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The Youth Labour Market in Germany A new target group for German labour market policies?

By Klaus Schömann and Christoph Hilbert¹

Summary

The labour market for youth is an important feature of the whole labour market, since it reflects the future developments in the behaviour of both, individuals and the firm. Our central assumption is that institutions make a significant contribution in explaining economic behaviour and, particularly, changing institutions have consequences for the agents in the labour market. Especially in the youth labour market, institutional settings play an important role in explaining transitions and early experience.

Our findings based on two waves of the GSOEP suggest that the young are still in a disadvantaged labour market position concerning permanency of employment as well as labour earnings even after accounting for various other labour market characteristics. In the last eleven years, however, we do not observe a considerable worsening of conditions. Wage differentials compared to older employees and more precarious employment among the young have largely remained unchanged on the national level. An inter-cohort comparison also reveals no particular worsening of the labour market conditions for the young at entry into the labour market or during the first few years.

The transitional labour market from education to employment is clearly dominated by a matching process of employers' needs for new skills and additional employees as well as the education and job aspirations of the young. The outcome of this process shows considerable tendencies to reinforce industrial and regional segmentation.

1. Introduction

The youth labour market is an important part of the whole labour market since it includes elements of both individual and firm behaviour, particularly in respect of recruitment strategies of firms targeted at the youth as well as job search behaviour of labour market entrants. On the margin we deal with policies of human capital investment like the support of a generalised youth apprenticeship system, as one way to advance integration of youth in the labour market. This has long been believed to be of minor importance in the debate of rates of return to human capital investment, but delays in integrating youth into the labour market or unstable job careers for highly qualified labour market entrants can negatively affect the overall propensity to reach higher qualifications or invalidate efforts to achieve a culture of life-long learning.

Particularly in comparative research, it appears that the institutional setting plays an important role in explaining transitions and early experiences in the labour market. This has been recognised 25 years ago by Schultz: "There are a few old boxes on the back shelf labelled institutional economics, which have been pushed aside and

which have long been thought to be empty. [...] When we look more closely, we find that there are virtually no terms of reference, no concepts with specifications that can be identified, and no economic theory to guide the analysis. Yet, it is obvious that particular institutions really matter, that they are subject to change and are, in fact, changing, and that people are trying to clarify social choices with regard to alternative institutional changes to improve the economic efficiency and the welfare performance of the economy." (Theodore W. Schultz (1971) Investment in Human Capital p. 248).

Schultz rightly points at the fact that institutions may make a significant contribution in explaining economic behaviour and, particularly, changing institutions have consequences for the agents, firms, trade unions and employees, in the labour market. This interplay of institutional change and outcomes in terms of enhancing integration of youth are reflected upon in this paper. We start with a description and discussion of the institutional aspects of

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the education and training system and transition options in Germany with an emphasis on training arrangements for the employed and unemployed youth. Subsequently, the first transition into the labour market is analysed in terms of effects of the institutional setting on the entry conditions for youth. We focus on entry into industrial sectors and an intercohort comparison of earnings at entry into the labour market. We close with a critical assessment of the previous literature and an outlook of labour market policies targeted at the young in Germany.

2. Particular Features of the German Education and Training System

2.1 Primary and Secondary Education

Although all pupils in Germany are obliged to go to school for at least nine years, they may learn and experience very different subjects and curricula within the same subjects. After attending a primary school for usually four years pupils are channelled into one of three different types of schools which differentiate pupils according to their ability to learn. The three types of schools are called lower secondary school (Hauptschule), intermediate school (Realschule) and upper secondary school (Gymnasium) and during the first two to three years changing between types can be accomplished in exceptional cases. The critical dispute about the three-pillar-type education system led to the foundation of an integrated comprehensive school (Gesamtschule) in the seventies which is not implemented in all federal states. The actual form of the school system differs between the fifteen German regions (Bundesländer), because it is a region's constitutionally approved right to formulate its own education policy (in view of cultural sovereignty of each federal state within Germany Kulturhoheit der Länder).²

Across regions pupils in lower secondary education have been distributed over the four types of schools in 1994 as follows: lower secondary school 25.8 per cent, intermediate school 26.7 per cent, comprehensive school 8.7 per cent and upper secondary school 35.7 per cent (Grund- und Strukturdaten 1995/96).³ Table 1 shows the distribution of the population between 25 and 65 years to the different educational levels. Looking at different age-groups, there is a sharp decrease of people with lower-secondary education and an increase of people with both, intermediate and upper-secondary education.

Pupils of lower secondary schools and intermediate schools finish their school attendance after five or six years with a school-specific certificate opening the entrance to different tracks in the general and occupational educational system. Most of the pupils who leave lower secondary school or intermediate school take up an apprenticeship. In 1991, the precise proportion was 63 per cent of pupils leaving lower secondary schools, and 59 per cent of pupils leaving intermediate school. 14 per cent of lower-secondary school leavers and 23 per cent of intermediate schoolleavers were visiting an occupational school. Another 12 per cent of lower-secondary school leavers and another 4 per cent of intermediate school leavers were attending a preparation school. Preparation schools are attended mainly by school leavers getting no apprenticeship. The preparation schools aim at improving the chances of these pupils to get a training place. Pupils in upper secondary

Table 1

Total population by age-group and educational level, 1995 (percentages)

	lower-secondary school	intermediate school ¹⁾	upper-secondary school	no answer or no grade
25-29 years	29.2	36.5	27.5	6.6
30-34 years	33.0	36.0	24.5	6.6
35-39 years	37.4	33.9	22.0	6.7
40-44 years	43.2	30.2	20.1	6.5
45-49 years	50.0	25.9	16.9	7.2
50-54 years	57.2	21.7	14.1	7.1
55-59 years	67.3	14.2	10.4	7.2
60-65 years	71.2	12.0	8.4	8.5

¹⁾ Including politechnical schools in the former GDR.

Source: Statistisches Jahrbuch 1996.

² Institutional diversity increased in particular after unification with the East German regions. Most of them did not adopt the tripartite system but established an intermediate school incorporating the lower secondary school and intermediate school.

³ The remaining share of pupils (17 per cent) attends classes for orientation or schools incorporating the lower secondary school and intermediate school.

schools leave school after eight or nine years with a certificate giving access to higher education (Abitur). 14 per cent of upper secondary school leavers take up an apprenticeship and around 34 per cent are enrolled in university or a technical college.

2.2 Higher Education

Most of the universities and post-secondary technical colleges (Fachhochschule) are state institutions and financed at 90 per cent by the regions and at 10 per cent by federal funds (Arbeitsgruppe Bildungsbericht 1994). Students do not have to pay fees for getting higher education but they — or their parents — are responsible for their living expenses. In 1994, only 17 per cent of the West German students and 45 per cent of the East German students were supported by the state (Dohmen 1996). The requirement for entry into higher education is a certificate of an upper secondary school. Aptitude tests are usually not conducted. But this does not mean that the choice of fields of study is completely free. In some fields of study (for example medicine or pharmacy) the access is restricted, and the students are selected according to the marks of their final exams of upper secondary education and some other criteria like previous professional experience of relevance for the field of study.

Because the universities have the right of self-governance, the organisation and content of fields of study varies widely between universities. Furthermore, the universities are responsible for the execution of the final exams. The effect of this freedom of the universities is that the acceptance of certificates in the labour market depends indirectly on the reputation of the university. Some important differences exist between universities and post-secondary colleges: The training at technical colleges has a close link to practical applications, follows well-defined curricula and lasts on average only 4,6 years in comparison with 6,8 years at universities (Arbeitsgruppe Bildungsbericht 1994).

2.3 Initial Vocational Training

In 1993 ninety-four per cent of youth who aimed for an occupational certificate were doing this in an apprenticeship-scheme in the so called dual apprenticeship system, the remaining six per cent went to specific full-time occupational schools, like nursery schools and other schools preparing for occupations in the medical and caring professions (Berufsbildungsbericht 1995: 62). The dual system is characterised by the combination of training on the job with a more theoretical and general education at a vocational school. The main emphasis is aimed at training on the job while the training at a vocational school takes only eight to fifteen hours per week. There are around 380 recognised skilled occupations in trade, industry and administration, and training normally lasts three years. The number of training places is determined by the firms having a contract with the trainee. Trainees are selected by the firms only.

Although there are no formal requirements for taking up an apprenticeship, there exists an informal hierarchy determining the social, educational and sex-specific recruitment and career-perspectives (Georg, Sattel 1995: 133). Training on the job is financed by the firm,⁵ whereas vocational schools are financed by the regions and by the communities. In 1991, a firm's expenditure on initial vocational training came to 29 573 DM per person with an apprenticeship contract. 49 per cent of this expenditure was attributed to training allowances. 39 per cent of expenses were spent on time used by instructors and 12 per cent for

Table 2
West-German and East-German employees by occupational level, 1979, 1985/86 and 1991/92 (percentages)

	1979 (West-Germany)	1985/86 (West-Germany)	1991 (West-Germany)	1991 (East-Germany)
No training	30	24	16	5
Apprenticeship	50	56	56	57
Vocational school	12	9	16	25
Technical college	3	3	4	3
University	6	7	8	10

 $^{^{\}rm 4}$ An exception are fields of study which are finished with a state examination.

⁵ There is only a small amount of financial support by the state for special programmes. These programmes are usually directed to firms to create additional training places or to offer training places at vocational schools. The situation in the East German regions is different: In 1994 22.1 per cent of the training places were extra-company training financed by the state in order to fill the gap of training places resulting from the difficult transformation of the economy there (Berufsbildungsbericht 1995).

equipment (Bardeleben, Beicht and Fehr 1995). However, the firms do not only have costs, but also benefits like the reduction of taxes and the productive work of the trainees. A cost-benefit analysis shows that the benefits of the firm exceed their costs (Bardeleben, Beicht 1996).

Vocational schools and firms do not only mark different training places but characterise two different legal regulation systems: The regions are responsible for training at vocational schools whereas the federal state is responsible for training on the job. The most important law regulating this apprenticeship-training on-the-job is the vocational training law (Berufsbildungsgesetz). It regulates the responsibilities of institutions which are involved in the vocational training system and defines the rights and duties of trainees and instructors. The institutions involved are the federal state, trade unions, employers' organisations, Chambers and the Federal Institute for Vocational Training (Bundesinstitut für Berufsbildung). The Federal Institute for Vocational Training is the key national body in this policy area, because it plays an important role in the process of defining the Curricula for training on-the-job.

The dual system is regulated by series of training ordinances (Ausbildungsordnungen), one for each occupation. Training ordinances are issued by the Minister responsible for the occupation in agreement with the Minister of Education and Science. A complicated process of co-ordination between the federal state, regions, employers' organisation, trade unions, chambers and the Federal Institute for Vocational Training precedes the formal agreement of ministers. Training ordinances have the status of legal regulations which define obligatory norms for training on the job. These norms include the skills and abilities required and define the requirements of examinations. Compliance to the rules is enforced by Chambers. The Chambers also conduct the compulsory intermediate and final exams and issue certificates. The existence of training ordinances guarantees a high degree of standardisation and a general recognition of certificates in the labour market.

Table 2 shows the distribution of employees over different occupational levels in 1991. 16 per cent of the West-German employees never participated in occupational training, 56 per cent passed an apprenticeship, 16 per cent a vocational school, 4 per cent a technical college and 8 per cent a university. Compared to the distribution in 1979, there is a decrease of employees who never participated in occupational training and an increase of employees passing an apprenticeship and a vocational school.

2.4 The rationality of wasteful investment: Combining an Apprenticeship with University-level qualification

Recently, the discussion about the cost-effectiveness of the German education and training system has focused on the potentially wasteful investment of both private as well as public funds. In surveys of university graduates and recent labour market entrants it is found that almost 20% of recent entrants in the universities have completed an apprenticeship before as well as the Abitur. This is particularly frequent in the social sciences and in economics.

The analyses by Büchel and Helberger (1995) based on panel data (SOEP) suggested that persons with a double qualification (university and apprenticeship) have no better integration into the labour market than others. The analyses based on a BIBB/IAB survey (Bellmann, Parmentier, Plicht, Schreyer 1996) suggests no significant difference between the two groups.

A more detailed investigation of this issue by Lewin, Minks, Uhde (1996) concludes that the motive for taking a course of vocational training before starting university studies is mainly to reduce the occupational risks of a higher educational qualification. The additional time and foregone earnings invested in vocational education is compensated by a comparably short duration of university studies. Their findings suggest that persons with both types of qualification enter into work more rapidly than university graduates without work experience and the first occupational position tends to be more stable. Similarly they tend to judge their first job as more satisfactory than university graduates without apprenticeship or prior work experience.

3. Empirical Findings

In this section of the paper we address the issue of how the young enter into the labour market, in which economic sectors they find their first jobs and the kind of qualification which has facilitated or prolonged their labour market entry. For this it seems to be necessary not only to compare the different cohorts of young labour market entrants, but also to investigate how they differ from the labour force as a whole. This allows us inferences about the relative labour market position of the young with regard to the competition or allocation of jobs in an economy.

In the first section we show the evolution of the youth and overall European labour market. This gives an impression of differences within the European Union and shows the special situation of Germany which is analysed in the following sections based on the 1985 and 1996 samples of the Socio-economic Panel for Germany. We begin the analysis with simple cross-section type analyses of this longitudinal data set to find out the patterns of qualification and structural change over the eleven year period. As described above, we distinguish two approaches of analysis: On the one hand, we compare persons under the age of 30 with the whole labour force at the time of 1985 and 1996, and on the other hand, we compare levels of occupational and educational qualifications as well as sectoral distributions of the young within the group of young depen-

Table 3

The Evolution of Unemployment in Europe, Younger than 25 Years, 1990-1997

	EUR 15 ¹⁾	В	DK	D	EL	Е	F	IRL	ı	L	NL	Α	Р	FIN	Ø	uĸ
1985	(11.7)	23.6	11.5	9.8	23.9	:	25.8	25.1	31.7	6.5	17.7	:	:	:	:	18.2
1990	(14.6)	15.3	11.4	4.6	21.5	32.3	19.3	19.4	27.4	3.8	8.6	:	10.0	9.4	4.5	10.8
1991	16.3	14.9	11.6	5.9	22.9	31.1	21.5	22.4	26.0	3.2	8.3	:	8.8	19.5	7.8	14.3
1992	18.1	16.2	12.7	6.4	25.1	34.6	23.3	24.4	27.1	4.0	8.5	:	10.1	32.6	13.6	16.7
1 9 93	21.4	21.8	13.8	7.9	26.8	43.4	27.3	25.2	30.4	5.4	11.1	:	12.9	41.8	22.6	17.9
1994	22.1	24.2	11.0	8.7	27.7	45.0	29.0	22.8	32.3	7.3	11.4	:	15.1	42.2	22.6	17.0
1995	21.5	24.4	10.0	8.8	27.9	42.5	27.3	19.5	33.2	7.1	11.6	5.6	16.6	38.2	19.4	15.9
1996	20.9	17.3	9.0	10.5	21.5	36.6	25.1	19.1	30.0	10.1	11.3	7.1	14.6	41.9	22.4	17.9
1997	21.2	21.3	8.1	10.7	31.0	39.2	29.0	15.9	33.6	7.3	9.7	7.6	14.1	35.4	21.9	13.6

¹ Values in brackets are for EUR10.

Source: Eurostat: Les jeunes de l'Union européenne, Eurostat Labour Force Survey (several issues).

dent employees. This part of the paper is divided into two sections: in the first part, we are looking at labour market entries and sectoral recruitment patterns. For this we only compare the descriptive findings of the different years. In the third part, we are looking at the role of the education for the labour market status of the dependent employed under 30 and in comparison to the labour force as a whole. In addition to the approaches of former studies, we are estimating a simple multivariate OLS — regression using the data set described above and income as dependent variable.

3.1 Unemployment of Different Age Groups in Europe

Tables 3 and 4 show the evolution of the unemployment rates of young unemployed and of the whole labour force. The most striking fact is that the unemployment rate of the younger employees and the ratio compared with the overall unemployment in Germany is much lower than in most other European countries. Since this is consistently the case independent of the business cycle and size of demographic cohorts, the explanation of this finding is to be found in institutional features of the youth labour market, mainly the apprenticeship system as discussed in the previous section.

Especially Greece, France and Italy have a consolidated youth unemployment which is much higher than their overall unemployment rates. On the other hand, there are some countries like Denmark or the UK who have a moderate level of youth unemployment which has fallen slightly in the last twelve years. Germany's evolution of youth unemployment is in contrast to the other European countries. In the beginning of the nineties, there was no special problem with youth unemployment. The difference

between the youth and the overall unemployment rate is very small. But in the middle of the nineties we observe a change of this situation. The gap between the overall and the youth unemployment rate has been slightly rising although at the end of 1998 we witness already a new decrease in youth unemployment.

3.2 Changing Sectoral Recruitment Patterns as Entry Positions

Since the middle of the eighties we observe the process of "tertiarisation" of the German economy. In 1985, 42.8 per cent of the labour force were employed in services and an additional 5.2 per cent in banking and insurance related jobs, a total of 48 per cent in general service sector jobs based on an analysis of the entire labour force with data from the German Socio-economic Panel (West Germany only). In 1996 for the unified Germany the share in tertiary sector jobs rose to 48.2 per cent plus 7.3 per cent in financial services, a total of 55.5 per cent employed in services (Table not shown). Compared to the distribution of the labour force as a whole the young under 30 years of age show a very similar pattern of employment across sectors: 50.1 per cent of employees in financial services and other services in 1985 (West Germany) and 58.3 in 1996 (see Table 5). Even the distribution in East and West Germany in 1996 is very similar for the young and the whole labour force. This reflects a remarkable speed of adjustment in East Germany in the tertiarisation of the economy. However, this outcome neglects the high costs of this fast process of tertiarisation in terms of high levels of unemployment and the sharp decline in labour force participation in the new Länder.

Concerning the education and training of the young we find that the German apprenticeship system follows the

Table 4

The Evolution of Unemployment in Europe, all Unemployed, 1990-1997

	E UR 15 ¹⁾	В	DK	D	EL	E	F	IRL	I	L	NL	А	Р	FIN	S	UK
1985	(9.5)	11.3	7.8	6.9	7.8		10.3	18.0	9.2	3.0	10.5					11.5
1990	(8.4)	7.3	8.3	4.9	7.0	16.3	9.4	14.1	9.8	1.6	7.8	:	4.7	:	:	7.0
1991	(8.5)	7.0	9.1	4.1	7.7	15.9	9.2	15.8	10.1	1.5	7.3	:	3.9	:	:	8.6
1992	(9.2)	6.7	9.0	6.3	7.8	17.7	10.2	15.0	9.4	2.0	5.6	:	4.0	:	:	9.7
1993	(10.6)	8.1	10.7	7.7	8.6	22.2	11.4	15.6	10.3	2.3	6.3	:	5.3	:	:	10.3
1994	(11.4)	9.6	8.0	8.7	8.9	24.3	12.7	14.6	11.3	3.5	7.2	:	6.7	:	:	9.7
1995	10.7	9.3	7.0	8.2	9.1	22.7	11.9	12.0	11.8	2.9	7.2	4.3	7.1	17.0	8.1	8.7
1996	10.9	9.5	6.8	8.8	9.7	22.2	12.4	11.7	12.2	3.3	6.4	5.3	7.3	15.6	9.5	8.2
1997	10.8	9.0	5.4	9.9	9.6	20.9	12.6	10.2	12.4	2.5	5.5	5.1	6.6	15.0	10.4	7.1

¹⁾ Values in brackets are for EUR10 / 12.

Source: Eurostat: Les jeunes de l'Union européenne, Eurostat Labour Force Survey (several issues).

same trend as the overall economic development in tertiary jobs. For example, close to 47 per cent of the young dependent employees in 1985 and about 53 per cent in 1996 were enrolled in an apprenticeship related to the service sector of the economy (see Table 6). In comparison to this relatively low increase related to the overall expansion of the tertiary sector, the apprentices in the financial sector,

i.e. banking and insurance, have more than doubled their share from 5 to 14 per cent of all apprenticeships between 1985 and 1996. Among the young under 30 years of age the respective shares are 7.3 in 1985 and 8.1 in 1996 (see Table 6), but occupational schools have increased their share more rapidly in the financial services from 8.8 in 1985 to 14.3 in 1996 for the East and West Germany.

Table 5 Employment Status and Industrial Sector, Labour Force Younger than 30 (Row Percent)

	Mining and Manufacturing	Utilities	Financial Services	Other Services	Total
1985 (West)			•		
blue-collar	40,6	33,7	0,5	25,2	100,0
self-employed	31,1	10,4	8,3	50,0	100,0
in education	24,2	25,2	5,0	45,7	100,0
white collar	12,4	24,0	12,9	60,7	100,0
public service	0,0	0,0	0,0	100,0	100,0
total	26,4	23,5	5,2	44,9	
1996 (East and West)					
blue-collar	45,5	22,4	0,4	31,7	100,0
self-employed	32,7	14,3	8,2	44,9	100,0
in education	23,0	16,0	13,6	47,4	100,0
white collar	14,2	8,9	13,8	63,1	100,0
public service	1,4	0,0	. 1,4	97,1	100,0
total	26, 9	14,6	8,1	50,3	100,0
1996 (West)					
blue-collar	44,9	25,3	0,6	29,2	100,0
self-employed	31,4	14,3	5,7	48,6	100,0
in education	18,7	16,3	15,4	49,6	100,0
white collar	15,9	9,5	12,2	62,3	100,0
public service	1,9	0,0	1,9	96,2	100,0
total	26,3	15,6	7,7	50,4	100,0

Source: German Socio-economic Panel, own calculations.

Table 6

Education and Industrial Sector, Labour Force Younger than 30 (Row Percent)

	Mining and Manufacturing	Utilities	Financial Services	Other Services	Total
1985 vocational education					
apprenticeship	29.6	23.7	7.3	3 9 .4	100.0
occupational school	19.3	21.1	8.8	50.9	100.0
school of public health	0.0	8.0	0.0	92.0	100.0
technical school	21.6	17.6	2.0	58.8	100.0
education of civil servant	0.0	0.0	1.8	98.2	100.0
other occupational education total	22.5 24.8	25.0 21.1	0.0 6.3	52.5 47.8	100.0 100.0
university degree			•		
technical college	26.3	21.1	10.5	42.1	100.0
university	17.6	13.7	5.9	62.7	100.0
foreign university	0.0	0.0	0.0	100.0	100.0
total	19.4	15.3	6.9	58.3	100.0
1996 (East and west) vocational education					
apprenticeship	32.1	15.3	8.1	44.6	100.0
occupational school	17.5	11.1	14.3	57.1	100.0
school of public health	4.5	0.0	0.0	95.5	100.0
technical school	14.8	22.2	7.4	55.6	100.0
education of civil servant	0.0	0.0	0.0	100.0	100.0
other occupational education	45.2	16.1	0.0	38.7	100.0
total	28.4	14.2	7.6	49.8	100.0
university degree					
technical college	20.6	8.8	11.8	58.8	100.0
university	8.6	14.3	8.6	68.6	100.0
foreign university	0.0	100.0	0.0	0.0	100.0
total	14.3	12.9	10.0	62.9	100.0
1996 (west) vocational education					
apprenticeship	31.2	16.2	8.2	44.3	100.0
occupational school	16.7	13.0	16.7	53.7	100.0
school of public health	5.9	0.0	0.0	94.1	100.0
technical school	17.6	23.5	8.8	50.0	100.0
education of civil servant	0.0	0.0	0.0	100.0	100.0
other occupational education	48.1	14.8	0.0	37.0	100.0
total	27.7	14.9	7.9	49.6	100.0
university degree					
technical college	20.7	10.3	10.3	58.6	100.0
university	11.1	18.5	7.4	63.0	100.0
foreign university	0.0	100.0	0.0	0.0	100.0
total	15.8	15.8	8.8	59.6	100.0

Particularly, the trend to aim for higher education combined with the fact that two thirds of university graduates are recruited by the service sector, increases the trend towards "tertiarisation" (Blossfeld 1985, Schömann, Rogowski, Kruppe 1998). Only the graduates from the German "Fachhochschule" which are comparable to British

graduates from polytechnic higher education hold a still larger share of employees in industrial sector jobs than university graduates. About 30 per cent of graduates from polytechnics go to jobs in manufacturing industries, whereas 23 per cent of university graduates went to this sector in 1996 (see Table 6).

Table 7

Education and Industrial Sector, Labour Force Younger than 30

(Column Percent)

	Mining and Manufacturing	Utilities	Financial Services	Other Services	Total
985 rocational education					
apprenticeship	75.8	71.4	71.7	50.5	62.3
occupational school	9.5	12.2	16.7	12.6	12.0
school of public health	0.0	1.0	0.0	5.0	2.6
technical school	4.8	4.6	1.7	6.5	5.4
education of civil servant	0.0	0.0	1.7	11.7	5.8
other occupational education	3.9	5.1	0.0	4.6	4.2
total vocational education	93.9	94.4	91.7	90.9	92.4
university degree	0.0	0.0	0.0	0.0	0.0
technical college	2.2	2.0	3.3	1.7	2.0
university	3.9	3.6	5.0	6.9	5.4
foreign university	0.0	0.0	0.0	0.4	0.2
total university degree	6.1	5.6	8.3	9.1	7.6
total	100.0	100.0	100.0	100.0	100.0
1996 (East and West) vocational education					
apprenticeship	84.7	78.3	75.9	64.0	72.6
occupational school	3.7	4.6	10.8	6.6	5.9
school of public health	0.7	0.0	0.0	7.7	4.1
technical school	2.7	7.9	4.8	5.5	5.0
education of civil servant	0.0	0.0	0.0	5.9	3.0
other occupational education	4.7	3.3	0.0	2.2	2.9
total vocational education	96.6	94.1	91.6	91.9	93.5
university degree	0.0	0.0	0.0	0.0	0.0
technical college	2.4	2.0	4.8	3.7	3.2
university	1.0	3.3	3.6	4.4	3.3
foreign university	0.0	0.7	0.0	0.0	0.1
total university degree	3.4	5.9	8.4	8.1	6.5
total	100.0	100.0	100.0	100.0	100.0
1996 (West) vocational education					
apprenticeship	81.4	76.1	72.6	61.7	70.0
occupational school	4.3	6.0	14.5	7.4	6.9
school of public health	1.0	0.0	0.0	8.1	4.3
technical school	2.9	6.8	4.8	4.3	4.3
education of civil servant	0.0	0.0	0.0	7.4	3.7
other occupational education	6.2	3.4	0.0	2.5	3.4
total vocational education	95.7	92.3	91.9	91.4	92.7
university degree	0.0	0.0	0.0	0.0	0.0
technical college	2.9	2.6	4.8	4.3	3.7
university	1.4	4.3	3.2	4.3	3.4
foreign university	0.0	0.9	0.0	0.0	0.1
total university degree	4.3	7.7	8.1	8.6	7.3
total	100.0	100.0	100.0	100.0	100.0

Next we compare the education levels and labour force status across four major sectors of the economy: (1) raw materials, mineral extraction, energy and large scale engineering, (2) electrical and mechanical appliances, (3) banking and insurance and (4) other services. Completed apprenticeships are the most common recruitment category in all sectors of the economy (see Table 7). The lowest share is found in other services compared to the other sectors of the economy, despite some catching up in shares of service sector apprenticeships between the years 1985 to 1996. Financial and especially other services show a much stronger recruitment of employees with university or polytechnic education (see Table 7).

For young employees under the age of 30 the shares of employees with apprenticeship degrees reach figures of 64 per cent within the sector of other services. In the industrial sector of the economy the share of employees holding an apprenticeship degree was over 70 per cent in 1985 and has reached levels of over 75 per cent in 1996. These figures demonstrate the claim that labour market entry is mainly after completion of an apprenticeship. Even in the service sector of the economy new certificates for apprenticeships are being set up or revised quickly now. The catching up of the education level of the employees in the other services from 50 per cent in 1985 to 64 per cent in 1996 for West and East Germany is remarkable (see Table 7).

3.3 Returns to Education and Uncertainty about Labour Market Entry

In the last few years, a broad discussion about the costeffectiveness and the future orientation of the Dual Apprenticeship System has taken place. These discussions are dominated by two major topics: On the one hand, more and more firms reduce their training capacities⁶ and on the other hand, the employment prospects of apprentices deteriorate. The share of apprentices getting a job in the same firm where their training took place, is decreasing and, therefore, an increasing share of successful apprentices experience unemployment shortly after completing their training. Furthermore, the opportunities of upward job mobility are getting worse for employed with an apprenticeship compared to employees with a university or technical college degree. Additionally there is an increasing share of employees with an apprenticeship training who do not work on a job which corresponds to their skill level (Franz et al 1997; Hansen et al 1994; Parmentier, Schober, Tessaring 1990).

A similar discussion arose about the employment prospects of students leaving university or technical college. The main aspect here is the decreasing fit between attained qualifications and required qualification at the working place (Büchel 1998; Plicht, Schober, Schreyer 1994). Nevertheless, there is still a close link between the educational certificate and the status or the content of the first job (Blossfeld 1985a; Konietzka, Solga 1995; Mayer 1995;

Müller, Steinmann and Ell 1995). This means, that the different educational tracks are directly linked to specific status positions in the occupational system.

A very important concern of empirical research was the effect of the expansion of the education system on the link between education certificate and first job. In the F.R.G. the share of higher education increased during the seventies and the eighties. A sharp reduction of school leavers with lower secondary education and an increase of school leavers of intermediate schools and higher secondary schools was observed. Parallel to this development of participation in higher education there was an increase in the demand for qualified jobs. But demand for qualified work did not exceed the increase of the well educated labour force. This led to the consequence, that longer participation in education and training was on the one hand devalued and revalued on the other hand. Devaluation results from the vast expansion of higher education and turns out in lower social status and lower returns to education (Blossfeld 1985, Schömann 1994). At the same time, the importance of educational certificates for occupational attainment increased because education and training certificates are now a necessary requirement to get a qualified job.

Another important characteristic of the German occupational structure is the important role of the first job for the ensuing occupational career. Differentiated according to the job at entry, there are few possibilities to change jobs between different status positions. A lot of job shifts between unqualified positions can be observed, but upward mobility hardly occurs. In the middle range of the occupational hierarchy (qualified manual jobs and qualified service and administration jobs) upward mobility occurs, but only to the next level. High mobility occurs between different highly qualified occupations. This indicates closed labour market segments (Blossfeld 1985). Because of the dependence of upward mobility and career lines on the entry job, Blossfeld concluded on a remarkable effect of the first job on the individual career. This implies that there is no compensation over the course of life for inequalities reflected by the first job. There is little new evidence which has shown that this has changed in recent years.

At this stage of the analysis the importance of further education and training for job mobility and wage attainment becomes apparent. Since the introduction of the Employment Promotion Act in 1985 we observe a new phenomenon of instability in the first entry into the labour market. Whereas before 1985 entry into the labour market appeared to be a single step with considerable importance for subsequent occupational careers, since then integration into the labour market has become much more gradual or unstable.

⁶ This trend is produced by the big firms. The small and medium-sized firms increased the number of training places between 1993 and 1995 (Pfeiffer 1995: 591).

Table 8
Fixed-term Contracts of Dependent
Employees by Gender

	Men	Women	Total
1985	5.8	7.8	6.6
	(13.5)	(12.7)	(13.1)
1996	6.3	8.7	7.4
(All)	(12.5)	(11.8)	(12.2)
1996	7.8	12.4	9.9
(East Germany)	(12.8)	(11.0)	(12.0)
1996	5.8	7.3	6.5
(West Germany)	(11.2)	(14.7)	(12.8)

¹⁾ Values in brackets indicate dependent employed under the age of 30.

Source: German Socio-economic Panel, own calculations.

In order to test for the probability or risk to be recruited into a fixed-term contract Schömann and Kruppe (1993) estimated a probit model where the dependent variable takes the value one if the current job is a fixed-term employment and zero in case of a tenured position for several years between 1985 and 1992 in East and West Germany. Following on from the Employment Promotion Act (BeschFG 1985) more employees with lower qualifications have taken up jobs with fixed-term employment. In other words, this group runs now a higher risk of having a job for a limited duration.

Between the years 1985 and 1996 the share of fixed-term contracts has not changed dramatically (see Table 8). While there is a moderate increase in the share of fixed-term employees among women, the share of men with this kind of contract decreased slightly. A remarkable fact is, that the share of fixed-term contracts of younger dependent employees is about double the share of all employees irrespective of age. From a theoretical point of view this supports the perspective that fixed-term contracts are considered as some sort of "prolonged probationary period" for young labour market entrants. Young labour market entrants are most likely to be employed in the first instance on a fixed-term basis and subsequently the probability of fixed-term employment decreases with age or general labour force experience. In case a person has obtained an educational certificate during the last year she or he is more likely to be in fixed-term employment shortly afterwards.

The analysis by Schömann and Kruppe (1993) indicates that between 1985 and 1988 the risk of fixed-term employment has slightly increased, whereas in 1991 in West Germany it is no longer significant. This captures indirectly the effect of recent labour market entrance and, therefore, supports the hypothesis that fixed-term employment is particularly frequent at labour market entry, either as tem-

porary work until search for a more permanent job is completed, or as prolonged probationary period. However, in 1991 recently qualified persons are those who were enabled to benefit directly from the reunification boom in labour demand, where employers have been less choosy about labour market entrants by apparently dropping or lowering the entry barrier of "necessary work experience". The overall share of fixed-term contracts in the German economy remains on the level of 10 % of all employees in 1996 (see also Eurostat 1997).

We extend the empirical work presented in Schömann and Kruppe (1993) and estimate similar models considering the different groups of dependent employees based on the two waves of the GSOEP-data discussed in the former section⁷. In estimating equations for yearly earnings for the whole labour force in 1985 and for youth under 30 years of age in 1985, and both estimates for 1996, the most obvious finding is the consistent pattern of significantly negative coefficients on the effects of fixed-term contracts on earnings. We find decreasing earnings over the time period and slightly smaller coefficients among the young than among the total labour force.

We used annual gross earnings⁸ for our estimations in this paper and found for 1985 even higher wage differentials than in our other analysis (Schömann and Kruppe 1993) based on net hourly wages (see Table 9). This is probably due to the lower probability of fixed-term employees to receive end-of-the-year gratification's or bonuses. However, in 1996 the wage differential between employment on a fixed-term contract and employment with an indefinite term still remains between 7 and 8 per cent even after accounting for age, duration of education and training, working time and industrial sector of employment effects a multivariate model.

Beside the fact of a rising share of fixed-term contracts among the young we also find the existence of earning disadvantages through fixed-term employment which has remained at a similarly high level as in the middle of the eighties. The percentage share of fixed-term employment among the young increases the younger the age group that is chosen and is highest among employees who have completed their full-time education only during the last twelve months. There is a considerable amount of accumulation of precarious elements in employment, i.e. the combination of fixed-term employment and part-time work simultaneously which appears unchanged over the last ten years. By looking at the coefficients of the branch dummies we can see that especially for the young, the manufacturing sector has a much less positive effect on earnings than within all other estimates.

⁷ The regressions of wave m are estimated only for the West-German sample. This allows us a better comparison with the results of wave b.

⁸ This measure includes the monthly gross earnings times twelve plus all other sources of earnings from dependent employment.

Earning Equations of Dependent Employees, West Germany only

				Dependent	Variable:	In (yearly gross	earning)		
		All	Depender	nt Employees		Deper	ndent Emp than	loyees Younger 1 30	
Independen	t Variables	1985		1996		1985		1996	
Age	Beta t-Statistics	.01249 11.58	**	0.010 9.199	**	0.976 12.300	**	0.087 9.877	* *
Duration of I	Education Beta t-Statistics	0.086 17.75	**	0.055 12.346	**	0.367 3.240	**	0.019 1.488	**
Mining & ma	anufacturing Beta t-Statistics	0.17500 5.72	**	0.22200 7.2740	**	0.24500 4.0500	**	0.0965 1.492	
Utilities	Beta t-Statistics	.190 6.09	**	0.258 7.256	**	0.126 2.030	*	0.227 2.863	**
Financial Se	ervices Beta t-Statistics	.242 4.09	**	0.293 5.722	**	0.282 2.450		0.134 1.273	*
Weekly wori	king time Beta t-Statistics	.02171 24.26	**	0.041 51.531	**	0.018 9.620	**	0.048 28.855	**
Fixed-term (contract Beta t-Statistics	-0.579 -13.568	**	0.334 7.233	* *	-0.463 -7.820	**	-0.211 -3.220	**
Type of edu	cation Beta t-Statistics	172 -2.914	**	-0.303 -5.110	**	0.109 1.550	*	-0.009 -0.124	
Constant	Beta t-Statistics R ²	7.797 102.127 .478	**	7.937 112.53 0.419	**	0.209 30.150 0.501		6.013 26.623 0.682	*

^{*} Significant at 5%-level. — ** Significant at 1%-Level.

Source: German Socio-ecoomic Panel Waves A, E, I und M, own calculations.

The last variable in the analysis of yearly earnings indicates whether the employee has completed his full-time education/training or apprenticeship during the last year. Relative to older employees the young recent school or training leavers earn significantly less, between 3 and 5 per cent in 1985 and 1996. Only in 1996 comparing young (< 30) employees with each other there is an insignificant difference for recent graduates compared to those having entered the labour market earlier.

4. Conclusions

The German labour market has witnessed, as most other industrialised countries, the growth of service sector jobs. This trend of "tertiarisation" of employment has equally affected the labour market for young people in Germany. Even if we can observe a time lag for the development of the apprenticeship system to offer more apprenticeships in services, the evolution of the apprenticeship system follows

the overall economic trend. Due to the adaptation of the apprenticeship system to the overall economic trend the labour market for youth in Germany is still not largely disconnected from the labour market of older and more experienced employees as in some other Member States of the European Union.

Recruitment of youth according to broad industrial sectors does not vary dramatically from the overall trends of recruitment by sectors. However, due to the "tertiarisation" and higher educational attainment of later birth cohorts arriving on the labour market, we expect even stronger push and also pull factors towards more employment in the service sector of the economy. This tendency of "tertiarisation" of employment is largely responsible for the finding that in the late 1990s the atypical forms of employment like fixed-term employment, marginal part-time employment or marginal self-employment are more common among youth particularly at first entry into the labour market.

The findings of the analysis suggest that the young are still in a disadvantaged labour market position concerning permanency of employment and also labour earnings even after accounting for various other labour market characteristics like differential levels of education, work experience, differences in sectoral recruitment and employment patterns in a multivariate regression analysis of all employees. In the last eleven years, however, we do not observe a considerable worsening of conditions on the youth labour market in Germany comparing 1985 (West Germany) with 1996 (East and West Germany). Wage differentials compared to older employees and more precarious employment among the young has largely remained unchanged on the national level. Equally an intercohort comparison of the young in 1985 with the young in 1996 does not reveal a particular worsening of the labour market conditions for the young at entry into the labour market or during the first few years of job mobility (Büchel 1998).

In consequence this means that labour market segmentation at entry into the labour market already evidenced in previous studies of the entry process (Schömann 1994 and Schömann and Kruppe 1993) has not been reduced in recent years (see also Büchel 1998 p. 157). We do witness in the unified Germany an increased regional differentiation of economic opportunities and youth unemployment. This empirical fact remains to be investigated in more detail. Official statistics show the large interregional differences in youth unemployment ranging from 6,3 (Bavaria), and 7,5 (Baden-Württemberg) in the south of Germany, to 14,9 (Hamburg), and 17,4 (Bremen) in the north of Germany, to levels as high as 18,1 (Brandenburg) and 23,1 in Berlin representing eastern parts of Germany.9 Whereas in the prosperous regions of the south of Germany youth unemployment is still below the regional level of unemployment, in the northern and eastern parts youth unemployment exceeds the overall unemployment rates in these regions. These regional disparities are even more pronounced if we focus the comparison on districts within regions as for example specific districts within the bigger city-states (Hamburg, Berlin). The figures show again above average values for youth unemployment for some innercity districts.

In addition to segmentation of youth largely determined by entry into specific industrial segments we witness an important second regional dimension of segmentation masked by the national figures on youth unemployment. In this respect the young remain of similar importance to labour market policies today as in the middle of the eighties in Germany. The new government has introduced already a labour market policy worth 2 billion DM to implement the employment guidelines of the European employment summit held in Luxembourg. The major aspect of this programme focuses on qualifications for young labour market entrants without valid certificates, thereby strengthening equal access to education and training, particularly apprenticeships as the major port of entry to the German labour market.

The second major part of the new policy initiative of the new German government offers work experience (Praktikum) predominantly in small and medium sized enterprises as well as some additional occupational counselling. Again the basic idea of policy intervention in the youth labour market is to widen access to apprenticeships also to specific target groups among young labour market entrants based on practical work experience combined with general education and training. Specific measures like large-scale job creation programmes for the young similar to France are not on the political agenda. The challenge to reduce youth unemployment rests largely on the shoulders of regional governments which are also responsible for education policy (Kulturhoheit der Länder). Insufficient resources in one policy domain seems to have immediate repercussions in the other policy domain.

The transitional labour market from education to employment is clearly dominated by a matching process of employers' needs for new skills and additional employees as well as the education and job aspirations of the young. The outcome of this matching process shows considerable tendencies to reinforce industrial and regional segmentation which cannot easily be tackled both by individuals themselves nor through national labour market policies. A more region-specific labour market policy more closely linked to general education policies and targeted specifically at the young seems to be necessary. Without an improved concertation of the two policy domains substantial regional differences in job and educational opportunities will persist and reinforce tendencies of labour market segmentation and the risk of social exclusion for parts of the younger generations who are no longer reached by education and labour market policies.

⁹ All ratios calculated relative to civilian dependent employees.

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Zusammenfassung

Der Arbeitsmarkt für Jugendliche ist ein wichtiger Indikator für den Gesamtarbeitsmarkt, da er die zukünftige Entwicklung sowohl auf individueller, als auch auf Unternehmensebene abbildet. Zentrale Annahme innerhalb unserer Arbeit ist, daß Institutionen einen signifikanten Beitrag zur Erklärung von ökonomischem Verhalten leisten und daß Änderungen ihrer Rahmenbedingungen das Verhalten der Agenten im Arbeitsmarkt beeinflussen kann.

Insbesondere auf dem Jugendarbeitsmarkt spielen Institutionen bei der Erklärung von Übergängen und ersten Erfahrungen eine bedeutende Rolle. Die Ergebnisse unserer Analyse zweier Wellen des GSOEP zeigen, daß die Jüngeren auf dem Arbeitsmarkt nach wie vor benachteiligt sind. In den vergangenen elf Jahren zeigt sich jedoch keine beträchtliche Verschlechterung bezüglich der Lohnunterschiede, und das häufigere Bestehen prekärer Beschäftigungssysteme bei den Jüngeren ist im Grossen und Ganzen gleich geblieben. Ein Vergleich zwischen den Gruppen zeigt ebenfalls keine partielle Verschlechterung der Bedingungen beim Eintritt in den Arbeitsmarkt bzw. in den ersten Jahren im Arbeitsmarkt.

Der Übergangsarbeitsmarkt von der Ausbildung in Beschäftigung wird durch den Bedarf der Arbeitgeber an neuem Wissen und zusätzlichen Beschäftigten, sowie durch die Ausbildung und die Bestrebungen der Jüngeren bestimmt. Die Ergebnisse dieses Prozesses zeigen verstärkt eine regionale und industrielle Segmentierung.