition of globalization, which is very hard, since it is such a broad and multidimensional concept. Globalization is related to concepts as 'worldwide interdependency' and 'global integration' and, in fact, it is not a new phenomenon: for a long time, people and companies from all over the world are connected to each other through trade, for instance. However, given the speed and extent to which trade, investments and migration between countries have increased in the past few decades, it seems legitimate to state that the world has entered a new phase of development since the 1980s, referred to as globalization.

In an attempt to develop a multidimensional globalization measure, in order to allow "to empirically assess whether there is globalization at all, whether globalization represents a distinctive new historical phenomenon, and to which extent globalization has an impact on the life courses of individuals in industrialized societies" (Raab et al., 2008, p.597), Raab et al. divide globalization into four different dimensions, i.e. economic, (socio)technological, cultural and political globalization, following work by Mills and Blossfeld (2005). Each dimension is based on a specific macro process. The first dimension, i.e. economic globalization, is often considered as the only dimension of globalization and, in brief, it concerns the internationalization of markets and rising tax competition among welfare states (Raab et al., 2008). This type of globalization is particularly visible after 1989 (the fall of the Iron Curtain), when countries with very different wage levels, social standards and productivity levels came together. This led to a variety of actors on different markets, resulting in

growing competition between them, which posed new challenges for both corporations and nation-states, in particular concerning the strong tax competition they faced. Internationalization of markets thus implies a decline of national borders: worldwide, countries started cooperation and agreed on developing common laws, institutions or practices, which makes it easier and cheaper to cross borders with commodities, labor, services and capital. This involves, for instance, that labor-intensive and hence costly work is transferred to countries with lower wages, like India, or that inexpensive workers from, for example, Poland are set to work in the Netherlands to save labor costs. This way, countries have more opportunities to capture a powerful position in the world economy, but also experience more and more competition. There is hence a growing interdependency between nation states and a decline of national authority and identity. In addition to the fact that increased labor market competition between corporations and nation states will have direct financial consequences, it might also cause fluctuations in the supply and demand size of the products sold or the services offered. In turn, both determine the demand size of the workforce, which will also vary consequently. Therefore, employers have started offering more nonstandard work contracts, like temporary jobs. By using fixed-term contracts the workforce can be more easily adjusted to the supply and demand of that specific moment, compared to a situation in which people are contracted for an indefinite period of time, which makes it hard to fire or hire people.

Although the first dimension, i.e. economic globalization, is often regarded as the most important one since the economy is seen as the basic 'motor' of globalization, we will shortly pay attention to the other dimensions of globalization and their link to employment precarity. The process of globalization also involves (socio)technological globalization, the second dimension discerned (Raab et al., 2008). This includes the spread of global networks and firms linked by ICTs such as microcomputers and the Internet. Thanks to these new ICTs together with modern mass media, the diffusion of information and knowledge is hardly delayed or restricted by time or space. This implies that individuals, organizations and communities from everywhere can communicate with each other very easily and cheaply. Technological advances made it thus possible for companies to become globally competitive, or in fact even forced them to do so. This way, ICTs contributed to increased labor market competition and hence to the rise of more precarious work, like previously discussed. In addition, technological innovation led to changes in the work process. One of the most important changes concerns the fact that there was (and still is) a growing need for knowledge-intensive work, because of technological developments in modern labor markets. A shift in the economy took place "from manufacturing-based, mass production to an information-based economy organized around flexible production" (Kalleberg, 2009, p.3). The service sector expanded enormously (i.e. especially the producer and social service sector) at the expense of the size of the traditional industrial and

agricultural sectors. This 'upgrading' of the labor market structure involved a favor for skilled labor (linked to highly educated, more able, more experienced personnel) over unskilled or low-skilled labor (linked to poorly qualified workers), also known as 'skill-biased technological change' (Katz & Autor, 1999). Educational expansion entailed, though, that also better educated people faced problems in entering an optimal labor market position, because of the growing number of highly educated people compared to the available number of highly-skilled jobs. As a result, some of the higher-educated were forced into lower-skilled jobs, resulting in even more unemployment or precarious employment among (lower-skilled) people (Borghans & de Grip, 2000; Bukodi et al., 2008; Gesthuizen & Wolbers, forthcoming).

The third dimension is constituted by cultural globalization. Again, new ICTs and mass media play an important role, however, now in spreading Western culture (characterized by belief in growth and progress), values and standards over the world. Despite the fact that there are still institutional and life course differences between individuals, it is expected that a global culture will develop. This also includes the spread of western values such as rationalism and universalism, or the civil right of education and equal opportunities, as well as the political rights of freedom (Raab et al., 2008). Although the cultural dimension of globalization is not directly linked to an increase of labor market precarity, we argue that cultural globalization positively affects the spread of especially economic globalization and hence indirectly leads to a more precarious labor market.

Finally, the dimension of political globalization concerns the internationalization of politics. It is argued, however, that political globalization, i.e. the increase in global political agreements, precedes, perhaps even necessarily, social, cultural and economic integration. Without common political decisions it is very hard to communicate, trade or cooperate, for instance, and internationalization of politics intensifies the interaction between nation-states and link social groups from various countries (Raab et al., 2008). Therefore, like cultural globalization, we expect political globalization to be indirectly inducing labor market precarity through the encouragement of particularly economic globalization.

Figure 1 illustrates how globalization has developed in the Netherlands since the 1980s. It shows the overall KOF Index of Globalization (Dreher, 2006) for the Netherlands, as well as for Europe in general. Moreover, the economic globalization index for the Netherlands is represented in Figure 1. It is clear from this figure that the level of globalization in the Netherlands has always been high, especially compared to Europe. In addition, from the 1980s a trend is visible to more globalization in the Netherlands, but also in the rest of Europe. In 2000, the globalization level seems to stabilize in the Netherlands, while it is still rising in Europe and hence approaching the Dutch level of globalization. However, still, the Netherlands seems to be a country that is far more globalized than

many other European countries, which must have far reaching consequences for the Dutch society. The level of economic globalization is highly correlated with the overall globalization index in the Netherlands: i.e. from about the mid-1980s the first mentioned is slightly higher.

[FIGURE 1]

Hypotheses on the Effect of Globalization on Employment Precarity

So far, we have described what the different types of globalization encompass and how they are linked to employment precarity. Although all types of globalization in a way are expected to contribute to the rise of precarious employment among youth in the Netherlands, either directly or indirectly, the most important contribution might be expected from the advancements in economic globalization. This dimension of globalization entails that individuals, firms and governments increasingly experience competition and interdependency due to globalizing markets and have difficulties in predicting the future of the market and in making choices between different alternatives and strategies. In brief, economic globalization leads to increasing uncertainty about economic and social developments (Mills & Blossfeld, 2005). The consequence of (temporal) uncertainty is that it is less attractive to make long-term commitments, but it leads on the other hand to so-called 'contingent asymmetric commitment', all else being equal (Breen, 1997). This implies that there is an agreement between two parties, but one of both parties has the possibility to withdraw from the relationship if required by circumstances, while the other party can only comply with whatever the first party chooses to do. Employers gratefully use this strategy in uncertain times, making them seek for a more flexible labor market in order to cut costs, which can be reached, for instance, through the creation of more fixed-term employment contracts. Their degree of commitment to actual and prospective employees thus declines in uncertain times: it allows employers to retain employees when they are needed and to get rid of them when they are not (Breen, 1997, p. 477). The risks resulting from economic globalization are shifted this way from employers to employees and future-employees, who cannot do more than accepting what is offered them, i.e. a temporary contract, or else they will probably be unemployed. We hence propose the first hypothesis that the level of economic globalization has a positive effect on the likelihood of temporary employment among labor market entrants (H1a). Although a rise in temporary employment as compared to permanent employment does not draw a positive image of the outcomes of globalization – apart from the fact that some people might prefer such a flexible type of employment themselves – it can also be viewed from a more bright side: considering the fact that employers could be reluctant to hire employees at all, in times of fast growing globalization, people

who are in temporary employment during such times, at least belong to the work force, which implies that they are not unemployed. So, temporary employment might be regarded as a good alternative to unemployment in a world that is highly globalized. This leads to the hypothesis that the level of economic globalization has a negative effect on the likelihood of unemployment among labor market entrants (H2a).

Without a doubt, increasing uncertainty is a consequence of globalization that strikes all individuals in modern societies in a certain way. It is also true that in our current, knowledge-based society, the most important types of human capital are constituted by education and labor force experience (Mills & Blossfeld, 2005). Whereas the allocation of jobs used to be based on ascribed characteristics, like social class background, technological developments entailed that labor became more difficult, which required a higher level of education (i.e. more achieved properties like knowledge and skills) to practice such jobs. This trend from ascription to achievement is summarized in Blau and Duncan's modernization theory (1967) and acknowledges the prominent position of education in the allocation of jobs nowadays. Although labor market experience is another indispensable characteristic for getting a job, it may be clear that school-leavers usually lack relevant work experience and hence their level of education is exceptionally important in informing employers about their qualities as a future employee. However, this also explains why labor market precarity might result from differences in education between labor market entrants, apart from the level of economic globalization in their country. Different micro level theories can be used to explain the relationship between education and successful labor market entrance.

First, according to human capital theory, the skills acquired in education represent human capital (Becker, 1964). As long as investments in human capital lead to higher productivity on the labor market, people will follow more education. The best labor market positions will be offered by employers to individuals who have obtained most human capital. A higher educational level will hence lead to less employment precarity among labor market entrants. We already addressed the fact that employers have no other information about the actual skills and knowledge of individuals than their educational qualifications. Signaling theory (Spence, 1974) argues that this is the reason why employers use education as a screening device, in order to help to solve the problem of imperfect information about potential workers. Again, the higher educated send out better 'signals' to employers about their future labor market productivity which protects them from starting in precarious employment, compared to lower educated labor market entrants. In addition to these theories that assume a direct relationship between education and labor productivity, other theories deny this. Conflict theory (Collins, 1971; Bourdieu, 1973), for instance asserts that knowledge and skills are acquired on-the-job instead of in education. Schools can be regarded as the arena, where

higher and lower status groups dispute with each other, and higher educated people finally get the best positions because of their ability to control access to elite jobs, and not because of their better skills or knowledge (Bills, 2003). Lower educated people are consequently forced into more precarious employment. Finally, according to job competition theory (Thurow, 1975) employers seek to employ the best available candidate for their vacancies, at the lowest training costs. Therefore, they place job seekers in an imaginary queue (based on their expected training costs) which is matched with a queue of vacant jobs (ranked according to their level). People with the lowest (expected) training costs will get the highest level jobs, or in other words: the precarious jobs go to the people with the highest training costs, i.e. the lower educated.

In brief, according to the theories above, lower educated individuals are put at a disadvantage when entering the labor market compared to those with higher education, since the former have a higher risk to start in precarious employment, irrespective of the level of globalization in their country. On the other hand, we have argued that because of economic globalization, in general, all employers will face higher uncertainty and transfer this risk to their employees, which will result in a greater risk of precarious employment for every employee or future employee. So, when we do take account of the level of economic globalization, it is most likely that the increase in uncertainty and insecurity, resulting from rising economic globalization levels, hits the lowest educated the hardest, and hence the more negative the relationship between education and employment precarity becomes. Also Breen (1997) demonstrates that employer's risks resulting from globalization will not be transferred equally across all employees. He argues that for employers it is very important in the decision to offer a long-term employment contract whether or not it is difficult or impossible to monitor exactly what a worker is doing. As high skilled jobs, i.e. employment regulated by a service relationship, are hard to submit to direct supervision because of the specialized knowledge of the employee holding the job, compared to lower skilled jobs, i.e. jobs based on a labor contract, such jobs are most often rewarded with a long-term employment contract, even in times of high uncertainty. The advantages of long-term commitment in times of less uncertainty are namely substantially bigger than the advantages to the employer of flexibility in their employment relationship in times of more difficulties (Breen, 1997: p. 480). As high skilled jobs are only available for those with higher qualifications, labor market entrants with more education are more protected against the consequences of economic globalization, i.e. employment precarity. In brief, we expect that the positive effect of the level of economic globalization on the likelihood of temporary employment is stronger for low educated labor market entrants than for high educated ones (H1b).

Also regarding the likelihood of unemployment we expect differences in the effect of economic globalization between people with a different education level. As described previously, under the

process of globalization a shift took place from low-skilled to high-skilled labor, which is called 'skill biased technological change'. This implies that the current labor market is characterized by more highly skilled jobs, and that the demand for people with more education grows. Higher educated school-leavers are hence expected to be 'protected' from unemployment because of this process of upgrading of the labor market structure. Moreover, if the number of available higher-skilled jobs is not sufficient to provide all higher educated labor market entrants with a job at their educational level, they can still choose to accept a lower-skilled job. For lower educated labor market entrants, however, it is more difficult or even impossible to accept a job below their educational level, and they are therefore more likely to be pushed into unemployment. This is generally referred to as 'crowding-out' (Borghans & de Grip, 2000). So, our last hypothesis reads that the negative effect of the level of economic globalization on the likelihood of unemployment is stronger for the high educated labor market entrants, than for the low educated ones (H2b).

Data & Measurements

Data and Selection of Sample Population

To test our hypotheses, we pooled sixteen waves of the Labor Force Surveys (LFS) (in Dutch: 'Enquête Beroepsbevolking' or EBB) collected by Statistics Netherlands (CBS) in 1992-2007. LFS is a very large-scale survey and the aim of the LFS is to monitor the Dutch economic situation. The data are representative of the Dutch non-institutionalized population of 15 years and older and surveys are conducted every year, in order to provide national employment statistics on a regularly basis. The LFS contain detailed information on education and occupation of respondents, including information on temporary employment, which makes these data very suitable for our analyses. In addition, we added to these data information on globalization and the economic situation in the period 1992-2007.

Since we focus in this paper on employment precarity among Dutch labor market entrants, we are only interested in information about respondent's first job. In order to exclude respondents that already have gained work experience, we selected respondents on age within each level of education, in addition to the more general selection of respondents belonging to the labor force only that we applied. This implies that we selected for each educational level respondents who are maximally one year younger than the nominal age of leaving this type of education and at most five years older than the nominal age. This results in the following selection of respondents: elementary education (BO) selection of 15 through 17 years old at the moment of interview; lower vocational (LBO) 15 through 21; intermediate general (MAVO) 15 through 21; higher general (HAVO/VWO) 16 through 23; intermediate vocational (MBO) 18 through 25; higher vocational (HBO) 20 through 26,

and university (WO) 21 through 27 years old. Furthermore, to the purpose of analyzing labor market entrants, which implies that we are not interested in people with side jobs, we excluded respondents who reported to be in education, when asked for their social position. The sample size of the data originally included 1,404,169 respondents, but our selections (so far) resulted in a sample of 84,482 respondents.

Dependent Variable: Employment Situation

Employment situation is based on a variable in the LFS indicating whether the respondent: (1) worked as an employee with a permanent employment relationship (i.e. having an employment contract of at least one year and for a fixed number of working hours), (2) worked as an employee with a flexible employment relationship (i.e. having an employment contract of less than one year without perspective of a permanent contract, or having an employment contract for an indefinite number of working hours; so, also people working through an employment agency have a flexible employment relationship), (3) was self-employed within one's own company, (4) was self-employed within the company of the partner or parent(s), (5) or else self-employed (i.e. not working as an employee, nor self-employed in own company or company of partner or parent(s), but as a freelancer for instance). To measure *employment situation* we only included people indicating to work as an employee and excluded all people who were self-employed in a way, since this concerns a group of people with a very specific type of employment, which is neither permanent nor flexible. Moreover, we excluded people who did not belong to any of the above mentioned categories. Subsequently, to measure *employment situation*, we briefly coded people within the first category as being in 'permanent employment' (0), people within the second category as being in 'temporary employment' (1) and, based on a variable in LFS indicating the type of labor force one belongs to, people belonging to the unemployed labor force are obviously coded as being in 'unemployment' (2).

Independent Variables

The highest *level of education* is measured by distinguishing between six educational categories: elementary education or lower vocational education (in Dutch: BO/LBO), intermediate general education (MAVO), higher general education (HAVO/VWO), intermediate vocational education (MBO), higher vocational education (HBO) and university (WO). We decided to combine elementary education and lower vocational education in one category as the former contained only 1% of the respondents in our data. This category is used as reference category. Respondents, of whom the educational level was unknown, are excluded.

Year is included as dummy variables indicating the year of the survey. We used 1992 as the reference category. Furthermore, we included *year* as an interval variable ranging from 0 (1992) to 15 (2007), only to construct an interaction variable with *level of education*.

The level of *economic globalization* is measured through the economic dimension of the KOF Index of Globalization, which is available until 2007 (Dreher, 2006). The overall index covers the economic, social and political dimensions of globalization, but we included the measurement of economic globalization only, as this seems to be the most important dimension in explaining employment precarity, or in other words, it is expected to be most directly linked to the increase in precarious employment. Economic globalization is characterized as long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges. In fact, economic globalization includes two dimensions. First, it refers to actual economic flows, which are usually taken as measures of globalization. This sub-index includes data on trade, foreign direct investment (FDI), portfolio investment and income payments to foreign nationals. Second, economic globalization includes proxies for restrictions to trade and capital, which actually indicate less globalization. More specifically, this sub-index refers to restrictions on trade and capital using hidden import barriers, mean tariff rates, taxes on international trade (as a share of current revenue) and an index of capital controls. The scale measuring economic globalization includes weights of all these variables and is transformed to an index on a scale of one to hundred, where a higher number indicates a higher level of economic globalization (Dreher, 2006). For the period 1970 to 2006 the data are calculated every year, so we added the variable *economic globalization* with measurements from 1992 to 2006 to the LFS. As the measurement for 2007 is still unknown, we calculated the mean score on economic globalization of the last three survey years as indication for 2007, in order not to lose these data.

Control Variables

Gender is measured by coding men (0) and women (1). *Ethnicity* is also included as a dummy variable referring to natives (0) and non-natives (1), since a further distinction between ethnicities was not available for all survey years. Non-natives are defined as people with at least one parent born abroad. We also included a measure of *time since leaving education*. Since we do not know the respondent's exact date of leaving education, we calculated this variable by subtracting the nominal age of leaving the educational level that the respondent attained of the respondent's age in the survey year. This results in a linear measurement of the time someone has left education in years. The minimum score on this variable (0) indicates that the respondent left education in the year of the survey. We also examined whether the effect of *time since leaving education* was non-linear by including dummy variables for different categories of years since leaving education. However, this

analysis showed that the effect of *time since leaving education* is linear. To keep the model as parsimonious as possible, we hence included the linear measurement of this variable. Information on the *type of education* was used to construct dummy variables indicating general education (0), technical education (1), economical education (2) and cultural education (3). To control for business cycle effects, we included the *unemployment rate* per year (percentage unemployed labor force). These statistics are based on figures from Statistics Netherlands (CBS, 2009).

An overview of the variables included is presented in Table 1. Our analytical sample includes 82,097 respondents. As our dependent variable is categorical with more than two categories, we apply multinomial logistic regression with permanent employment as the reference category.

[TABLE 1]

Results

Descriptive Analysis

In this research, we aim to find out to what extent a trend exists in precarious labor among young people in the Netherlands between 1992 and 2007, particularly among the lower educated. First, we will show some graphs (see Figure 2) that give more insight into the differences between young people with different levels of education, before turning to our multivariate analyses. Temporary employment is contrasted with permanent employment (in order to see whether lower educated have more precarious jobs in case they have a job), while unemployment is compared to temporary employment and permanent employment.

From Figure 2 we can derive that there is a clear pattern in the development of temporary employment: the three lowest levels of education (i.e. lower vocational, intermediate general and higher general) are more often in temporary employment in the beginning of the 1990s compared to the three highest levels of education (i.e. intermediate vocational, higher vocational and university), and the number of people with lower education being in temporary employment increases more strongly during the 1990s and early 2000s compared to the higher educated. This implies that there is a growing gap between lower educated and higher educated in the degree to which they end up in temporary employment compared to permanent employment. This is exactly what we expected in light of the rise in globalization in the 1990s in the Netherlands. Concerning unemployment we see the following pattern: the level of unemployment of the higher educated (i.e. intermediate vocational and higher vocational) is lower than the unemployment level of the lower educated (i.e. lower vocational, intermediate general and higher general) and, in addition, the latter seems to

fluctuate more strongly compared to higher educated people. There is only one exception: the level of unemployment among people with a university degree is rather high during the 1990s, even higher than the lower educated, although this changes in the 2000s when it grows more to the level of the people with intermediate vocational and higher vocational education. Overall, we do not see structurally increasing educational differences in unemployment between the lower educated and the higher educated, like with temporary employment.

[FIGURE 2]

Multivariate Analysis

Although the graphs in Figure 2 nicely show how precarious employment develops among people with different levels of education, we need multivariate analyses to test whether the trends we observe in temporary employment and unemployment continue to exist, after controlling for some individual background characteristics (like gender, ethnicity, time since leaving education, level of education and type of education) and business cycle effects (through inclusion of the unemployment rate). Table 2 and Table 3 present the results of the multinomial logistic regression on employment situation: Table 2 for temporary employment versus permanent employment and Table 3 for unemployment versus permanent employment.

The first model of Table 2 (Model 1) only includes the level of education and the separate year dummies, apart from several control variables. What we can derive from this model to a large extent corresponds to the temporary employment graph in Figure 2: people with one of the three highest educational levels are less likely to experience temporary employment (compared to permanent employment) than people with elementary, lower vocational or higher general education. People with intermediate general education, however, are an exception: they are also less likely to experience temporary employment, compared to people with elementary or lower vocational education. Model 2 adds the interaction terms between year (linear variable) and level of education, which gives more insight into trends in temporary employment among people with different educational levels. This model shows that the general trend in temporary employment is rising until 1999 after which it slightly decreases (it does however not reach the level of 1992 again). After 2004, an increasing trend can be observed again, so in general, the likelihood to experience temporary employment increases between 1992 and 2007. This trend is furthermore less strong for people with a higher level of education than higher general education: for people with university degree the trend is least strong (i.e. interaction term of -0.065), respectively followed by people with higher

general education (i.e. -0.056) and people with higher vocational education (i.e. -0.023). These findings correspond to the trends we observed in Figure 2.

In Table 3 we present the same models, but here we compare unemployment with permanent employment. Model 1 shows some remarkable results: people with elementary or lower vocational education (reference category) appear to be most likely to experience unemployment (compared to permanent employment), but then it seems to be the case that a higher educational level increases the likelihood to be in unemployment (i.e. the odds of being in unemployment is -0.850 for people with intermediate general education compared to the reference group and -0.035 (not significant) for people with university degree. However, we did not test whether the various levels of education differ significantly from each other. The interaction terms between year (linear) and level of education (Model 2) reveal, subsequently, that the (fluctuating) trend in unemployment is less strong as the level of education increases, which also stemmed from the unemployment graph in Figure 2.

So far, we have focused on the first aim of our research, i.e. to find out to what extent a trend towards labor market precarity exists among young people in the Netherlands between 1992 and 2007, particularly among the lower educated. We found out that this trend is confirmed by our data, especially with regard to temporary employment. Our second aim, though, concerns explaining the general trend in precarious employment and the increasing educational differences by the process of globalization. To this aim, we first calculated a model in which we replaced the dummy variables of year by the measurement of economic globalization (Model 3) and another model with also the interaction terms between economical globalization and level of education (Model 4). With regard to the likelihood of temporary employment compared to permanent employment, Model 3 (Table 2) teaches us that the level of economic globalization has a positive effect (0.075), which is in accordance with hypothesis 1a. We hypothesized, in addition, that this positive effect is stronger for lower educated labor market entrants (H1b). Model 4 supports this assumption: the positive effect of economic globalization is less strong for people with tertiary education (i.e. higher vocational (0.037) and university (0.018)) and for the other (lower) levels of education the positive effect of economic globalization is equal to people with elementary or lower vocational education, or even stronger positive for people with higher general education (0.138). This implies that lower educated labor market entrants in particular deal with the negative consequences of globalization, i.e. an increase in temporary employment.

We did not only expect economic globalization to affect the likelihood of temporary employment, as compared to permanent employment, but, moreover, we assumed that it influences the likelihood of unemployment among labor market entrants, though negatively (H2a). To test this hypothesis, we

need to look at the effect of economic globalization in Model 3 in Table 3. As we find a positive effect here (0.022), we have to reject hypothesis 2a. The same conclusion, however, does not need to be drawn towards the assumption that the negative effect of the level of economic globalization on the likelihood of unemployment is stronger for the higher educated labor market entrants (H2b). In Model 4 we find that, although the effect of economic globalization is still positive (0.059) for people with lower education (elementary/lower vocational, intermediate general and higher general education), it is less positive for people with intermediate vocational education (0.016), and economic globalization appears to affect people with higher vocational education and people with a university diploma negatively (respectively -0.033 and -0.096). So, globalization leads to higher levels of unemployment among lower educated labor market entrants, but among higher educated labor market entrants it leads to less unemployment. Although we expected that economic globalization would also lower the likelihood to become unemployed for lower educated labor market entrants, our expectation towards the differences between people with different educational levels are supported by our data and hence we do not need to reject hypothesis 2b.

[TABLE 2 & 3]

Conclusion and Discussion

In this study, we have focused on the trend in precarious labor among Dutch youth. Precarious labor we defined as temporary employment and unemployment, both as counterparts of permanent employment. Our first aim was to examine to what extent there is an increase in labor market precarity between 1992 and 2007. Previous research provided indications for the fact that increasing labor market uncertainty leads to reinforcement of social inequalities, as precarious labor is concentrated among people with less human capital in particular. More specifically, we hence aimed to find out to what degree the trend towards labor market precarity particularly exists among lower educated labor market entrants. Our second aim concerned providing an explanation for the trend in precarious employment in the Netherlands since the 1990s. We hence posed the question to what extent the trend in employment precarity and increasing educational differences in this trend could be explained by the process of economic globalization since the 1980s.

The results of the empirical analysis suggest a trend towards more temporary employment among young people in the Netherlands. Although the trend shows some fluctuations, in general, the likelihood of starting in temporary employment increases between 1992 and 2007. Moreover, the results show that the trend is weaker for higher educated people, which implies that labor market

flexibility is concentrated among lower educated people. With regard to youth unemployment, our results do not corroborate a rising trend, but a strongly fluctuating one, and, again, it is less strong for people with a higher educational level. So, in general we can conclude that a trend towards more labor market precarity exists between 1992 and 2007, although it mainly manifests itself in a rise in temporary employment, and, it is particularly visible among lower educated labor market entrants.

As regards the increasing differences in employment precarity between people with different educational levels, economic globalization offers an explanation. First, our analysis showed that economic globalization leads in general to more temporary employment. But, in addition, it appeared that economic globalization results in an increase in the likelihood of temporary employment among lower educated labor market entrants in particular. The difference in the likelihood of entering in temporary employment between higher and lower educated labor market entrants thus increases, in favor of the higher educated, as economic globalization further develops. The analysis furthermore showed that the likelihood of experiencing unemployment due to economic globalization increases for the lower educated labor market entrants, but decreases for the higher educated ones. Again, the differences between higher and lower educated labor market entrants grow bigger as the level of economic globalization rises. In brief, this implies that the higher educated definitely are the 'winners' of globalization, and, accordingly, the lower educated are the 'losers': because of the increase in the number of highly skilled-jobs (i.e. 'skill biased technological change') higher educated people are to a higher degree protected from unemployment after school-leaving, compared to lower educated people. And, since they have more human capital than lower educated people, the latter are pushed into temporary jobs more often, where higher educated people still get the standard, permanent jobs.

What do our findings imply? In a world, which is highly globalized and likely to globalize even further, young labor market entrants experience more difficulties in getting a standard, permanent job. As higher educated labor market entrants are more 'protected' from the rise in labor market precarity, resulting from globalization, social inequalities will continue to exist and most likely grow in the next decade. People with less human capital, i.e. lower educated people, will enter the labor market more often in temporary employment or even stay unemployed, compared to higher educated labor market entrants, who find standard, permanent jobs more often. In highly globalized countries like the Netherlands, goals to 'build our youth for the future' hence only seem to apply to young people with more human capital, while the lower educated have to start in secondary labor market segments, with less positive prospective.

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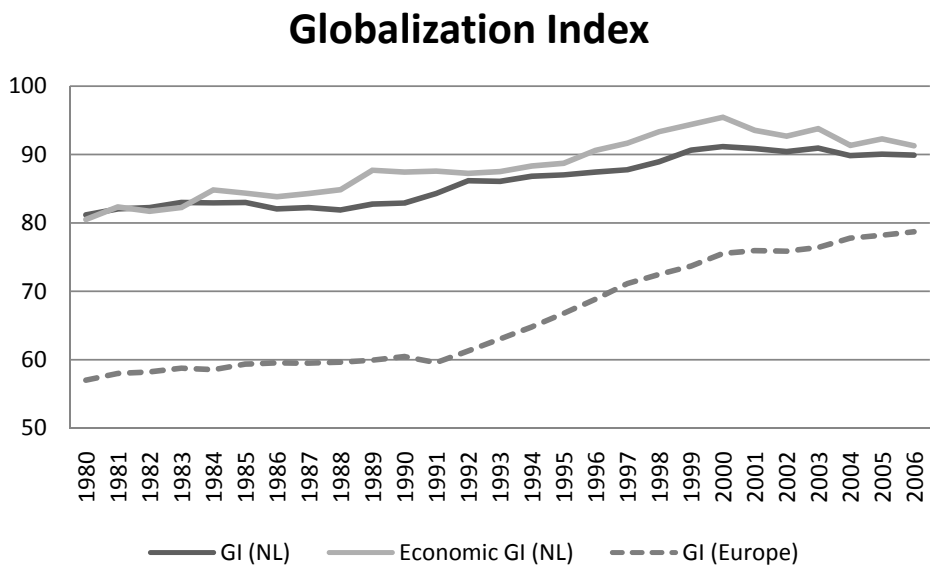

Figure 1. Globalization Index Netherlands (1980-2006).
Source: KOF Index of Globalization, 1980-2006.

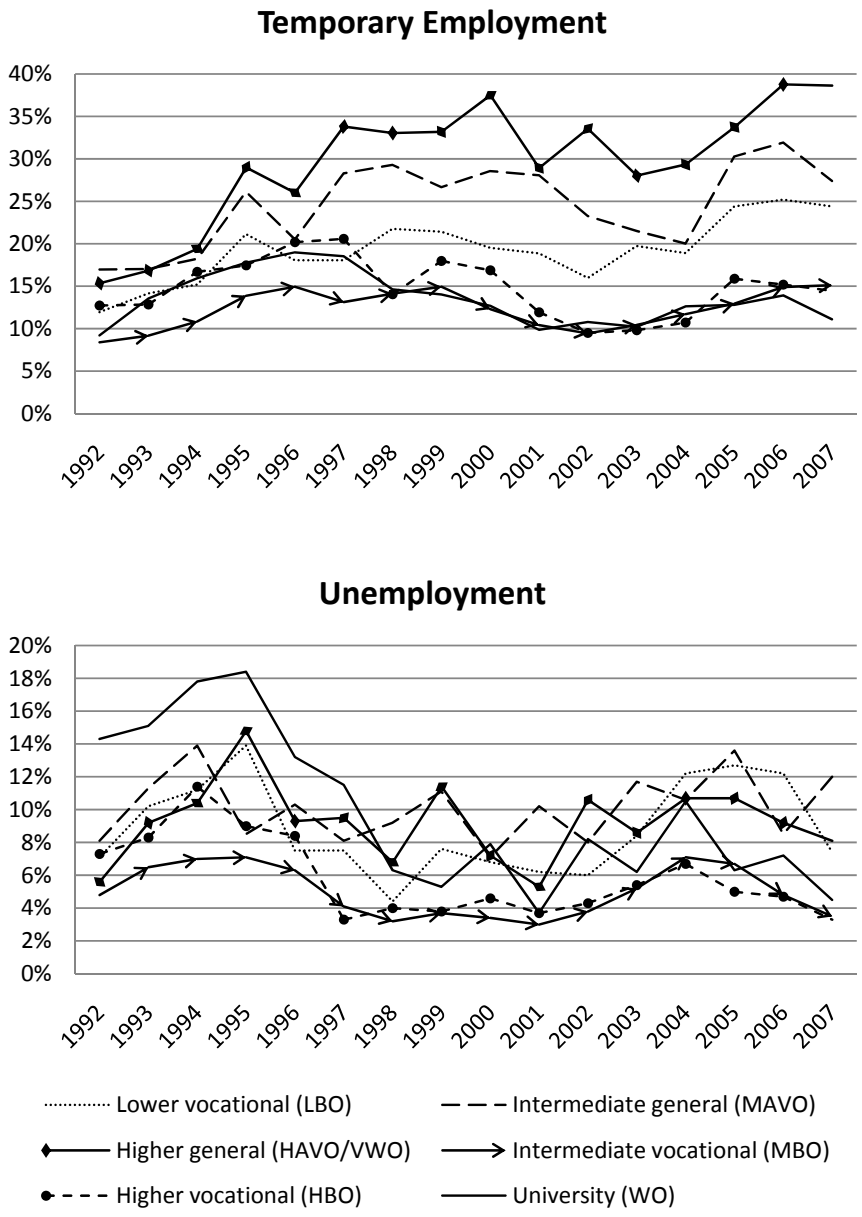

Figure 2. Trends in temporary employment and unemployment among young people in the Netherlands (1992-2007) with different levels of education.
Source: Dutch Labor Force Survey, 1992-2007.

Table 1. Descriptive statistics on the independent and control variables (N=82,097)

	Minimum	Maximum	Mean
Dependent Variable			
Employment Situation			
Permanent Employment	0	1	0.79
Temporary Employment	0	1	0.15
Unemployment	0	1	0.07
Independent Variables			
Level of Education			
Elementary/Lower vocational (BO/LBO)	0	1	0.14
Intermediate general (MAVO)	0	1	0.49
Higher general (HAVO/VWO)	0	1	0.07
Intermediate vocational (MBO)	0	1	0.06
Higher vocational (HBO)	0	1	0.17
University (WO)	0	1	0.07
Year			
1992	0	1	0.07
1993	0	1	0.07
1994	0	1	0.06
1995	0	1	0.07
1996	0	1	0.06
1997	0	1	0.06
1998	0	1	0.05
1999	0	1	0.06
2000	0	1	0.07
2001	0	1	0.06
2002	0	1	0.06
2003	0	1	0.06
2004	0	1	0.07
2005	0	1	0.06
2006	0	1	0.05
2007	0	1	0.05
Year (linear)	0	15	7.30
			(4.62)
Economic Globalization	87.3	95.5	91.49
			(2.47)
Control Variables			
Gender (female)	0	1	0.50
Ethnicity (non-native)	0	1	0.08
Time since leaving education (in years)	0	7	4.50
			(1.69)
Type of Education			
General	0	1	0.14
Technical	0	1	0.31
Economical	0	1	0.25
Cultural	0	1	0.29
Unemployment Rate	3.5	8.5	5,90
			(1.58)

Source: Pooled LFS (1992-2007)

Table 2. Multinomial logistic regression on employment situation: temporary employment versus permanent employment (N = 82,097)

	Model 1	Model 2	Model 3	Model 4
Intercept	-0.402 **	-0.541 **	-7.498 **	-9.046 **
Gender				
Male	ref.	ref.	ref.	ref.
Female	-0.029	-0.023	-0.032	-0.029
Ethnicity				
Native	ref.	ref.	ref.	ref.
Non-Native	0.601 **	0.603 **	0.578 **	0.578 **
Time since leaving education	-0.205 **	-0.204 **	-0.202 **	-0.201 **
Level of Education				
Elementary/Lower vocational (BO/LBO)	ref.	ref.	ref.	ref.
Intermediate general (MAVO)	-0.299 **	-0.301 **	-0.293 **	-1.282
Higher general (HAVO/VWO)	0.069	-0.094	0.071	-4.226 **
Intermediate vocational (MBO)	-0.491 **	-0.315 **	-0.480 **	1.366
Higher vocational (HBO)	-0.344 **	0.090	-0.339 **	4.642 **
University (WO)	-0.397 **	0.107	-0.372 **	6.297 **
Type of Education				
General	ref.	ref.	ref.	ref.
Technical	-0.733 **	-0.763 **	-0.724 **	-0.719 **
Economical	-0.622 **	-0.656 **	-0.610 **	-0.607 **
Cultural	-0.464 **	-0.487 **	-0.453 **	-0.446 **
Year				
0 (1992)	ref.	ref.		
1 (1993)	0.134 *	0.145 *		
2 (1994)	0.341 **	0.377 **		
3 (1995)	0.624 **	0.674 **		
4 (1996)	0.640 **	0.712 **		
5 (1997)	0.597 **	0.693 **		
6 (1998)	0.555 **	0.674 **		
7 (1999)	0.585 **	0.733 **		
8 (2000)	0.429 **	0.599 **		
9 (2001)	0.230 **	0.420 **		
10 (2002)	0.094	0.306 **		
11 (2003)	0.168 **	0.403 **		
12 (2004)	0.218 **	0.480 **		
13 (2005)	0.467 **	0.756 **		
14 (2006)	0.561 **	0.873 **		
15 (2007)	0.529 **	0.860 **		
Year*Level of Education				
Year*Elementary/Lower vocational (BO/LBO)		ref.		
Year*Intermediate general (MAVO)		-0.005		
Year*Higher general (HAVO/VWO)		0.014		
Year*Intermediate vocational (MBO)		-0.023 **		
Year*Higher vocational (HBO)		-0.056 **		
Year*University (WO)		-0.065 **		
Economic Globalization			0.075 **	0.091 **
Economic Globalization*Level of Education				
EG*Elementary/Lower vocational (BO/LBO)				ref.
EG*Intermediate general (MAVO)				0.011
EG*Higher general (HAVO/VWO)				0.047 **
EG*Intermediate vocational (MBO)				-0.020
EG*Higher vocational (HBO)				-0.054 **
EG*University (WO)				-0.073 **
Unemployment Rate			0.109 **	0.108 **
Model Chi^2	5042	5257	4699	4814
Degrees of Freedom	52	62	26	36

** p<0.01; *p< 0.05

Source: Pooled LFS (1992-2007)

Table 3. Multinomial logistic regression on employment situation: unemployment versus permanent employment (N = 82.097)

	Model 1	Model 2	Model 3	Model 4
Intercept	-0.396 **	-0.574 **	-3.750 **	-7.166 **
Gender				
Male	ref.	ref.	ref.	ref.
Female	0.045	0.058	0.045	0.053
Ethnicity				
Native	ref.	ref.	ref.	ref.
Non-Native	1.006 **	1.011 **	1.012 **	1.012 **
Time since leaving education	-0.195 **	-0.195 **	-0.195 **	-0.193 **
Level of Education				
Elementary/Lower vocational (BO/LBO)	ref.	ref.	ref.	ref.
Intermediate general (MAVO)	-0.850 **	-0.945 **	-0.853 **	-4.523 *
Higher general (HAVO/VWO)	-0.815 **	-0.854 **	-0.817 **	-4.402
Intermediate vocational (MBO)	-0.702 **	-0.470 **	-0.703 **	3.221 *
Higher vocational (HBO)	-0.579 **	-0.053	-0.580 **	7.773 **
University (WO)	-0.035	0.789 **	-0.040	14.095 **
Type of Education				
General	ref.	ref.	ref.	ref.
Technical	-1.165 **	-1.239 **	-1.168 **	-1.168 **
Economical	-0.982 **	-1.061 **	-0.987 **	-0.989 **
Cultural	-0.928 **	-0.991 **	-0.932 **	-0.927 **
Year				
0 (1992)	ref.	ref.		
1 (1993)	0.326 **	0.349 **		
2 (1994)	0.526 **	0.583 **		
3 (1995)	0.590 **	0.672 **		
4 (1996)	0.371 **	0.487 **		
5 (1997)	-0.053	0.099		
6 (1998)	-0.326 **	-0.137		
7 (1999)	-0.099	0.133		
8 (2000)	-0.337 **	-0.075		
9 (2001)	-0.527 **	-0.237 *		
10 (2002)	-0.305 **	0.019		
11 (2003)	-0.070	0.291 **		
12 (2004)	0.184 *	0.594 **		
13 (2005)	0.159 *	0.606 **		
14 (2006)	-0.025	0.459 **		
15 (2007)	-0.313 **	0.202		
Year*Level of Education				
Year*Elementary/Lower vocational (BO/LBO)		ref.		
Year*Intermediate general (MAVO)		0.001		
Year*Higher general (HAVO/VWO)		-0.007		
Year*Intermediate vocational (MBO)		-0.031 **		
Year*Higher vocational (HBO)		-0.072 **		
Year*University (WO)		-0.116 **		
Economic Globalization			0.022 *	0.059 **
Economic Globalization*Level of Education				
EG*Elementary/Lower vocational (BO/LBO)				ref.
EG*Intermediate general (MAVO)				0.040
EG*Higher general (HAVO/VWO)				0.039
EG*Intermediate vocational (MBO)				-0.043 **
EG*Higher vocational (HBO)				-0.092 **
EG*University (WO)				-0.155 **
Unemployment Rate			0.230 **	0.231 **
Model Chi^2	5042	5257	4699	4814
Degrees of Freedom	52	62	26	36

** p<0.01; *p< 0.05

Source: Pooled LFS (1992-2007)