

January 2001

Prepared as part of the TSER project:

Comparative Analysis of Transitions from Education to Work in Europe

**Learning and working:
Double statuses in youth transitions
within the European Union**

Maarten H.J. Wolbers

Research Centre for Education and the Labour Market (ROA)
Maastricht University
P.O. Box 616
6220 MD Maastricht
The Netherlands
E-mail: m.wolbers@roa.unimaas.nl

WORKING PAPERS

Abstract

This paper investigates combinations of learning and working during the transition from school to work within the European Union. We distinguish three types of double-status situations: dual system students, working students, and studying workers. The empirical analysis uses data from the European Community Labour Force Surveys (ECLFS) that were conducted in the 1992-1997 period. The relevance of double statuses differs greatly between institutional contexts. Dual system participation is most important in OLM countries. Working students are most frequently found in OLM countries too. Continuous training during working life is most common in ILM contexts, which is understandable given the lack of attention to occupation-specific skills in initial education. In Southern Europe, double-status positions of any type hardly exist. Apart from these differences in relative importance, double statuses go together with specific employment situations. Dual system participants combine fixed-term contracts with full-time employment, while studying workers are not very different from their non-studying colleagues. Working students are more often employed on a part-time basis. Nevertheless, the permanency of these student jobs is fairly high, at least much closer to the situation of regular employees rather than to that of dual system students. Also with regard to the occupational status of the jobs held by young people there are substantial differences between double-status positions.

1. Introduction

The transition from school to work is a temporal stage in which young people are introduced to the world of labour. This transition process is often far from smooth and it can be characterised as a turbulent and precarious period (OECD, 1998: 111). First of all, the transition process refers to a period in which there is a great deal of labour mobility. This mobility not only concerns moves between unemployment and employment, but also shifts between jobs. Through labour mobility, both employers and school-leavers strive to establish an optimal job match (Jovanovic, 1979; Tuma, 1985). Secondly, the transition from school to work is not just a single event from full-time education to stable full-time employment. The entry into the labour market can be described as an integration process, of which it is unclear at what point in time it really starts and when it exactly ends (OECD, 1996). Often, there is a kind of gradual labour market entry, where young people combine learning and working at the same time. This learning can refer to initial education, but also to continuing investments in human capital during the working career.

In this paper, we explore the extent, structure, and evolution of combinations of learning and working during the transition from school to work within the European Union. We look at three types of 'double statuses': young people who combine learning and working in the dual system, full-time students who have jobs, and employed individuals who invest in training to advance their working career. The analysis of these double-status situations offers the opportunity to look in more detail at how the pathways from school to work are organised in various countries. For scientific purposes, this leads to a better understanding of the routes that young people take from initial education to a stable position in the labour force. For policy purposes, this enables governmental bodies to improve the relationship between education, training and working.

We start this paper by deriving hypotheses on the differences in the relevance of double-status positions among youngsters in the various institutional contexts of the European Union. Subsequently, we demonstrate how the three double-status categories can be separated from each other on the basis of the data set that is used in this paper: the European Community Labour Force Survey (ECLFS). Next, the occurrence of double-status positions in the total youth population, the student population, and the employed labour force of youngsters is presented. After that, we look at three characteristics of the jobs held by young people who combine learning and working: the permanency of their jobs, the distinction between full-time and part-time jobs, and the level of occupation attained. The paper ends with a list of the main conclusions.

2. Double-status positions and the expected effects of the institutional context

A traditional way of combining learning and working is the dual system. This apprenticeship system of vocational education refers to a situation in which pupils receive on-the-job training in the company in which they work almost full-time, while at the same time attending some day-release programmes at school. In general, the dual system is open to pupils from 15/16 years and over, with or even without a diploma at the lower level of secondary education. The courses last up to three years, depending upon the initial educational qualifications. A crucial feature of the dual system is that all actors – employers, unions, and the government – are involved and together set up the training programmes, the curricula, the standards of instruction, and the examinations (Crouch, Finegold and Sako, 1999). Pupils in the apprenticeship system are usually employees at the same time. They are not only covered by the provisions of the apprenticeship agreement, but also by the legal rights and duties of a regular employment contract, although their contract is mostly limited to the duration of the

training. Given this nature of apprenticeships as being essentially regular work contracts, pupils in the dual system are often paid, although below the level of minimum wages.

The popularity of the dual system has increased considerably during the post-war period. An important reason for this is that in those days the industry required large numbers of young individuals, who could be trained in a relatively short period (OECD, 1994). The structure of the apprenticeship system was created in such a way that it could serve the different branches of industry. In Germany, for example, this has resulted in a qualitatively extensive system of training regulations in hundreds of occupations. Besides occupations in industry, it concerned particular jobs in craft and – to a lesser extent – service sectors. In more recent years, however, the number of apprenticeships in countries that had reasonably large dual systems has stabilised or even declined. According to Blossfeld (1992), the reason for this is that the dual system is not flexible enough to adjust to current changes in the occupational structure, most notably referring to tertiarisation. In countries such as France, on the other hand, the number of pupils in the apprenticeship system seems to grow (Goux and Maurin, 1998; Crouch, Finegold and Sako, 1999).

Apart from combining learning and working in the apprenticeship system, there is the recent phenomenon of student employment that allows a gradual transition into the labour market (Hutson and Cheung, 1992; Hakim, 1998; Steijn and Hofman, 1999). Today, many students have regular jobs, not just during the summer holidays, but also during the academic year. Well known are the examples of young people delivering newspapers or helping in shops on Saturdays or in restaurants in the evening hours. In general, student jobs are taken on a temporary or short-term basis, even if the job itself may contractually be a permanent one. Furthermore, the jobs that students hold are typically part-time jobs, since they have to combine these jobs with their full-time educational activities. The level of occupation may vary, although the majority of student employment will be in semi-skilled or unskilled jobs requiring little specific training.

There are two main economic arguments that may explain the rising trend in student jobs. The first reason is the relative decline in funding for higher education. Since most modern societies have moved to a mass higher education system, it has become almost impossible for national governments to give extensive grants to students to pay their living expenses and therefore they decided in the 1990s to reduce student grants. As a consequence, this measure forced students to take jobs in order to pay for their studies and to cover their living costs. From the labour demand side, there is also an argument for expecting an increasing number of working students: the numerical flexibilisation of the labour force. There are two processes that indicate that the European labour market has become more flexible recently (Delsen, 1995). First of all, much of the recent employment growth in European countries can be ascribed to the creation of part-time jobs. Secondly, labour markets in Europe have become more flexible through the increasing share of people who work in fixed-term contracts, or through temporary employment agencies. Both processes have facilitated student employment, because employers find students especially interesting in this respect (Steijn and Hofman, 1999). Students are flexible in the sense that they are often without any daily obligations (such as family life) beyond college hours and they can often work at irregular (evening) hours. This makes them very attractive to employers who offer short-term contracts or part-time jobs.

A third form of combining learning and working is the attendance of continuing training while working. In contrast to the other two double-status situations, the educational component here is continuous training instead of initial education. In general, this kind of additional training refers to enterprise-related training and it often has the function of bridging any gaps that may exist between skills which are demanded on the work floor and those that employees possess (Barron, Black and Loewenstein, 1989; Van Smoorenburg and Van der Velden, 2000).¹ According to Thurow (1975), on-the-job training can be considered as a way

to obtain the knowledge and skills necessary to adequately perform a job. The initial educational background is often only used as a 'screening device' to judge the school leavers' trainability (Arrow, 1973). Enhancing productive skills, however, takes place by means of specific enterprise-related training. It can therefore be expected that studying workers have permanent jobs less often than non-studying workers, although the differences may be small. Studying workers are in the early stages of their careers with their current employer and in this period they need to do some extra training to acquire firm-relevant skills. Only after finishing this training and applying these skills successfully in the firm may temporary contracts be changed into permanent ones. Moreover, studying workers are more likely to be in part-time jobs, since their investments in additional training have to be combined with work.

Labour market segmentation theories point out that the role of these double-status positions in the transition process differs across various institutional contexts. In general, segmentation theories contrast two types of labour market structures: internal labour markets (ILM) versus occupational labour markets (OLM) (Marsden, 1990; Maurice, Sellier and Silvestre, 1986; see also Gangl, 1999). The crucial difference between them lies in the access to skilled labour market positions and it is evident that the organisation of the education and training system plays a key role in this distinction.

In countries dominated by internal labour markets, newcomers start in entrance jobs ('ports of entry'). The career patterns or profiles within internal labour markets depend to a large extent on the acquired on-the-job training (Doeringer and Piore, 1971). By means of additional training, individuals obtain the skills that are necessary to make internal upward moves (often within the same firm). In other words, the intensity of training during working life is expected to be high in internal labour markets. In countries dominated by occupational labour markets, on the other hand, a very different allocation process is applied. In the labour markets of these countries, there is a close link between the specific skills learnt in vocational education and the skills required on the labour market (Hannan, Raffe and Smyth, 1997; Müller and Shavit, 1998). Access to skilled jobs is reserved for those workers who have mastered the specific skills needed for these jobs. This means that the existence of occupational labour markets is closely related to the existence of an apprenticeship system that produces workers with occupation-specific skills. Furthermore, the acquired skills have high levels of consistency across firms or even industries, are transferable across employers, and are recognised as such (Eyraud, Marsden and Silvestre, 1990; Shavit and Müller, 2000). On the basis of this distinction in the production of skills, we derive the hypothesis that studying workers are more likely to be found in ILM countries than in OLM ones. With regard to dual system students we expect the opposite. In OLM countries, a model of workplace training combined with vocational schooling has been adopted, which leads to many young people going through this dual system.

With respect to working students, the ILM versus OLM contrast applies too, although less distinctly. As indicated above, financial need is expected to be a driving force behind the increasing trend of working students. Especially in countries with mass higher education, government subsidies for students' living expenses have fallen strongly and, therefore, the financial pressure for students to work is high. Since the recent expansion of higher education has been stronger in ILM countries than in OLM ones (Müller and Wolbers, 1999), we expect that in the former countries students are more likely to hold a job than in the latter. Moreover, in ILM arrangements unskilled or semi-skilled (student) jobs are quite easily accessible without the proper qualifications because of the entry-port employment structure in internal labour markets. In OLM countries, however, where access to jobs is much more closed for individuals without the required skills, it is likely that students have more difficulties finding jobs (which bear hardly any relationship to their studies).

Despite the simple, but very promising, contrast between ILM and OLM arrangements, this distinction cannot capture the full European picture with respect to the issue of double statuses in youth transitions. Recent studies suggest that a third institutional context should be distinguished in Europe, which clearly differs from Northern European contexts: Southern Europe (Jobert, 1997; Gangl, 1999). The Southern European countries can be characterised by at least three particular features. First of all, it should be noted that in these countries the education system hardly provides any formal vocational education, maybe with the exception of Italy. For this reason, the link between education and employment is rather weak. In addition, the employment protection of the existing labour force is fairly high in Southern Europe (OECD, 1999). This makes it very difficult for young people to integrate into the labour market. Related to this is the fact that many youngsters in Southern Europe run the risk of serious economic and social exclusion from the labour market and depend upon family support as a result of the lack of an adequate social security system (Bison and Esping-Andersen, 2000). Together, these characteristics of the Southern European labour market context lead to the expectation that – compared to ILM and OLM countries – all kinds of double-status positions play a minor role in Southern Europe. For the empirical test of this hypothesis (and other formulated ones) we turn to the next part of this paper.

3. Data and variables

The data we use for the empirical analysis come from the European Community Labour Force Survey (ECLFS) data set as conducted in the period 1992-1997. The ECLFS is a combination of the original Labour Force Surveys (LFS) as held annually in the member states and it contains some of the most important indicators on young people's labour market outcomes, such as employment chances, job security and job search.² The ECLFS constitutes the best available data set in this respect, because of its scale and its comparability between countries. In this paper a sub sample of individuals from the ECLFS is drawn. We analyse only those respondents who are aged between 15 and 39 years in order to capture youngsters who are in the transition process.

To define youngsters who are in a double-status position, we start by cross-tabulating information on education and training activities during the last four weeks (in education versus not in education) by the employment status (employed versus not employed).³ This provides us with four distinct categories of education and employment activities:⁴

- employed; in education;
- employed; not in education;
- not employed; in education;
- not employed; not in education.

The first category includes all combinations of learning and working. Within this category, the three double-status positions (dual system students, working students and studying workers) are differentiated. In principal, the distinction between working students and studying workers is established on the basis of information on the purpose of the received education or training. If the purpose of the education is initial training, individuals are defined as working students. If the purpose is continuous training we call them studying workers. Employed individuals who attend a school that provides general education are always classified as working students. Furthermore, those who receive specific education in a working environment or study for some other qualification are treated as studying workers. Dual system students are defined as employed youngsters who receive specific vocational training within a system that provides both work experience and complementary instruction elsewhere (any form of 'dual system' including apprenticeship). Individuals who receive training in any form of a dual system, but for whom this is not initial but continuous training, are labelled as studying workers.⁵

To illustrate that these three combinations of learning and working are distinct in the data, we plot the age distribution of each double-status category in Figure 1.⁶ In this figure, it can be seen that the modus age of dual-system students in the European Union is 18 years. About 22 percent of all dual-system students are aged 18. This percentage drops fast as age increases. At the age of 22, it stands below five percent. The deviation around the modal age is relatively small if we compare it to that of working students and studying workers. The modal age of working students is even lower than that of dual-system students (16 years), but the proportion of working students at later ages drops only gradually (from 11 percent for those who are 17 years old to still five percent for those aged 25). The modal age of studying workers is around 27 years of age, consisting of five percent of all studying workers. Just like in the case of working students, there is no real peak.

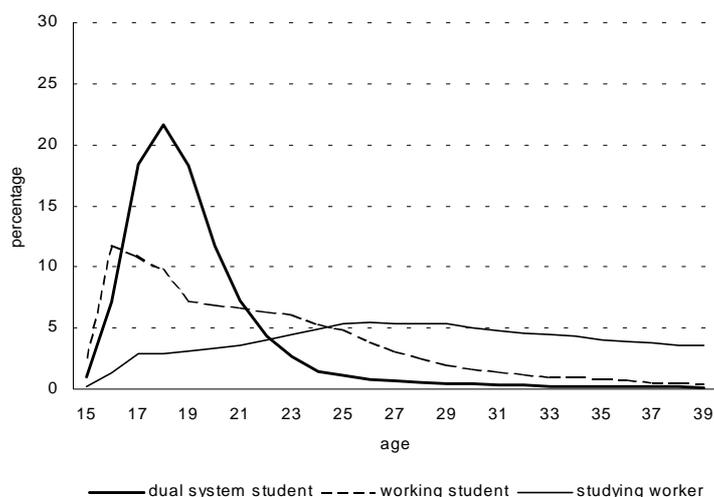


Figure 1. Age distribution of the double-status categories

source: pooled ECLFS-data 1992-1997

To determine the effects of the institutional context, we specify a grouping of countries that represents the main different institutional arrangements affecting the labour market entry of youngsters within Europe (see Gangl, 1999). The first and second groups more or less reflect the contrast between ILM and OLM systems. We define Belgium, France, the United Kingdom and Ireland as ILM countries. Austria, Germany, Denmark and the Netherlands are labelled OLM countries. As a third group, we combine the Southern European countries Greece, Italy, Spain and Portugal. Although there are some national differences within each country cluster, it seems that these country differences are minor compared with the clear contrasts between OLM, ILM and Southern European countries (Gangl, 1999: 155). Therefore, we ignore this within-cluster cross-country variation in the present analysis.

To control for differences in educational achievement, we introduce the level of education in the analysis. The level of education is measured in terms of ISCED (UNESCO, 1975). We distinguish three levels of education: primary education plus lower secondary education (ISCED0-2), upper secondary education (ISCED3), and tertiary education (ISCED5-7). For the interpretation of the effects of education, we have to keep in mind that in the analysis the level of education reflects the highest achieved educational qualification so far, and that many young people who are still in initial education will potentially upgrade their level of education later on.

Gender differences with regard to double-status situations are investigated by differentiating between men and women. Trends over time are determined by including a variable that measures the period of observation.

Three characteristics of the jobs held by youngsters in a double-status position are examined. Firstly, we look at the permanency of the job as an indicator of job security. The permanency of the job is measured by distinguishing between permanent and temporary jobs. A temporary position reflects a job with a contract of limited duration. Secondly, the part-time versus full-time contrast is analysed. This distinction is built on the subjective evaluation of the individual and not on the actual number of hours worked per week. Thirdly, we study the level of occupations. Besides a description of occupational groups, the occupational status of the jobs held by youngsters is analysed. The occupational groups are based on the first digit (major groups) of the ISCO-88 classification (ILO, 1990). The occupational status of jobs is determined on the basis of the international socio-economic index (ISEI) (Ganzeboom, De Graaf and Treiman, 1992; Ganzeboom and Treiman, 1996). Status scores were assigned to occupational titles (based on 3-digit information from the ISCO-88 classification) according to a scale that ranges from 16 for occupations with the lowest status to 90 for occupations with the highest status. Armed forces are excluded from the analysis.

4. Education and employment activities of young people

Figure 2 presents the education and employment activities of youngsters for different age groups in different institutional contexts. It is immediately evident upon inspection of this figure that age is a very important individual characteristic regarding the transition process. In general, it can be concluded that the proportion of youngsters in full-time education declines sharply over age groups, whereas the proportion of young people in a situation of (non-)employment rises strongly during the early life course. These findings confirm the basic mechanism of the transition process. The older youngsters are, the smaller the probability that they are in education or training and the higher the likelihood that they are (non-)employed. This is not a fully deterministic situation, since there is in all countries a small, but significant group of young people that is simultaneously both student and worker during the transition from school to work. For them, entry into the labour market is a gradual one.

Despite this common age pattern in all European countries, there is a great deal of cross-country variation with regard to the education and employment activities of youngsters which can be linked systematically with the institutional context. In ILM countries, the vast majority of youngsters are in the education system during the initial transition process. In France, for instance, 86 percent of all youngsters aged between 15-19 years is in full-time education. Only in the United Kingdom is this proportion considerably lower. This is due to the relatively large proportion of this age group (around one quarter) that is in a double-status position as working student or studying worker. Graduates in this country enter the labour market rather early (Müller and Wolbers, 1999), but a substantial part of them obtains job-specific qualifications using the very rich and varied supply from evening and part-time programmes in institutions of Further Education.

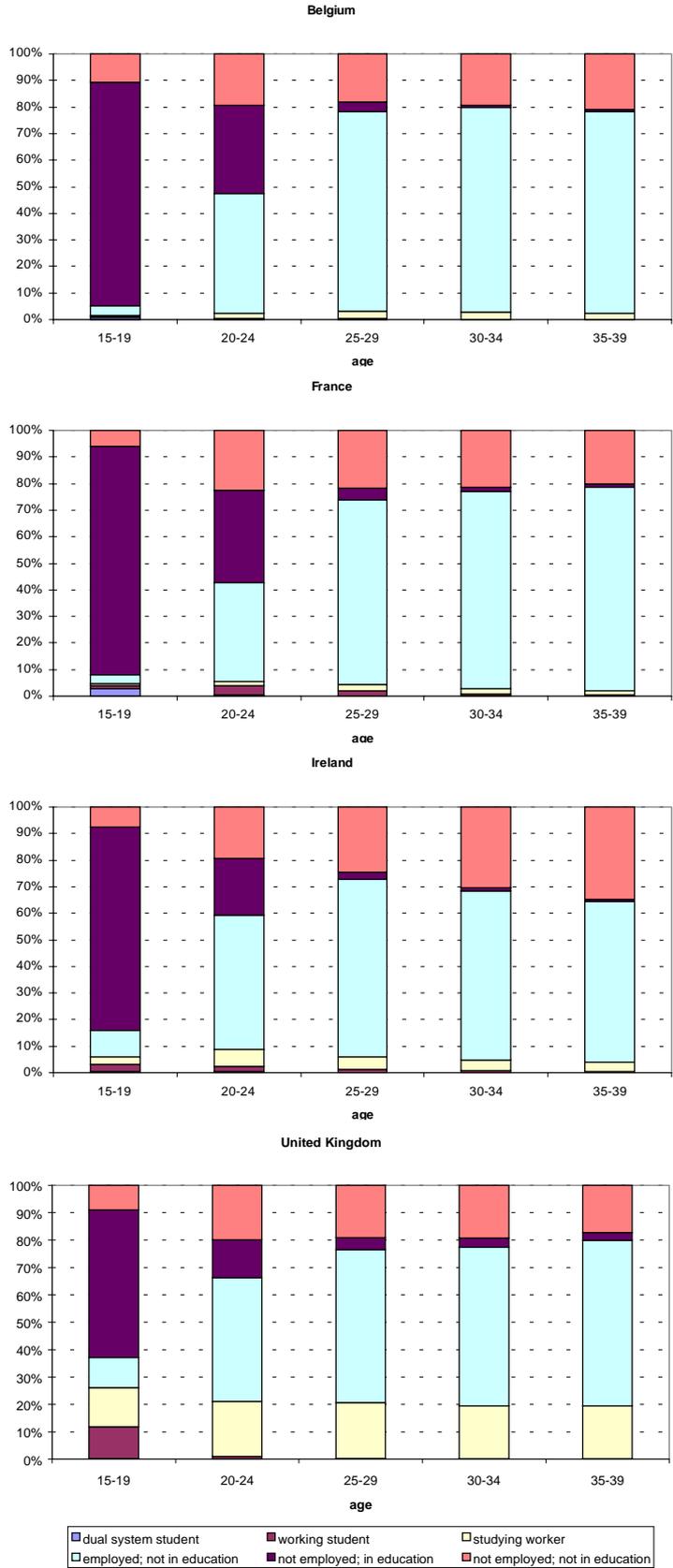


Figure 2. Education and employment activities of youngsters by age group: ILM countries

source: pooled ECLFS-data 1992-1997

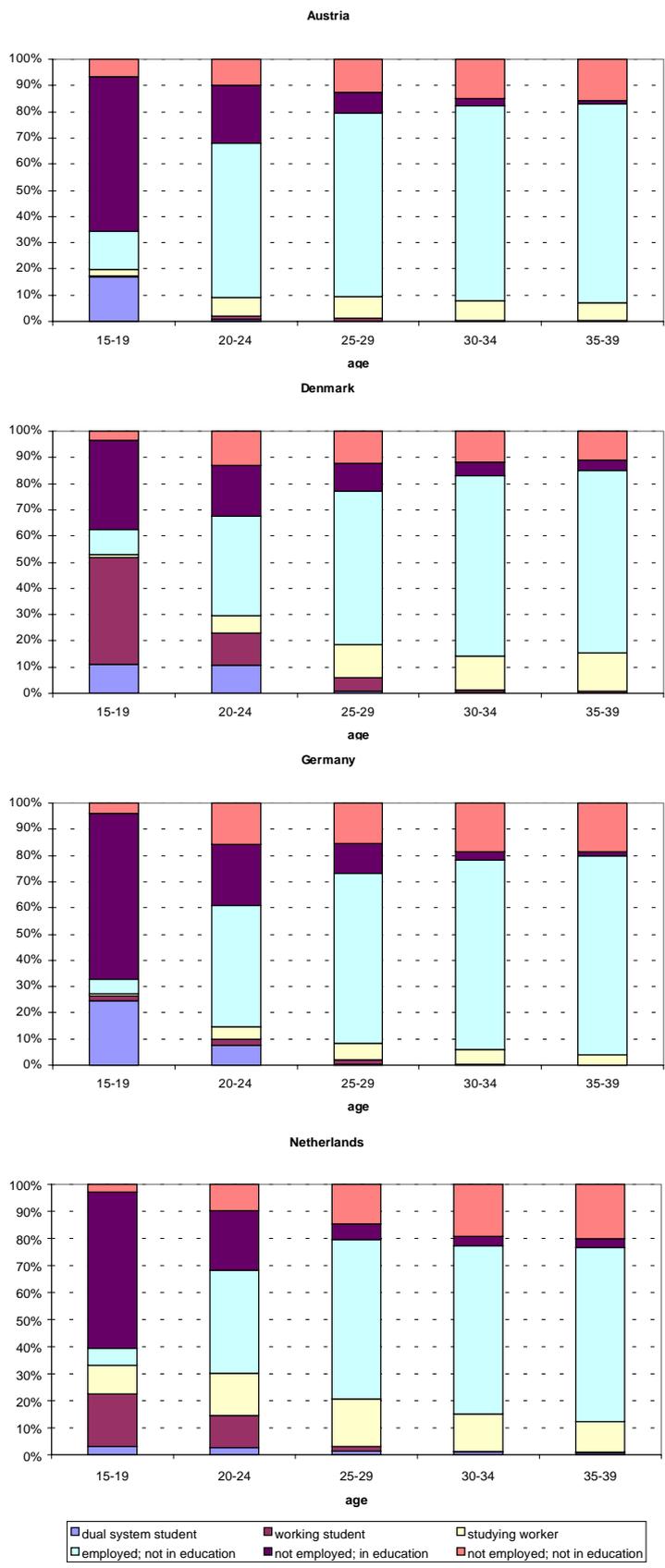


Figure 2. Education and employment activities of youngsters by age group: OLM countries (continued)
 source: pooled ECLFS-data 1992-1997

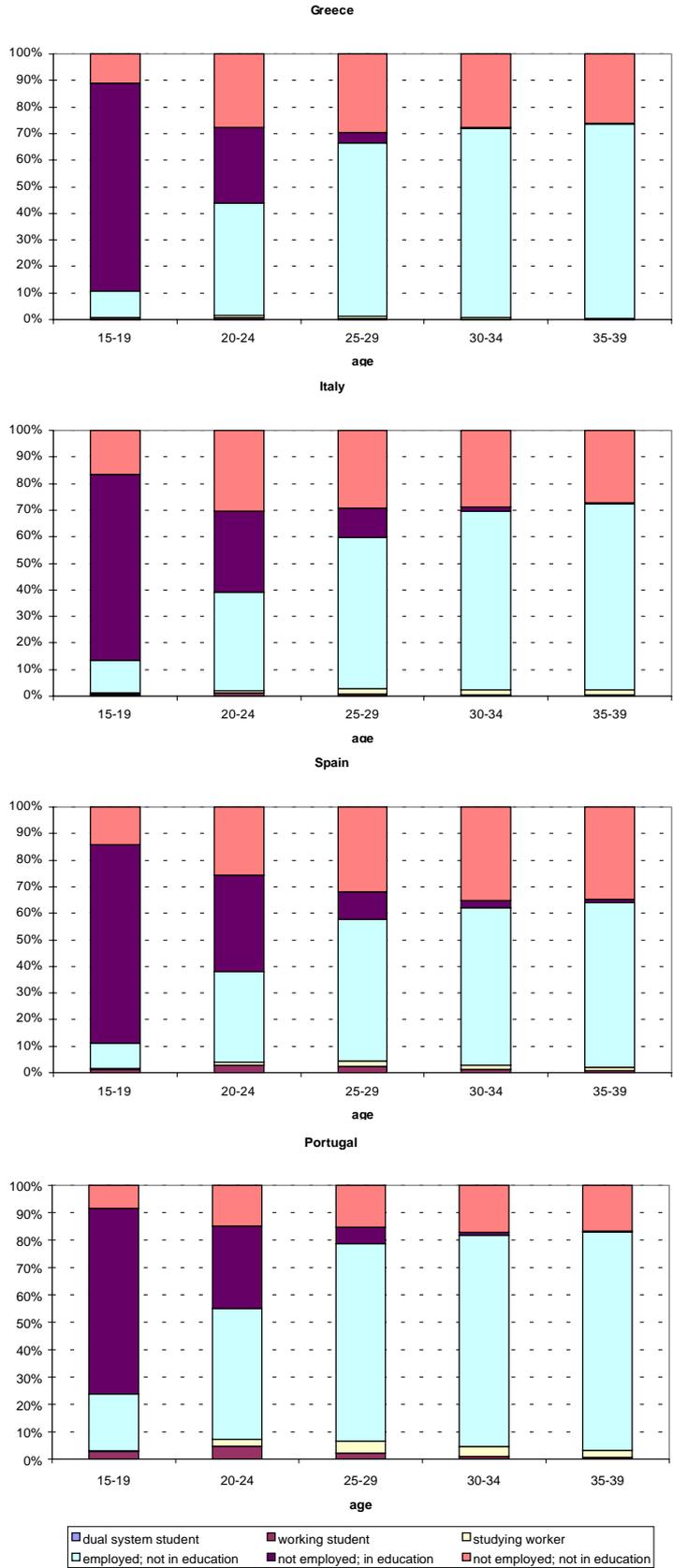


Figure 2. Education and employment activities of youngsters by age group: Southern Europe (continued)

source: pooled ECLFS-data 1992-1997

OLM countries are characterised by much higher proportions of double-status situations. In these countries, the combination of learning and working is often institutionalised by the apprenticeship system. The large proportion of dual-system students confirms the strong link between education and employment in OLM countries. Especially in Germany and Austria, a relatively large proportion of youngsters is in the dual system. In Germany, this percentage amounts to one quarter of the youth population of 15-19 years old. In Denmark and the Netherlands, on the other hand, the percentage of youngsters in the dual system is lower, since vocational training is more often school-based in these countries. The large number of double-status positions in Denmark and the Netherlands can be attributed to the high proportion of youngsters who are in initial education and have part-time jobs at the same time. The question is whether these student jobs yield specific skills applicable in later working life.

The Southern European countries show completely different results when compared to both ILM and OLM countries. Double-status situations hardly occur in Southern Europe. Working students seem to exist, but only marginally. In Southern Europe there is a clear trade-off between school and work. Youngsters are either in the employment system or in education. Moreover, a substantial proportion of young people in Southern Europe is neither in education or training nor in employment. Such youngsters run the risk of long-term economic and social exclusion.

When different age groups are compared, we find that the categories of dual-system students and working students are clearly 'age-related'. The majority of dual-system students are aged between 15 and 24 years. Most of the working students belong to the younger age groups as well. For studying workers, there is no such clear age restriction. The reason for this is obvious, since the purpose of the education or training received is continuous vocational training. Especially in ILM and OLM countries, there is an important group of individuals who invest in learning during their occupational careers. In Southern Europe, continuous training does not seem to exist.

5. Double-status positions in the student population

In Table 1, the above-mentioned findings are refined by multinomial logit analysis. The table shows in a multivariate way the effects of various independent variables on the log odds of being in a double-status position relative to the log odds of being in full-time education. The contrasts of full-time (non-)employment with full-time education are left out in the analysis, since our main interest is in double-status situations. Model 1 shows that the effects of the institutional context are reconfirmed by this analysis. It is clear that dual-system students are found most often in OLM countries. The estimated log odds indicate that in OLM countries the odds of being a dual system student (relative to full-time student) are more than 15 times larger than the corresponding odds in ILM countries ($e^{2.749} = 15.627$). Also, the likelihood of being a working student is larger in OLM systems than in ILM ones. The implied odds ratio is 1.579 ($= e^{0.457}$). With respect to the likelihood of being a studying worker, the reverse is true. The results show that the odds of being a studying worker are higher in ILM countries than in OLM countries. In the former group of countries, the education system is hardly occupation-specific and therefore workers in these countries are often trained on-the-job. For Southern Europe, we find that youngsters in these countries have the lowest probability of being in any kind of double-status position.

As already discussed, the two youngest age groups (15-19 and 20-24 years) are more likely to be in an apprenticeship programme than the older age groups. For the two other double-status situations, a positive age effect is found, mainly indicating that the proportion of full-time educational participation declines over age groups.

Table 1. Results of multinomial logit analysis of being in a double-status position relative to not employed; in education

Model	1			2		
	Dual-system student	working student	studying worker	dual-system student	working student	studying worker
Intercept	-5.375**	-2.214**	-1.804**	-5.395**	-2.144**	-1.774**
Institutional context						
ILM countries	ref.	ref.	ref.	ref.	ref.	ref.
OLM countries	2.749**	0.457**	-0.384**	2.751**	0.248**	-0.445**
Southern Europe	-1.904**	-0.662**	-2.036**	-1.798**	-0.618**	-2.119**
Age						
15-19	ref.	ref.	ref.	ref.	ref.	ref.
20-24	0.351**	0.487**	1.345**	0.353**	0.487**	1.346**
25-29	-0.673**	0.873**	2.770**	-0.669**	0.875**	2.776**
30-34	-0.197*	1.079**	3.735**	-0.195*	1.078**	3.739**
35-39	0.070	1.033**	4.093**	0.074	1.032**	4.095**
Sex						
Male	ref.	ref.	ref.	ref.	ref.	ref.
Female	-0.328**	-0.034	-0.202**	-0.863**	0.037	-0.288**
Level of education						
ISCED0-2	1.741**	-0.434**	-0.679**	1.741**	-0.441**	-0.678**
ISCED3	0.937**	-0.502**	-0.485**	0.933**	-0.500**	-0.484**
ISCED5-7	ref.	ref.	ref.	ref.	ref.	ref.
Time trend (1992=0)	-0.020**	-0.033**	-0.031**	0.063**	-0.077**	-0.027**
Institutional context * Time trend						
OLM countries * Time trend				-0.090**	0.088**	-0.015
Southern Europe * Time trend				-0.118*	0.031*	0.016
Institutional context * Sex						
OLM countries * Female				0.613**	-0.017	0.214**
Southern Europe * Female				0.533**	-0.228**	0.082
Model Chi ²	90,005**			90,210**		
Df	30			42		
Pseudo R ²	0.359			0.360		
N	202,356			202,356		

* = p < 0.05; ** = p < 0.01

ref. = reference category

source: pooled ECLFS-data 1992-1997

Gender differences can be observed as well. The parameters for gender in model 1 show that women are less likely to be in a double-status position (relative to full-time education) than men. The negative sex effect is strongest for the category of dual-system students. For women, the odds of being a dual-system student are 0.720 ($= e^{-0.328}$) times smaller than the corresponding odds for men.

With respect to the level of education, we see that the lowest educated (ISCED0-2) have the highest probability of being a dual-system student, followed by those with a certificate at the ISCED3 level. In contrast, the probability of being a working student or being a studying worker is highest among those with a degree in tertiary education.

Lastly, model 1 presents changes over time concerning contrasts of double statuses with full-time education. In all cases, we find a negative time trend. This does not mean that double-status situations have become less frequent recently. The negative effects are linked to the higher participation in education over time (see also Müller and Wolbers, 1999). The results suggest that the growth in educational participation is stronger than the increase in combinations between learning and working among youngsters.

To investigate whether these time trends vary across institutional contexts, statistical interaction terms of the institutional context with the time variable are included in model 2. Interestingly, we find that the observed negative time trend with regard to dual-system students only holds true for OLM countries and Southern Europe. In ILM countries, on the other hand, the dual system has become more important in the period 1992-1997. This finding supports the idea that countries such as France have been successful in their attempts to enlarge the number of pupils in apprenticeship programmes recently. With respect to the double-status situation of being a working student, we find significantly smaller negative time trends in OLM and Southern European countries than in ILM countries. In OLM countries, the time trend even seems to be absent. With respect to studying workers, there are no institutional differences in the effects of the time trend variable.

Interactions of the institutional context with gender are also empirically tested in model 2. The results show that the disadvantageous position of women with respect to participation in the dual system is much smaller in OLM countries and – to a lesser extent – in Southern Europe than in ILM countries. With regard to working students, the interaction terms express that the effect of gender - *i.e.* women are more likely to be working students than men - is only true for Southern Europe. In ILM and OLM contexts, there is no gender difference with regard to the probability of being a working student. Concerning studying workers, it can be concluded that women in OLM countries have a higher probability of investing in continuous training than in ILM countries.

6. Double-status positions in the employed labour force

In Table 2, we analyse double-status positions in the employed labour force among youngsters aged between 15-39 years. With respect to the institutional context, model 1 shows that all findings correspond to the results found in Table 1, although the point of reference is different. First of all, the probability of being a dual system student is much higher in OLM countries than in ILM countries. The implied odds ratio is 17.567 ($e^{2.866}$). In Southern Europe, on the other hand, the chance of participating in the dual system is much lower. Secondly, working students are most likely to be found in OLM countries, followed by ILM countries. Students in Southern Europe have the lowest probability of combining their studies with a job. Thirdly, in ILM contexts the probability of continuous training is highest among young working people, followed by OLM contexts. In Southern Europe, the likelihood of further investments in education or training during the occupational career is lowest.

Table 2. Results of multinomial logit analysis of being in a double-status position relative to employed; not in education

Model	1			2		
	dual-system student	working student	studying worker	dual-system student	working student	studying worker
Intercept	-3.676**	-0.240**	0.292**	-3.982**	-0.341**	0.137**
Institutional context						
ILM countries	ref.	ref.	ref.	ref.	ref.	ref.
OLM countries	2.866**	0.447**	-0.261**	3.269**	0.676**	0.135**
Southern Europe	-2.068**	-0.486**	-1.578**	-1.975**	-0.477**	-1.637**
Age						
15-19	ref.	ref.	ref.	ref.	ref.	ref.
20-24	-2.233**	-2.126**	-1.333**	-2.227**	-2.124**	-1.330**
25-29	-4.695**	-3.381**	-1.689**	-4.688**	-3.381**	-1.688**
30-34	-5.587**	-4.456**	-1.942**	-5.578**	-4.457**	-1.939**
35-39	-5.902**	-5.052**	-2.103**	-5.892**	-5.053**	-2.101**
Sex						
Male	ref.	ref.	ref.	ref.	ref.	ref.
Female	-0.158**	0.179**	0.007	-0.626**	0.246**	0.002
Level of education						
ISCED0-2	1.969**	-0.721**	-1.161**	1.989**	-0.705**	-1.131**
ISCED3	0.672**	-0.669**	-0.660**	0.675**	-0.665**	-0.658**
ISCED5-7	ref.	ref.	ref.	ref.	ref.	ref.
Time trend (1992=0)	0.059**	0.062**	0.040**	0.251**	0.088**	0.103**
Institutional context * Time trend						
OLM countries * Time trend				-0.236**	-0.047**	-0.148**
Southern Europe * Time trend				-0.187**	-0.027	-0.034**
Institutional context * Sex						
OLM countries * Female				0.481**	-0.231**	-0.059*
Southern Europe * Female				0.939**	0.112*	0.285**
Model Chi ²	92,372**			93,057**		
Df	30			42		
Pseudo R ²	0.200			0.201		
N	413,793			413,793		

* = p < 0.05; ** = p < 0.01

ref. = reference category

source: pooled ECLFS-data 1992-1997

Very young people are more often found in double-status positions than less young people. As expected, the negative age effects are strongest for dual-system students and working students. Both double statuses are very much restricted to the youngest age groups. For studying workers, there is no clear age restriction, although it seems that most investments in continuous education or training take place at the beginning of the occupational career.

Furthermore, female youngsters are found in the dual system less often than their male counterparts. The estimated gender effect indicates that for women the odds of being a dual-system student are around one fifth smaller than the corresponding odds for men ($e^{-0.158} = 0.854$). With respect to the other two double-status positions, women have a higher probability than men of being in these positions.

In addition, it can be observed that the likelihood of being a dual-system student is negatively related to the level of education achieved so far. With respect to the probability of being a working student or being a studying worker, the reverse is true. Higher educated youngsters are more likely to be in one of the two double-status positions than the lower educated.

A final conclusion that should be drawn from model 1 is that the share of double-status situations in the employed labour force has increased over time. Despite the relatively short period of observation, the estimated time trends are all significant. The increase has been strongest for the categories of working students and dual-system students.

In model 2, interaction terms with the institutional context are included once again. The interactions with the time trend variable show that in ILM countries, the likelihood of being a dual-system student has increased most strongly between 1992 and 1997 (0.251). In OLM countries and in Southern Europe, there has only been a slight tendency towards an increasing popularity of the dual system. The estimated log odds are 0.015 ($= 0.251 - 0.236$) and 0.064 ($= 0.251 - 0.187$) respectively. With respect to the other two double-status situations (working students and studying workers), we find similar results, *i.e.* the positive changes over time are less evident in OLM countries and Southern Europe compared to ILM countries. With respect to studying workers, we even find a small negative time trend for OLM countries ($0.103 - 0.148 = -0.045$).

The interaction terms of the institutional context with gender demonstrate that the negative gender effect with regard to the probability of being a dual-system student is much smaller in OLM countries than in ILM ones. In Southern Europe we even observe a positive effect of gender, indicating that in these countries women are more likely to be in the dual system than men. Furthermore, the interactions show that the positive gender effects on the probability of being a working student or a studying worker are less strong in OLM countries than in ILM ones. In the case of studying workers, men are even more likely to invest in continuous training than women in the former countries. In Southern European countries, on the contrary, the gender effect with respect to the odds of being a working student or being a studying worker is stronger than in ILM countries.

Table 3. Results of logistic regression analysis of having a temporary job

Model	1	2	3
Intercept	-1.916**	-1.260**	-1.185**
Double-status position			
Employed; not in education	ref.	ref.	ref.
Dual-system student	3.820**	3.429**	4.584**
Working student	1.563**	1.107**	1.103**
Studying worker	0.433**	0.501**	0.022
Institutional context			
ILM countries		ref.	ref.
OLM countries		-0.079**	-0.287**
Southern Europe		0.838**	0.781**
Age			
15-19		ref.	ref.
20-24		-0.124**	-0.122**
25-29		-0.789**	-0.795**
30-34		-1.252**	-1.255**
35-39		-1.536**	-1.538**
Sex			
Male		ref.	ref.
Female		0.114**	0.117**
Level of education			
ISCED0-2		-0.221**	-0.237**
ISCED3		-0.539**	-0.540**
ISCED5-7		ref.	ref.
Time trend (1992=0)		0.073**	0.077**
Institutional context * Double-status position			
OLM countries * Dual-system student			-1.051**
OLM countries * Working student			0.179**
OLM countries * Studying worker			1.125**
Southern Europe * Dual-system student			-3.012**
Southern Europe * Working student			-0.229**
Southern Europe * Studying worker			0.243**
Model Chi ²	29,409**	50,044**	51,239**
Df	3	13	19
Pseudo R ²	0.079	0.131	0.134
N	357,447	357,447	357,447

* = p < 0.05; ** = p < 0.01

ref. = reference category

source: pooled ECLFS-data 1992-1997

7. Characteristics of jobs held by youngsters in a double-status position

Permanency of the job

We now turn to differences in the labour market attainment of youngsters who are in a double-status position. We begin with the permanency of the job. For this purpose, the results of logistic regression analysis of having a temporary job are presented in Table 3. Model 1 shows that youngsters who are in a double-status position are more likely to have a temporary job than youngsters who are employed without being in education at the same time. For the contrast with dual-system students, the estimated parameter shows that the odds for youngsters who are in an apprenticeship programme are more than 45(!) times larger than the corresponding odds for youngsters who are only working ($e^{3.820} = 45.604$). The implied odds ratios for working students and studying workers are 4.773 and 1.542, respectively.

Controlling for these differences between double-status categories, there is a strong effect of the institutional context on the odds of having a temporary job (see model 2). Youngsters in Southern Europe run the highest risk of being in a temporary position, followed by those from ILM countries. In OLM countries the probability of temporary employment among young people is lowest. In addition, model 2 shows that age has a negative effect on the odds of having a temporary job. This finding indicates that younger people are less well integrated into the labour market than older ones. Furthermore, female youngsters are more likely to be in a temporary labour market position than their male counterparts. Moreover, youngsters with a certificate at the ISCED3-level have the lowest probability of having a temporary job, followed by the least qualified. Finally, the results show that temporary employment has increased over time. The odds of having a temporary job have risen by seven percent ($e^{0.073} = 1.076$) each year.

In model 3, interaction terms of the institutional context with the double-status categories are empirically tested. The results indicate that dual-system students in ILM countries are most often in a temporary labour market position, followed by those in OLM countries. In Southern Europe, the probability of having a temporary job for dual-system students is lowest. With respect to working students, it can be concluded from the interaction terms that in OLM countries these youngsters are most often found in temporary jobs. Southern European students with jobs have the lowest probability of having a fixed-term contract. For studying workers, ILM systems offer the best protection against temporary employment. In countries dominated by internal labour markets, continuous training is institutionalised very extensively, since on-the-job training is the usual way of acquiring occupation-specific skills. In OLM countries, on the other hand, studying workers are most likely to have temporary contracts.

Distinction between part-time and full-time employment

In Table 4, we present the results of logistic regression analysis with regard to the odds of being in a part-time job. Model 1 shows that working students are most likely to be in a part-time job. Compared to the odds of being in part-time versus full-time employment for workers who are not in education (the reference category in the model), the corresponding odds for working students are almost 14 times larger ($e^{2.624} = 13.791$). The interpretation for this strong effect is obvious: full-time students who work most often hold part-time jobs. For studying workers, a similar interpretation may explain their higher probability of being in part-time employment. Dual-system students are less often in part-time jobs than employed workers who do not participate in any form of education or training.

Table 4. Results of logistic regression analysis of having a part-time job

Model	1	2	3
Intercept	-1.957**	-2.850**	-2.841**
Double-status position			
Employed; not in education	ref.	ref.	ref.
Dual-system student	-1.054**	-2.019**	0.080
Working student	2.624**	2.902**	2.785**
Studying worker	0.536**	0.400**	0.155**
Institutional context			
ILM countries		ref.	ref.
OLM countries		0.160**	0.071**
Southern Europe		-1.142**	-1.133**
Age			
15-19		ref.	ref.
20-24		-0.824**	-0.823**
25-29		-0.801**	-0.797**
30-34		-0.458**	-0.448**
35-39		-0.356**	-0.348**
Sex			
Male		ref.	ref.
Female		2.040**	2.067**
Level of education			
ISCED0-2		0.593**	0.579**
ISCED3		0.263**	0.258**
ISCED5-7		ref.	ref.
Time trend (1992=0)		0.049**	0.050**
Institutional context * Double-status position			
OLM countries * Dual-system student			-2.493**
OLM countries * Working student			0.911**
OLM countries * Studying worker			0.478**
Southern Europe * Dual-system student			1.333**
Southern Europe * Working student			-0.770**
Southern Europe * Studying worker			0.737**
Model Chi ²	19,555**	71,481**	73,013**
Df	3	13	19
Pseudo R ²	0.046	0.159	0.162
N	412,702	412,702	412,702

* = p < 0.05; ** = p < 0.01

ref. = reference category

source: pooled ECLFS-data 1992-1997

Model 2 shows that the institutional context has a significant effect on the odds of having a part-time job. Compared to young people from ILM countries, youngsters from OLM countries have a higher probability of being in part-time employment. Presumably, the relatively high rates of part-time employment in the Netherlands, and – to a lesser extent – in Denmark, contribute to this effect. In Southern European countries, part-time employment is still not widespread, as can be concluded from the negative coefficient for Southern Europe.

The positive age effect indicates that the various age groups are at different stages of the transition process. Older people are more integrated into the labour market, as can be seen from their lower probability of being in a part-time job. In addition, the results show that women are more likely to have a part-time job than men, which is of course the result of women's greater responsibilities within the household. Furthermore, the lower educated run a higher risk of being employed in a part-time job than the higher educated. Lastly, a positive time trend is observed, indicating that the probability of part-time employment among youngsters has increased over time.

Model 3 again describes interaction terms of the institutional context with the double-status categories. The interactions show that the effect of having a part-time job among dual-system students is much smaller in OLM countries than in ILM ones. With respect to working students and studying workers, the odds of being in part-time employment are larger in OLM contexts. In Southern Europe, dual-system students are relatively more often in part-time employment than in ILM countries. The same holds true for studying workers. Additional training is more often combined with a part-time job in Southern Europe than in ILM countries. Working students from Southern European countries, on the other hand, have a higher probability of being in a part-time job than those from ILM countries.

Occupational status of the job

Before analysing the effect of being in a double-status position on occupational status attainment, it may be good to have a brief look at the occupational structure of the jobs held by youngsters in a double-status position.⁷ Despite the crude level of differentiation (ISCO-88 major groups), we find substantial differences in the occupational distribution, both with regard to double-status category and institutional context (see Table 5). As expected, dual-system students are most often employed as craft and related trades workers (37 percent in total). This percentage is slightly higher in ILM countries and somewhat lower in OLM and Southern European countries. Furthermore, an important proportion of the dual-system students is working in service and shop/market sales occupations, especially in ILM countries (23 percent) and in Southern Europe (22 percent). Moreover, in OLM countries and in Southern Europe, a substantial group of youngsters who combine learning and working in the dual system, holds jobs in clerk and technician level occupations and in elementary occupations (only in OLM contexts). This latter finding suggests that in OLM and Southern European countries, the dual system serves much more occupations than in ILM countries.

Almost half of the working students' jobs are in service and shop/market sales occupations and elementary occupations. In ILM countries, the former occupations are more frequent, in OLM ones the latter. In all institutional contexts, the most common occupations (not presented in Table 5) are shop sales jobs (14 percent in total), housekeeping and restaurant service jobs (8 percent), and domestic and cleaning jobs (5 percent). In addition, a relatively large proportion of working students has access to higher-skilled occupations (clerical and professional jobs), possibly related to their type of study in higher education.

Table 5. Occupational structure of jobs held by youngsters in a double-status position by institutional context

	dual-system student (%)	working student (%)	studying worker (%)	employed; not in education (%)
Total				
Legislators, senior officials and managers	1	2	8	5
Professionals	2	14	21	9
Technicians and associate professionals	14	12	21	14
Clerks	13	16	18	15
Service workers and shop/market sales workers	18	27	12	15
Skilled agricultural and fishery workers	2	2	1	3
Craft and related trades workers	37	7	11	19
Plant and machine operators and assemblers	3	3	4	10
Elementary occupations	11	17	4	10
ILM countries				
Legislators, senior officials and managers	2	3	13	7
Professionals	6	16	25	11
Technicians and associate professionals	6	10	15	13
Clerks	9	16	19	18
Service workers and shop/market sales workers	23	34	13	15
Skilled agricultural and fishery workers	3	1	1	3
Craft and related trades workers	44	6	8	15
Plant and machine operators and assemblers	5	3	4	11
Elementary occupations	4	11	3	8
OLM countries				
Legislators, senior officials and managers	0	2	5	4
Professionals	1	12	16	9
Technicians and associate professionals	17	14	28	19
Clerks	14	14	16	14
Service workers and shop/market sales workers	16	23	11	14
Skilled agricultural and fishery workers	2	2	1	2
Craft and related trades workers	35	6	14	21
Plant and machine operators and assemblers	2	3	4	9
Elementary occupations	14	25	6	9
Southern Europe				
Legislators, senior officials and managers	0	2	2	3
Professionals	3	15	20	7
Technicians and associate professionals	15	14	23	11
Clerks	16	23	21	14
Service workers and shop/market sales workers	22	21	14	17
Skilled agricultural and fishery workers	1	2	1	4
Craft and related trades workers	31	10	10	22
Plant and machine operators and assemblers	7	4	5	10
Elementary occupations	5	10	5	12

source: pooled ECLFS-data 1992-1997

Continuous training during the occupational career is concentrated in higher-skilled occupations. Studying workers can in particular be found among professionals (21 percent), technicians (21 percent) and clerks (18 percent). There are some minor differences between institutional contexts. Studying workers originating from ILM countries are somewhat over-represented in professional occupations, those from OLM countries in technician level occupations and those from Southern Europe in clerical jobs.

Table 6. Results of linear regression analysis of ISEI occupational status

Model	1	2	3
Intercept	40.794**	52.294**	52.198**
Double-status position			
Employed; not in education	ref.	ref.	ref.
Dual-system student	-5.100**	3.071**	1.937**
Working student	1.164**	3.171**	4.011**
Studying worker	7.515**	4.174**	4.899**
Institutional context			
ILM countries		ref.	ref.
OLM countries		-1.884**	-1.715**
Southern Europe		0.073	0.177**
Age			
15-19		ref.	ref.
20-24		1.130**	1.129**
25-29		3.114**	3.125**
30-34		4.113**	4.118**
35-39		N/A	N/A
Sex			
Male		ref.	ref.
Female		1.774**	1.763**
Level of education			
ISCED0-2		-21.003**	-20.991**
ISCED3		-14.658**	-14.637**
ISCED5-7		ref.	ref.
Time trend (1992=0)		-0.196**	-0.200**
Institutional context * Double-status position			
OLM countries * Dual-system student			1.448**
OLM countries * Working student			-1.696**
OLM countries * Studying worker			-1.304**
Southern Europe * Dual-system student			1.547
Southern Europe * Working student			-0.684*
Southern Europe * Studying worker			-1.424**
F	2,344**	10,313**	6,887**
Df	3	12	18
R ²	0.023	0.290	0.290
N	303,413	303,413	303,413

* = p < 0.05; ** = p < 0.01

ref. = reference category

N/A = not available

source: pooled ECLFS-data 1992-1997

In Table 6, we present the occupational status of the jobs held by youngsters in a double-status position by means of linear regression analysis. Model 1 indicates that the average occupational status score for youngsters who are employed and not in education is almost 41 points. For dual-system students, the average occupational status of the jobs held is 5 points lower. The occupational status score for working students and studying workers are 1 and 8 points higher, respectively.

After controlling for the institutional context, individual characteristics, and changes over time, we observe that dual-system students acquire occupations with more status than youngsters who are only employed (see model 2). In this situation, dual-system students hold jobs that have, on average, three points more status. In addition, model 2 demonstrates that the occupational status among youngsters in ILM countries is almost two points higher than in OLM countries. In Southern Europe, the average status score is even somewhat higher, but the effect is not significant. The age dummies show a positive effect of age on status attainment, presumably indicating that individuals with work experience achieve higher job levels than those without. The gender effect indicates that women are in an advantageous position in terms of occupational status. Moreover, educational qualifications have a strong positive effect on the attainment of occupational status. The jobs held by the least qualified youngsters have much less status than the jobs performed by the highest educated. Lastly, model 2 shows that the occupational returns have declined over time. However, the implied loss in status attainment among youngsters is fairly small; only one point in the observed period of five years ($5 * -0.196 = -0.980$).

In model 3, the occupational status of the jobs held by youngsters in a double-status position is broken down by the institutional context. The results show that the occupational status achieved by dual-system students in ILM countries is around one-and-a-half points lower than in OLM and Southern European countries. With respect to working students and studying workers, similar interaction effects are found.

8. Conclusions

The labour market entry of young people is a transition process of which it is not easy to determine when it really starts and ends. In many cases, there is a kind of gradual entry into the labour market, during which many young people are simultaneously both student and worker. In this paper, we investigated the extent, structure, and evolution of combinations of learning and working within the European Union. For this purpose, data of the European Community Labour Force Surveys (ECLFS) for the period 1992-1997 were used. Three types of double statuses in youth transitions were distinguished: dual-system students, working students and studying workers.

The empirical analysis showed that these double-status categories can be clearly defined on the basis of the data. In all countries within the European Union, the occurrence of dual-system students and working students is strongly related to age. In general, most dual-system students are aged between 15 and 24 years, with a sharp peak around the age of 18. The occurrence of working students is also strongly related to age, although this is slightly more spread out than is the case with pupils participating in the dual system. Studying workers show much more variation in age, although most investments in continuous training seem to be at the beginning of the occupational career.

Despite a strong and equal link with age in all countries, the occurrence of each double-status situation among youngsters differs greatly according to the various institutional contexts within Europe. Dual system participation is most significant in OLM countries, in particular in Germany and Austria. Working students are most frequently found in OLM countries as well. Especially in Denmark and the Netherlands, a large proportion of students

holds (part-time) jobs. Continuous training during working life is most common in ILM contexts, which is understandable given their lack of attention to occupation-specific skills in initial education. In Southern Europe, double-status positions of any type hardly exist. After initial education, youngsters are either employed or not in the labour force.

With respect to changes over time, it is found that the proportion of double-status situations in the employed labour force has increased over the years. This finding holds especially for ILM countries. In these countries, the likelihood of being a dual-system student has increased most strongly during the period of observation. In OLM countries and in Southern Europe, there is only a slight tendency towards an increasing popularity of the dual system. With respect to the other two double-status positions, similar results are found. The positive effects of the time trend on the likelihood of being in one of these double statuses are less evident in OLM countries and Southern Europe compared to ILM countries. Furthermore, it is observed that men are overrepresented in apprenticeship programmes. In ILM countries, the gender differences in dual system participation are larger than in OLM countries and Southern Europe. Also with respect to the likelihood of being a working student or a studying worker, gender differences are found that differ according to the institutional context.

Double statuses in youth transitions go together with specific employment situations that may differ between institutional contexts. In general, participants in dual systems combine fixed-term contracts with full-time employment, while studying workers are not found to be much different from their non-studying colleagues. Working students, in turn, are more often employed on a part-time basis. Nevertheless, the permanency of these student jobs is found to be fairly high, at least much closer to the situation of regular employees rather than to that of dual-system students. With respect to the occupations held by youngsters in a double-status position, it is observed that dual-system students are often employed as craft and related trades workers or as service and shop/market sales workers. Working students usually hold service and shop/market sales occupations or elementary occupations. Studying workers are mainly found among professionals, technicians and clerks. In terms of status attainment, studying workers achieve the highest occupational status with their jobs, closely followed by working students and dual-system students.

All in all, the findings identified in this paper confirm the impression that the originally strong boundary between full-time education and full-time employment has broken down. The recent increase in overlap between learning and working within the European Union implies a stronger occupational preparation of young people when they enter the labour market. Early work experience provides them with job-related skills that are also recognised by employers. This may lead to a smoother integration of young people into the labour market. In particular, the recent growth in the provision of apprenticeship programmes in ILM countries, such as France, may contribute to this. The recent trend towards lifelong learning may also improve young people's chances of finding secure employment. Less encouraging is the almost non-existence of double statuses in Southern Europe. In these countries, characterised by the absence of a tight relationship between education, training and employment, young people run serious risks of economic and social exclusion, not just at labour market entry, but possibly also during their later working careers.

Notes

1. More recently, the function of additional training is often associated with the idea of 'lifelong learning'. In current knowledge societies, where technological developments follow each other rapidly, the risk of skills becoming obsolete is relatively high and training is used to maintain and develop (new) skills (see for instance Bartel, 1991; Tuijnman, 1997).

2. Data from Luxembourg, Sweden and Finland are excluded from the analysis, because of small sample sizes and hence their unstable and unreliable estimates. Moreover, for Sweden and Finland, information on occupations is only available for 1997.
3. We define the employed labour force as those individuals who worked at least one hour in the week they were interviewed or those who did not work but had a job from which they were absent during the reference week.
4. This distinction implies that the education and training activities of unemployed persons are not treated separately. Instead, these individuals are classified within the group of individuals who are not employed, but in education.
5. Since the period of data collection of the ECLFS is in the Spring, *i.e.* immediately before the exams, students who work (either as dual-system student or as working student) may be underrepresented in the data set. Furthermore, only in Spain, France, the Netherlands, Portugal, and the United Kingdom, are persons in student accommodation included in the survey. Also, with respect to the (purpose of the) education and training received during the last four weeks, there are some limits with regard to the degree of comparability of the information. This implies that the differences found between the countries need to be interpreted very carefully.
6. Due to the small number of respondents in double-status positions within countries, we categorise in the remainder of this paper the yearly ages into five-year span age groups.
7. Since information on the purpose of the received education or training is lacking for this analysis, the double-status categories are defined somewhat differently. We use the age variable as a proxy to determine the purpose of training. If respondents belong to the two youngest age groups (15-19 and 20-24 years of age), their purpose of training is defined as initial, whereas for older individuals the purpose of training is specified as continuous training. In addition, information on the oldest age group is not available for this analysis due to restricted data access.

References

Arrow, K. (1973). Higher education as a filter. *Journal of Public Economics*, 2, 193-216.

Barron J., Black, D., and Loewenstein, M. (1989). Job matching and on-the-job training. *Journal of Labor Economics*, 7, 1-19.

Bartel, A. (1991). *Productivity gains from implementation of employee training programs*. (NBER Working Paper Series 3893). Cambridge, MA: National Bureau of Economic Research.

Bison, I., and Esping-Andersen, G. (2000). Unemployment, welfare regime and income packaging. In: D. Gallie and S. Paugam (eds.), *Welfare regimes and the experience of unemployment in Europe* (pp. 69-86). Oxford: Oxford University Press.

Blossfeld, H-P. (1992). Is the German dual system a model for a modern vocational training system? A cross-national comparison of how different systems of vocational training deal with the changing occupational structure. *International Journal of Comparative Sociology*, 23, 168-181.

Crouch, C., Finegold, D., and Sako, M. (1999). *Are skills the answer? The political economy of skill creation in advanced industrial countries*. Oxford: Oxford University Press.

Delsen, L. (1995). *Atypical employment. An international perspective. Causes, consequences and policy*. Groningen: Wolters-Noordhoff.

Doeringer, P., and Piore, M. (1971). *Internal labor markets and manpower analysis*. Lexington: Heath.

Eyraud, F., Marsden, D., and Silvestre, J-J. (1990). Occupational and internal labour markets in Britain and France. *International Labour Review*, 129, 501-517.

Gangl, M. (1999). European perspectives on labour market entry: a matter of occupationalised versus flexible arrangements in labour markets? In: W. Müller *et al.* (eds.), *A comparative analysis of transitions from education to work in Europe - Based on the European Community Labour Force Survey* (pp. 129-164). Mannheim, Maastricht, Marseilles: MZES, ROA, CERREQ.

Ganzeboom, H., and Treiman, D. (1996). Internationally comparable measures of occupational status for the 1988 International Standard Classification of Occupations. *Social Science Research*, 25, 201-239.

Ganzeboom, H., Graaf, P. de, and Treiman, D. (1992). A standard international socio-economic index of occupational status. *Social Science Research*, 21, 1-56.

Goux, D., and Maurin, E. (1998). From education to first job. The French case. In: Y. Shavit and W. Müller (eds.), *From school to work. A comparative study of educational qualifications and occupational destinations* (pp. 103-141). Oxford: Clarendon Press.

Hakim, C. (1998). *Social change and innovation in the labour market*. Oxford: Oxford University Press.

Hannan, D., Raffe, D., and Smyth, E. (1997). Cross-national research on school to work transitions. An analytical framework. In: P. Werquin, R. Breen and J. Planas (eds.), *Youth transitions in Europe: theory and evidence* (pp. 409-442). Proceedings of third ESF workshop of the Network on Transitions in Youth, La Ciotat, September 1996. Marseilles: CERREQ.

Hutson, S., and Cheung, W-Y. (1992). Saturday jobs: sixth-formers in the labour market and in the family. In: C. Marsh and S. Arber (eds.), *Families and households: divisions and change* (pp. 45-62). Basingstoke: Macmillan.

ILO (1990). *ISCO-88 International Standard Classification of Occupations*. Geneva: ILO.

Jobert, A. (1997). Employment, education and training in Italy. The role of regions, employers' organisations and unions. In: A. Jobert, C. Marry, L. Tanguy and H. Rainbird (eds.), *Education and work in Great Britain, Germany and Italy* (pp. 208-223). London: Routledge.

Jovanovic, B. (1979). Job matching and the theory of turnover. *Journal of Political Economy*, 87, 972-990.

Marsden, D. (1990). Institutions and labour mobility. Occupational and internal labour markets in Britain, France, Italy and West Germany. In: R. Brunetta and C. Dell'Aringa (eds.), *Labour relations and economic performance* (pp. 414-438). Houndmills: Macmillan.

Maurice, M., Sellier, F., and Silvestre, J-J. (1986). *The social foundations of industrial power: a comparison of France and Germany*. Cambridge: MIT Press.

Müller, W., and Shavit, Y. (1998). The Institutional Embeddedness of the Stratification Process, a Comparative Study of Qualifications and Occupations in Thirteen Countries. In: Y. Shavit and W. Müller (eds.), *From school to work. A comparative study of educational qualifications and occupational destinations* (pp. 1-48). Oxford: Clarendon Press.

Müller, W., and Wolbers, M. (1999). Educational attainment of young people in the European Union: cross-country variation of trends over time. In: W. Müller *et al.* (eds.), *A comparative analysis of transitions from education to work in Europe - Based on the European Community Labour Force Survey* (pp. 19-56). Mannheim, Maastricht, Marseilles: MZES, ROA, CEREQ.

OECD (1994). *Vocational training in the Netherlands: Reform and innovation*. Paris: OECD.

OECD (1996). *Education at a glance. Analysis*. Paris: OECD.

OECD (1998). *Employment Outlook*. Paris: OECD.

OECD (1999). *Employment Outlook*. Paris: OECD.

Shavit, Y., and Müller, W. (2000). Vocational secondary education. Where diversion and where safety net? *European Societies*, 2, 29-50.

Smooenburg, M. van, and Velden, R. van der (2000). The training of school-leavers. Complementarity or substitution? *Economics of Education Review*, 19, 207-217.

Steijn, B., and Hofman, A. (1999). Zijn lager opgeleiden de dupe van de toestroom van studenten op de arbeidsmarkt. Over verdringing aan de onderkant van de arbeidsmarkt. *Tijdschrift voor Arbeidsvraagstukken*, 15, 149-161.

Thurow, L. (1975). *Generating inequality*. New York: Basic Books.

Tuijnman, A (1997). Economics of adult education and training. *Adult Education and Development*, 49, 189-198.

Tuma, N. (1985). Effects of labor market structure on job-shift patterns. In: J. Heckmann and B. Singer (eds.), *Longitudinal analysis of labor market data* (pp. 327-363). Cambridge: Cambridge University Press.

UNESCO (1975). *International Standard Classification of Education (ISCED)*. Paris: UNESCO.