

Precarious Employment, Education and Gender : A Comparison of Germany and the United Kingdom

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Editorial Note:

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Abstract

During the last decades most industrialised countries have experienced a massive educational expansion. Corresponding to this development there has been an increase of female employment which is, however, to a large extent part-time. At the same time, the attempts of firms to achieve more employment flexibility – facilitated by government intervention to deregulate the labour market - has contributed to the growth of precarious jobs, such as, fixed-term, (certain types of) part-time jobs and self-employment. This has been true in particular for the United Kingdom.

In this paper we examine the relationships between the growth of precarious employment, the general educational expansion and gender in Germany and the United Kingdom. Our first question is to what extent education shields from insecure employment. The empirical analysis focuses on effects of both general and vocational education and compares these effects between countries. Based on national differences in the educational systems, we expect a relatively smaller influence of education on the likelihood of precarious employment in the UK where the educational system is less restrictive – that is, less rigidly stratified – than in Germany. Second, we try to better understand the link between gender and precarious employment by looking at its embeddedness within the national institutional arrangements. We expect that the economic interests of firms to create precarious jobs are more or less closely linked to the national “gender regimes”. Given the stronger emphasis on the male-breadwinner model we expect that the female bias in precarious employment is relatively stronger in Germany than in the United Kingdom.

Data from the German Microcensus (1982, 1996) and the British Labour Force Survey (1984, 1996) are used for the empirical analyses.

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1 Introduction

Employees in Western European countries increasingly face the risk of precarious employment relationships. The reason for this development is usually seen in the de-industrialisation process and global competition which pressures firms to become more flexible with respect to their employees – in particular, in terms of wage flexibility and numerical flexibility (Castells 2000, Standing 1999, Regini 2000). However, as has been pointed out by several authors, the concrete employment outcomes will probably greatly differ by national institutional arrangements in labour market regulations, educational systems and welfare state provisions (e.g. Esping-Andersen 1999, Blossfeld 2001). We follow this strand of research and investigate how men and women in Germany and the United Kingdom in the 1990s have been affected by precarious employment and, in particular, whether certain groups of employees have been affected differently depending on the educational system. Given the national differences in the educational systems, we expect that higher education shields better against precarious employment in Germany than in the UK, since the link between educational certificates and labour market outcomes is closer in the former country (Shavit/Müller 1998). More specifically, it is likely that vocational qualifications (mainly based on apprenticeships) provide a better protection against adverse employment outcomes in Germany than in the United Kingdom. Apart from our focus on the consequences of the different educational systems, we aim to better understand the link between gender and precarious employment. Curiously enough there has not (yet) been much of a debate on the possible consequences of the increase in precarious employment on gender relations and gender inequalities (Lenz 2000, Leitner/Ostner 2000) and, further, on how these consequences might differ by national context. A few authors do, however, point to the danger that women might be the main losers when it comes to the introduction of precarious work. Analyses for the United States hint in this direction (Smith/Gottfried 1998). We expect that the economic interests of firms to create precarious jobs are more or less closely linked to national “gender regimes”. Given the stronger emphasis on the male-breadwinner model in Germany we suppose that the female bias in precarious employment is relatively stronger there than in the United Kingdom.

Data from the German Microcensus for 1982 and 1996 as well as from the British Labour Force Survey for 1984 and 1996 are used for the empirical analyses. The main focus will be on the 1990s.

We will proceed as follows: To provide the basis for developing our hypotheses we start with a description of the institutional contexts in both countries with respect to the educational systems, the gender dimension of the welfare regimes and the characteristics of the labour markets and their deregulation throughout the 1980s and 1990s (section 2). It follows a description of the three types of precarious work we are going to study: part-time work, fixed-term contracts and one-person companies (section 3). Given this background we present our hypotheses in section 4. After having described data and methods (section 5), we will present empirical results on precarious employment in the following section. We conclude with a summary and discussion of our results.

2 The national institutional contexts

2.1 The educational systems

Germany

The German educational system has been described as highly standardized and stratified (Allmendinger 1989). The stratification starts at a rather young age: After four years of primary school (around age 10) pupils are selected into three different tracks: the lower secondary school (Hauptschule), middle school (Realschule), and the upper secondary school (Gymnasium or Fachoberschule) which leads to the university entrance qualification (Abitur)¹. Although it is possible to switch between the schools, transitions between them are quite rare, but have somewhat increased in recent years (Blossfeld 1990). Almost all schools are state schools without much of a visible status or quality differentiation between schools of a given track.

General schooling is usually followed by vocational training or attendance of a technical college or university. The majority of young people receive their vocational training in the dual system, that is in the form an apprenticeship (König et al. 1988, Winkelmann 1996). The apprenticeship system combines training at the workplace (3 to 4 days a week) with attendance of a vocational school (1 to 2 days a week) where a broader theoretical understanding of occupational activities is to be achieved (Blossfeld/Stockmann 1999). Employer organizations, unions and state institutions are all involved in determining the mode of training, examination, and certification (Winkelmann 1996). The standardization of occupational titles is a source of flexibility between firms and within the same occupation. At the same time, however, flexibility between occupations is hindered. A second tier in the German vocational training system are the vocational schools. These schools exist for a variety of semi-professions, e.g. in the field of health occupations. In contrast to apprenticeships, education in school and training at the workplace do not run parallel in most cases, but in sequence. Finally, tertiary education is provided by state financed technical colleges and universities. They are free of charge and not differentiated by quality or status.

As many studies have shown there is a close link between the certificates provided by the system of general and vocational education and employment positions (Shavit/Müller 1998; Blossfeld/Stockmann 1999). Apprenticeship graduates usually enjoy a smoother transition to first employment than labour market entrants without vocational qualification. They are also less likely to become unemployed at the beginning of their career (Kurz/Steinhage 2001; Winkelmann 1996; Brauns/Gangl/Scherer 1999). An important reason for this surely is that for most apprentices the search issue does not arise since most of them are retained by their training firm after graduation (Winkelmann 1996).

¹ See for further details, Müller/Steinmann/Schneider (1997).

Since our study does also include East Germany and since only young employees received their education and vocational training in the Western part of the country, some information on the educational system of the German Democratic Republic (GDR) is needed. The structure of the general educational system resembled that of West Germany. Regarding vocational education no major differences existed (Mayer/Diewald/Solga 1999): In particular, the GDR continued the German tradition of the apprenticeship system which was, however, unlike in West Germany, organized by the state and took place predominantly in big companies (Sackmann 2000). Further, the educational decisions were to some extent conditioned on party membership and politically valued activities. For the time after the unification on which we focus in our empirical analysis when including East Germany, we expect the educational and vocational credentials to be of similar value as the West German ones. This should be so, on the hand, given the similarities in the educational and vocational training system and, on the other hand, since the equivalence of the educational and vocational training degrees was explicitly written down in the Unification Treaty (Mayer/Diewald/Solga 1999).

United Kingdom²

The system of education and vocational training in the United Kingdom is heterogeneous (Halls 1995, Lindley 1996, Brauns/Steinmann 1999). There are regional differences between England, Wales and Scotland as well as Northern Ireland, although compared to other educational systems in Europe these differences are relatively small: Wales offers the same qualifications as England and its institutional structure is similar, but it has a different national curriculum. In Scotland education had begun to develop as a national system before the Union with England in 1707 and it has remained more distinct. The Scottish educational and vocational training system provides different qualifications and its curriculum tends to be broader with an emphasis on general education (Raffe et al. 1998). The educational system in Northern Ireland is more comparable to the English and Welsh system than to the Scottish. The religious and political division as well as the larger selectivity in the secondary school sector are the major differences in Northern Ireland.

Despite the regional differences, the educational and vocational systems in the United Kingdom can be summarized as follows: Compulsory education begins at the age of five and comprises primary and secondary education which lasts at minimum 11 years. Most education takes place in the comprehensive state system³ and pupils follow a common national curriculum up to the age of 16. At the end of the compulsory schooling years, pupils receive the General Certificate of Secondary Education – GCSE – or the Scottish Certificate of Education – Standard Grade – (Halls 1995).

Post-compulsory education is commonly represented as a tripartite system with an academic, broad vocational, or an occupational pathway (Halls 1995, Raffe et al. 1998)⁴. The majority of pupils remain at school for two post-compulsory years and embark on a one year course to achieve the Scottish

² The United Kingdom means here the United Kingdom of Great Britain and Northern Ireland and comprises England, Scotland, Wales, together with Northern Ireland.

³ However, parents can decide to send their children to fee-paying private schools.

⁴ These pathways are, however, less clearly outlined in Scotland (Raffe et al. 1998)

Certificate of Education (Higher Grade, in general 'Higher') or A levels in England and Wales. The SCE at the Higher Level and A levels are standard qualifications for entering a university. An alternative for those pupils who choose neither to remain in school nor to enter employment directly is to continue their education on the Further Education (FE) level or with the more work-based pathway of the Youth Training. The full-time vocational courses at FE colleges or schools (called the 'broad vocational pathway') provide both A level and vocational training courses in England. In Scotland, FE colleges offer a range of vocational courses for the General Scottish Vocational Qualification (GSVQ). The third post-compulsory pathway is the work-based route to occupational qualifications generally offered through an apprenticeship or with training on the job. Both are supported by government funding. Another alternative for young people is to enter a training place supported by government funding, but without the status of being employed. This option is commonly referred to as Youth Training (YT) in England/Wales and Skillseekers in Scotland. It was introduced on a pilot basis in 1991 and expanded nation-wide in 1995. Youth Training is aimed to provide 16-18 year olds with integrated programs of work experience and vocational training, and especially cater for the rising number of unemployed young people.

The system of Higher Education (HE) experienced major reforms⁵ at the beginning of the 1990s when a unified university system was introduced. Previously, university education was sharply divided from education in polytechnics and other colleges. Now the same certificates may be awarded by different types of institutions and through different schemes or duration of education (Raffe et al. 1997). It is possible to move between the academic and vocational pathway and to combine different types of qualifications. Three main types of institutions provide Higher Education: universities - including the former polytechnics and other 'public sector' institutions which acquired university status; a few colleges - including several monotechnics which have not gained university status; and Further Education (FE) colleges (Mackinnon et al. 1995). Universities and some institutions of higher education offer degrees at the undergraduate level (first degree), postgraduate and research degree. The undergraduate level, with certificates such as BA, BSc and BEd, requires four years of course work in Scotland, but three years in England/Wales. Postgraduate courses offer a master's degree (MA, MBA, MSc) and usually take one year. Research degrees involve independent research and the submission of a thesis and take up three years or more. To achieve other sub-degrees, such as HNC (Higher National Certificate) or HND (Higher National Diploma), takes one or two years in general. FE colleges provide mainly HNC and HND courses and also award undergraduate degrees, mainly in Scotland.

In sum, the educational and vocational system in the UK can be characterized as weakly stratified and more flexible than the Germany system: Students are selected rather late in their educational career into different tracks. In addition, it is easily possible in the UK to move between academic and vocational pathways. The degree of standardization is lower than in Germany, in particular, with

⁵ The reform acts in England and Wales and those in Scotland resemble each other (Brauns/Steinmann 1999).

respect to vocational qualifications which are very diverse and understandardized (Müller/Shavit 1998: 12).

2.2 Gender and the welfare state

According to the well-known typology by Esping-Andersen (1990, 1999) Germany belongs to the 'conservative' cluster and the United Kingdom to the 'liberal cluster' of welfare regimes. Whereas the two systems are different with respect to the securities they offer to economically active individuals they are rather similar by giving little state support to family work: In particular, in both countries public childcare for children under the age of three is very limited. Further, in contrast to what might be expected from a liberal - market oriented - welfare regime, market solutions to the child care problem play only a minor role in the United Kingdom (similarly to Germany). Thus, the lack of affordable childcare makes it difficult for women in both countries (given the gender division of labour) to be full-time employed when having young children.

Apart from this similarity, however, German social and tax policy clearly supports more than the British one the male bread-winner model. While in the United Kingdom taxation is virtually neutral to different patterns of employment/non-employment of married couples, the German tax system gives strong incentives for the person with lower earnings (usually the woman) to reduce working hours or to quit employment (Esping-Andersen 1999, Kurz 1998). In addition, the parental leave legislation is quite generous in Germany, providing the option of an employment interruption (of mother or father) of up to three years⁶ with a job guarantee compared to 40 weeks in the United Kingdom (O'Connor 1996: 99). Furthermore, while in Germany practically all women are covered by the parental leave legislation, a large proportion of women are excluded in the United Kingdom (O'Connor 1996: 99).

To summarize, in Germany a package of institutional features works to foster the male bread-winner model. Thus, not surprisingly, women with young children are likely to be housewives or to work on a part-time basis (Blossfeld/Rohwer, 1997). In contrast, Britain mainly follows the liberal idea that every individual is responsible for his/her economic well-being. Accordingly, welfare state measures do little to support the traditional division of labour within the family. However, at the same time the severe shortage of affordable child-care acts as a strong incentive for British women work part-time when having children.

⁶ 1979 to 1986 the maternal leave legislation allowed for an employment interruption of 6 months after the birth of a child. In 1986 the parental leave legislation was introduced, making it possible also for fathers to take up the leave (or part of it). The maximum duration of the parental leave was 10 months in the beginning; after several extensions it has been 36 months since January 1992 (Kurz 1998).

2.3 Labour Market

2.3.1 Types of economy

Germany has been classified as a flexibly coordinated economy, whereas Britain – alongside with the US – has been characterized as a liberal economy (Soskice 1999; Mayer 1997). Long-term cooperative relationships based on trust are at the core of employment relationships in flexibly coordinated economies. In Germany various institutions work as a framework of incentives and constraints that helps to create and maintain relationships of that kind (Soskice 1999). This is, *first*, the vocational training system in which apprentices are intensively trained over two to three years. Job rotation is part of the training process (Maurice et al. 1986). This enables functional flexibility that goes hand in hand with employment relationships governed by mutual cooperation and trust (Marsden 1995). *Second*, workers' councils within the firms help to keep up cooperative relations between employer and employees by being involved in a wide range of firm decisions. *Third*, wages are set by collective bargaining agreements between specific industrial unions and employers' associations for a specific region. These regional tariff agreements – which are called “Flächentarifverträge” – are binding for all employers who are members of the employers' association⁷. The collective wage setting arrangement keeps away conflicts about wage setting from the company level. About 84% of all German employees are covered by collective agreements (Bispinck 1997). All three institutional features – the apprenticeship system, workers' councils and collective bargaining – help to strengthen a work environment of cooperative exchange and trust. In addition, all workers with permanent full-time and part-time jobs (of about 15 hours or more) are covered by dismissal protection which requires advanced notice of at least 6 weeks before firing an employee and giving specific reasons for it. Furthermore, the workers' council has to be heard in matters of laying off employees, a regulation that make quick firings unlikely. All in all, this provides for a rather closed employment system where employees are generally well protected and young labour market entrants are the group most likely of being in precarious types of employment (Blossfeld 2001).

In sharp contrast to flexibly coordinated economies stand liberal market economies which characterize Britain and the US (Soskice 1999; Mayer 1997). In these economies collective bargaining is weak, employment relationships are more short term; trust and cooperative exchange are not typical characteristics of them. The institutional setting supports these features: The education and training system in the UK emphasizes general education and short-term vocational training. Occupational qualifications are achieved predominantly by training on the job and are mainly firm specific (Raffe et al. 1998). Employee rights within companies and collective bargaining procedures have been weakened in the United Kingdom over the last decades. Starting in the 1980s several steps were taken to remove the statutory regulation of collective bargaining (Brown et al. 1997). Both, ‘Schedule 11’, which regulated the extension of industry-level collective agreements to non-unionized enterprises, and the Fair Wages Resolution, according to which government contractors had to

⁷ The degree of employer organization is – with more than 90% - exceptionally high in Germany (Fuchs/Schettkat 2000: 211).

observe minimum labour standards were repealed. The power of the wage councils were severely restricted in 1986 before they were completely repealed in 1993⁸. The decentralization of wage bargaining has gone hand in hand with a sizable de-unionization from 1979 onwards up to the present (Machin 2000). By the end of the 1990s, less than 30 per cent of the work-force were members of trade unions. Both developments have helped to give employers a greater leeway to pay determination and individualized employment contracts (Deakin/Read 2000).

In sum, the institutional features in the UK emphasize self-regulation by the market and encourage shorter-term and more competitive relations. In contrast to Germany, the employment system is more open, so that precarious work should be found not only at entry level positions.

2.3.2 Deregulation of the labour market

Germany

In face of economic problems and high unemployment since the early 1980s the highly regulated and cooperative institutional setting in Germany has come under attack. Deregulation of the labour market has been a heavily debated issue in German politics for years. The two major problems forwarded from the employers' side were, one the one hand, that wages cannot be adapted to the specific economic situation of the firm and on the other, that the size of the work force cannot easily be adjusted to economic fluctuations due to the dismissal protection. The two most important changes so far – the opening clauses (“Öffnungsklauseln”) of collective agreements and changes of dismissal protection – directly address these problems (Fuchs/Schettkat 2000).

Opening clauses mean that certain regional tariff agreements are opened for exceptions on the firm-level, that is for firm-specific agreements. The key discussion resulted from problems of East German firms to pay wages that had been agreed upon in collective negotiations. After conflicts between the union of the metal industry and employers in the East, opening clauses were first introduced in East Germany in 1993. They permit wage reductions in firms that are in serious economic difficulties. Since 1997, opening clauses have also been applied in the West German metal industry (Fuchs/Schettkat 2000: 225). They contribute to a diversification of wage levels, but do not concern the employment contracts themselves. The most important step to deregulate employment contracts came with the Employment Promotion Act (“Beschäftigungsförderungsgesetz”) introduced in 1985. It made it easier for employers to use fixed-term contracts. Fixed-term contracts end at a specific date thereby circumventing dismissal protection. Before these contracts were possible only under certain specific conditions, but with the Employment Promotion Act employers do not have to observe these anymore when they conclude fixed-term contracts of up to 18 months with new employees or with their former apprentices⁹. The original legislation was first limited to the year 1990, but was extended several times

⁸ The New Labour Government by Tony Blair brought into effect a minimum Wage Act in 1998 and a new statutory minimum wage in 1999. The decentralized and fragmented system of workplace bargaining in the UK, however, has still remained in contrast to the predominant European model of sectoral bargaining.

⁹ Fixed-term contracts had not been limited to specific conditions already before in firms with up to 5 employees and for contracts of up to 6 months (Bielenski et al. 1994: 2)

after that. Since January 1996 the law allows for fixed-term contracts of up to two years. As from January 2001 the Employment Promotion Act was substituted by the Part-time and Fixed-term Contract Act which still allows to place fixed-term contracts of up to two years with newly hired employees without having to give specific reasons. In contrast to the private sector, in the public sector fixed-term contracts can only be placed under specific requirements. Nevertheless, they have had a long tradition in the public sector, and are still much more common than in the private sector.

Finally, the "Employment Promotion Act", 1994, is worth mentioning, since it contributed to the rise of self-employment which constitutes a precarious form of work in many cases (Leicht 2000). The Employment Promotion Act is not a deregulative measure, but a means to make self-employment more attractive for individuals seeking work. It offers a "bridging allowance" (Übergangsgeld) amounting to the last unemployment benefits for (up to) 6 months for unemployed persons who become self-employed.

United Kingdom

The conservative governments from 1979 to 1997 made several steps to deregulate the British labour market in the interest of flexibility and the maintenance of competitiveness. At the same time, the British employment rate rose during the 1980s and 1990s – quite in contrast to the development in most other EC countries where the unemployment rate has been increasing since the mid-1970s. The deregulative measures in Britain included the reduction of subsidies, a decentralisation of collective bargaining, a reduction of the size of the public sector, an introduction of market mechanisms in the public sector and withdrawal from direct regulation of employment. Ensuring employment flexibility was a central element in the government strategies to tackle unemployment and inflation (DE 1995). To this end a broad variety of policies and practices were implemented (Lane 1989, Deakin/Read 2000). However, it must be stressed that even before the deregulation period the parties in the employment relationship were relatively free to determine the type and features of the employment contract. There was (and still is), for example, no regulation that requires a formal justification when concluding a fixed-term contract (Deakin/Read 2000). At the same time, the standard employment contract has never enjoyed much of a legal protection. Therefore, the incentives for employers to conclude non-standard forms of employment like fixed-term contracts have never been as high as for example in Germany (Deakin/Read 2000; Bielenski 1998).

The following developments are of importance in the context of our research:

First, over the last two decades, the conservative governments introduced a number of measures aimed at reducing the negative effect of protective legislation on labour flexibility (Deakin/Read 2000). Measures like the protection against unfair dismissal were considerably weakened. The minimum period of continuous employment necessary so that the employer has to prove fairness of dismissal was changed from six months to one year in 1979 and to two years in 1985 for full-time employees. This has provided employers with a considerably enlarged margin to fire their employees without financial penalties. Part-time employees working less than eight hours per week did not enjoy any basic employment protection and those working between eight and fifteen hours had to have five

years of continuous employment. Fixed-term employees were allowed to waive their legal rights of dismissal protection (Deakin/Read 2000: 122). In 1994, following a court decision, part-time work thresholds were repealed. Furthermore, the Employment Relations Act introduced by the Labour Government in 1999 broadened the scope of employment protection legislation again, set new restrictions on waiver clauses in fixed-term contracts and reduced the qualifying period for general unfair dismissal protection from two years to one year (Deakin/Read 2000).

Secondly, the strength of trade unions has declined sharply since the end of the 1970s. This decline in union recognition can be partly attributed to the policies of the conservative governments aimed at limiting the capacity of trade unions to organize industrial action in defense of conditions of employment¹⁰ (Brown et al. 1997). Furthermore, traditionally, unions have found it more difficult to recruit members among female, non-manual and part-time workers in small non-manufacturing organizations. The recent trends in the composition of employment have therefore diminished the power and profile of unions. Besides, the trade unions themselves have cooperated in some cases in the development of core and peripheral distinctions in order to protect the employment of core workers. In particular, the acquiescent attitude of trade unions towards the expansion of part-time employment in the UK has eased it for employers to hire a more flexible, cheap and contingent (part-time) labour force (Rubery 1989). Thus, interests on both sides have supported in the UK the incorporation of non-standard employment forms within the mainstream category of employees.

A third important change occurring during the 1980s is the growth in self-employment. In 1979, the number of self-employed persons was 6.6 per cent, and in 1990 11.6 per cent (Robinson 1994:39). The expansion in the UK took place mostly in the construction industry and in financial and other services (Campbell/Daly 1992). The Enterprise Allowance Scheme in 1983 has encouraged a movement from non-employment into self-employment and helped unemployed people to start their own business¹¹ (Lohmann et al. 1999; Meager 1993, Rubery 1989). Another influence has been the policy in the public sector of contracting out and the removal of the insurance coverage requirement in the building industry in 1980 (Anderton/Meyhew 1994). Furthermore, the fact that only a minimum of qualifications is necessary to start a business in the UK has also eased the rapid growth of self-employment.

¹⁰ Although the 1999 Employment Relations Act introduced a statutory procedure for recognizing trade unions for collective bargaining purposes, key features of a neo-liberal environment were preserved (Charlwood 2001).

¹¹ Additionally, a easier access to venture capital enables newly self-employed persons to obtain start-up finance (Abell et al. 1995).

3 Types of precarious employment in the United Kingdom and Germany

There is evidence that non-standard forms of employment have been increasing in the UK and (West) Germany since 1970s, such as home-working, self-employment, temporary work, flex-time or part-time work (EIRR 1990, Blanpain/Biagi 1999, Blossfeld/Hakim 1997). Most of these forms are precarious in some sense. We distinguish between three dimensions of precariousness (or insecurity): temporal, economic and welfare insecurity. We use the term “temporal insecurity” to describe positions that do not imply (a relative) security about future employment developments; with “economic insecurity” we refer to positions that involve comparably low pay and might in some cases not allow for economic independence (Kurz/Steinhage 2001). Finally, with “welfare insecurity” we refer to positions that are not or less well covered by some kind of market or state based welfare system.

Based on this categorization the following positions of precariousness can be distinguished in Germany and the United Kingdom (see table 1).

Table 1: Positions of economic, temporal and transfer insecurity

	Economic insecurity	Temporal uncertainty	Welfare insecurity
Precarious employment:			
Part-time position (less than 15 hours)	FRG, UK	(FRG, UK)	FRG, UK
Part-time position (15 hours or more)	FRG, UK		UK
Fixed-term contract		FRG, UK	
Self-employed (without employees)	FRG, UK	FRG, UK	FRG, UK

As can be seen in both countries, part-time employment, fixed-term contracts and self-employment do involve some kind of insecurity. Still, the quantitative importance of certain positions as well as the extent of insecurity varies between the national institutional contexts.

Part-time employment

Part-time positions are often cited as one major form of precarious work. In both countries two “classes” of part-time employees can be distinguished: In Germany, part-time positions of 15 hours and more are precarious only in the sense that they do not allow for economic independence, but apart from that they enjoy the same fringe benefits as do full-time employees. They are included in the social security system and have the same dismissal protection. In contrast, employees with less than

15 hours and up to a certain minimum wage of currently 630 German Mark (since April 1999)¹², so-called "geringfügig Beschäftigte", were until recently not covered by health, old age and unemployment insurance and are not covered by the same dismissal protection as the other employees. Thus, they face all three forms of job insecurity. The majority of all part-time employees in Germany are women and most of them work in secure part-time positions with at least 15 hours of work per week.

Similarly, in Britain part-time employment has gained in importance during the last decades. In 2000, the proportion of all employees working part-time was about 25 per cent in the UK (Labour market Trends, July 2001). Most of these are women, mainly in hotels, catering and the service sector. The most important difference to the German context is, that in general part-timers are more likely than full-timers to be excluded from bonus or grading schemes as well as from occupational sick pay and pension schemes. For example, only 20 per cent of women working part-time belong to an employer's pension scheme, compared to 27 percent of men and 62 per cent of women working full-time (Burchell et al. 1997: 219). Apart from that, until 1995 employees working fewer than eight hours a week were not covered by the most basic employment protection, for example, with respect to unfair dismissal, redundancy pay and minimum notice periods. And those working between eight and fifteen hours had to have five years of continuous employment with their employer to be covered in employment protection (EIRR 1990; Walby 1997). Thus, for simplicity we distinguish between two groups of part-timers in the United Kingdom: the less protected part-timers with 15 hours and less, and the better protected part-timers with 16 hours and more. Still, even the latter do not enjoy the same fringe benefits as do the full-timers. They are, thus, in a more precarious position (relative to full-timers) when compared to part-time workers with 15 hours or more in Germany.

Fixed-term contracts

The prevalence of fixed-term contracts has increased somewhat in recent years in Germany. According to microcensus data 7,5% of all employees had fixed-term contracts in 1991. The figure rose to 9% in 1999. In the age group of employees of 30 years or younger temporary contracts are most prevalent with about 21% having a fixed-term contract (1991). Fixed-term contracts are also more common in East Germany, due to employment-creation measures ("Arbeitsbeschaffungsmaßnahmen") that provide fixed-term positions for formerly unemployed persons (Bielenski et al. 1994).

Also in the UK the number of workers with fixed-term contracts has increased slightly over recent years. It accounts now for around 6 per cent of all employees. As already mentioned, there are no statutory restrictions, such as on the length of the contract or the possibility of its renewal. Moreover, the employer is not required to justify the use of a fixed-term contract. In addition, the employee can be excluded from the right to complain against unfair dismissal and the right to a redundancy payment

¹² The wage limit was adjusted several times and differed between East and West Germany until 1998 (see e.g. Rudolph 1998). The limit of the weekly working hours has, however, remained unchanged throughout the last decades.

if agreement is expressed in writing¹³. At the same time, as already pointed out in section 2.3.2, the qualifying period of two years (between 1985 and 1999) for dismissal protection deprives workers with a permanent contract of most of the employment protection rights for this period (Hepple 1993). This means that fixed-term contracts should not be particularly attractive to employers because they can freely terminate any employment contract during the qualifying period. This constitutes an important difference to Germany where dismissal protection is strong what in turn should make fixed-term contracts an attractive alternative when hiring new employees in times of economic insecurity.

Self-employed without employees

Self-employed persons without employees often find themselves in a precarious position since their incomes might be unstable and low and their long-term perspectives are insecure. However, at least for Germany, the group is quite heterogeneous including also persons with high educational levels and rather good employment prospects (Wießner 1998). In Germany, the number of one-person-companies has grown considerably (in contrast to those with employees) since the introduction of the bridging allowances in 1994. While the group constituted about 40% of all self-employed persons in 1975 as well as in 1994, the proportion rose to almost 60% up to 1999 (Leicht/Philipp 2001).

In the UK during the last two decades, self-employment doubled and female self-employment increased during that same period (Moralee 1998; see also section 2.3.2). Also, the number of self-employed persons working part-time has increased steadily and female self-employed are more likely to work part-time. Meanwhile, the fact that about 80 per cent (1981-1984) and 74 per cent (in 1997) of the growth in self-employment has taken place in own-account employment (Moralee 1998: 127) indicates that self-employment is increasingly associated with precarious forms of employment than with the revival of small-firm with a dynamic entrepreneurship (Rubery 1989).

4 Hypotheses

With the labour market being more and more deregulated, we expect a general increase of precarious employment in both countries since the early 1980s. However, since deregulative measures have been more far reaching in the UK, precarious employment should be more common there than in Germany. Furthermore, given that the employment system is relatively closed in Germany, but not in the UK, precarious employment – in particular, fixed-term work – should be concentrated among young people (labour market entrants) in Germany and more spread over the whole age range in the UK.

The risk of precarious work should also vary considerably with education. Educational qualifications are one of the most important factors to determine occupational outcomes in modern societies by offering information on the skills of the potential employee to the employer. In general, in both

¹³ See Schömann et al. (1998) for details.

countries individuals with a low level of education are likely to be in less prestigious and less well paid occupational positions (e.g., Müller/Shavit 1998). We expect this relationship to hold also with respect to the risk of being in a precarious employment position. As has been pointed out by Breen (1997) firms try to shift insecure employment conditions to their employees, but less so to those with qualified occupational tasks, that is, those with (typically) high educational qualifications. This is due on the one hand, to the relative scarcity of these qualifications and on the other hand, (which is Breen's main point) to the fact the employer needs to secure motivation and commitment of these employees since their work tasks are not easily monitored. He or she can ensure motivation and commitment by offering advantageous employment conditions, such as a permanent contract, high pay and fringe benefits. Thus, we expect fixed-term positions to be less prevalent among highly qualified employees and more prevalent among low qualified employees.

The same should be true for self-employment without employees. Since low qualified persons have relatively worse opportunities to enter a wage employment relationship, entry into self-employment is an alternative for them more so than for qualified persons (Bögenhold/Staber 1990). Hence, self-employed persons without employees should be overrepresented among the less educated.

These two hypotheses, however, need to be further qualified: Following the compensation argument of neo-classical economics, fixed-term contracts should also be common among employees with high qualifications (Schömann et al 1998). Those employees might choose a fixed-term contract since they then can expect earnings generally above the equilibrium wage of the corresponding permanent position, to compensate for the risk of losing one's job when the contract expires¹⁴. A similar argument can be put forward with respect to self-employment (Breen 1997): Persons with scarce qualifications and strong bargaining power who are easily able to find a permanent job might choose the insecurity of self-employment (often without employees) to achieve higher incomes. Therefore, fixed-term contracts as well as self-employment without employees should not only be more likely among the low qualified but also among the highly qualified, mainly persons with a university or a technical college degree. Obviously, such an argument cannot be put forward with respect to part-time work. In particular, part-time employment with very low working hours – which in both countries does not enjoy basic welfare securities – is likely to be primarily a domain of persons with low qualifications. At the same time – as is well-known – there is a clear gender bias in part-time work: Many women, but very few men, choose part-time work voluntarily for an easier combination with family responsibilities. The likelihood of opting for part-time work in this situation should, however, still correlate with educational qualification. Following Becker's (1981) argument, women with high qualifications have higher opportunity costs if they opt for part-time work or not being employed at all than women with low qualifications. Thus, former should be less likely to work part-time than the latter.

¹⁴ In Germany, the massive use of fixed-term contracts in the public sector should further contribute to a high proportion of fixed-term contracts among highly qualified persons.

Turning to the effects stemming from the national variation in the educational systems, we expect differences in the strength of the relationship between education and precarious employment between the UK and Germany. As outlined in section 2.1, the British educational system can be described as weakly standardized and weakly stratified, and the German system as highly standardized and highly stratified. Therefore, the effect of education on employment outcomes should be weaker in the UK than in Germany which has indeed been found in previous research on occupational positions (Müller/Shavit 1998). We hypothesize that the differential effect should also hold for the risk of precarious employment: The association between minimum education and the probability of holding a precarious position in Germany should in general be stronger than in the UK.

The distinction between general and vocational education helps us to further investigate the nation-specific relationships between educational qualifications and labour market outcomes. One of the greatest differences is the lack of formalized vocational training within firms in the UK, compared to the well established apprenticeship system in Germany (Deissinger 1994). An apprenticeship is seen as a prerequisite for a (low or middle-level) qualified occupational position in Germany, but more as a means to postpone unemployment in the UK (Hurrelmann/Roberts 1991: 233). Formalized vocational qualifications (acquired in school) are more general in the UK and on-the-job training is the main route to achieve occupational skills. Therefore, we expect a clearly weaker effect of vocational qualifications on employment outcomes in the UK than in Germany. More precisely, completed vocational qualifications (from apprenticeships and training within vocational schools) should shield from precarious employment more in Germany than in the UK.

The different vocational training systems also affect the route to self-employment. In Germany, entry into self-employment requires more work experience and formalized vocational training in the corresponding branch, while there are low barriers for entry into self-employment in the UK. In particular, in the crafts sector in Germany becoming self-employed requires having graduated from a master's education (an additional educational qualification after the apprenticeship and after some years of work experience). Thus, we expect that self-employment is more an option for low qualified persons in the UK than in Germany.

So far, we have framed our hypotheses mostly in gender neutral terms. However, as already mentioned, women are more often found in at least one form of precarious work, namely part-time work (e.g. Walby 1997, Blossfeld/Hakim 1997). This can be understood in terms of gender roles and the need for women to combine paid work with household and family work. Given the rather clear cut gender division of labour in both countries we therefore expect women in the United Kingdom as well as in Germany to be at risk of part-time employment more than men even if differences in their educational qualifications have been taken into account. Further, regarding self-employment (without employees) we hypothesize the opposite gender effect as before since working autonomously is in

closer fit with male gender roles (Boden 1999)¹⁵. Finally, with respect to fixed-term positions we suppose that women are more likely to receive such a contract when they have low qualifications given their (on average) weaker bargaining power compared to men.

Assuming that the male bread-winner model is still more prevalent in Germany than in the UK (see section 2.2) we further expect that the gender effects are more pronounced in Germany. Furthermore, taken into account different phases in the life course we suppose that the gender differences hypothesized with respect to part-time work and self-employment are strongest among persons with children, less strong among couples without children and weakest among single men and women. Finally, given the gradual weakening of traditional gender roles and the fact that female employment careers have become more and more continuous we expect that the gender differences have weakened over time: Women at the beginning of the 1980s should have been more likely to be in precarious work when compared to men than in the 1990s.

5 Data and Methods

In this paper, we use Microcensus data for Germany and Labour Force Survey data for the UK from the early 1980s (1982 for Germany and 1984 for the UK) and from 1996 (for both countries). These surveys provide detailed information on the social and economic situation of the population in each country. Hence, they allow us to compare the current employment situation with respect to the type of employment contract, the working hours and the educational and vocational achievements of individuals, in both countries. Another advantage of the surveys are the large sample sizes which permit analyses for employment categories with low proportions of persons.

We selected the economically active resident population, excluding students¹⁶, apprentices, unpaid family workers and persons in the military service. We further confined the samples to individuals within the age interval from 16 to 64 years. The sample size varies between approximately 210 000 for Germany and 66 000 for the UK. The German Microcensus 1982 is restricted to the West German population (the old FRG), while the Microcensus 1996 refers to the East and West German population.

In our analysis we focus on precarious employment defined as follows: self-employment without employees, employees having a fixed-term contract and part-time employees working usually less

¹⁵ In addition, the typically longer working hours when being self-employed might be an obstacle for women with family responsibilities. At the same time, however, self-employment might offer specific advantages to women, since it allows for the flexibility needed when juggling children and employment. See Lohmann (2001) for a discussion and an empirical evaluation of the flexibility argument.

¹⁶ The rising trend in student jobs in the UK is one of distinct differences between the two countries. The increase of student work rates in the UK can be found not only among teenagers in secondary schools but also among students in higher education (Hakim 1998). However, there is no evidence that poverty or low household income is a significant factor in the rise of student jobs. On the contrary, student work rates are higher in the most affluent households (see e.g. Huston/Cheung 1992).

than 15 hours per week¹⁷. In order to compare these types of precarious employment to regular or standard employment types, we distinguish, on one hand, self-employed persons with and without employees, workers with a fixed-term contract and those with a permanent contract. We refer to these categories as 'employment types'. On the other hand, we compare part-time workers whose usual weekly working hours are less than 15 hours to part-time workers with 15 to 34 hours and to full-time workers. This group of dependent variables is named 'working hours'.

Table 2: The CASMIN scale of educational qualifications

Qualification	Description
1ab	Level of compulsory education or below
1c	Basic vocational training above and beyond compulsory schooling
2b	Academic or general tracks at the secondary intermediate level
2a	Advanced vocational training or secondary programmes in which general intermediate schooling is combined by vocational training
2c	Full maturity certificates (e.g. the Abitur, A-levels)
2c voc	Full maturity certificates including vocationally-specific schooling or training (e.g. Abitur plus vocational training certificate, BTEC)
3a	Lower-level tertiary degrees, generally of shorter duration and with a vocational orientation (e.g. technical college diplomas, social worker or non-university teaching certificates)
3b	The completion of a traditional, academically-oriented university education

We use educational level and gender as central explanatory variables for precarious employment. Educational level is measured by the CASMIN scale which has been developed for international comparative research (Müller/Shavit 1998, Brauns/Steinmann 1997, König et al. 1988). We apply the eight-category version of the classification which distinguishes hierarchical levels of educational attainment and differentiates between general and vocational qualifications in each educational level (see table 2). Gender was operationalized with a dummy variable with the value 0 for men and 1 for women.

We excluded working students from our study of precarious employment since it can be assumed that earnings from paid work are not the only source of income for them and, further, since we are primarily interested in the effect of *completed* education on the risk of being precariously employed.

¹⁷ In the Microcensus 1982 we had to define marginal part-time workers as employees usually working less than 11 hours since the data provided working hours only in classified form. The threshold for being exempt from social security was, however, a weekly working time of at least 15 hours and minimum earning of 390 DM in 1982.

We also take into account social class which is operationalized with the EGP class schema (Erikson/Goldthorpe 1992). We use the seven-class version, comprising class I (higher service class), class II (lower service class), class IIIa (routine non-manual employees), class IIIb (routine non-manual workers in services), class IVabc (small proprietors and self-employed farmers), class V/VI (skilled manual workers), class VIIab (un- and semi-skilled workers including agricultural labourers). Further, we control for age groups (16-24, 25-34, 35-44, 54-64), marital status (single, married, divorced/widowed), nationality (native, foreigner) and having children under age 6 (Germany) and under age 5 (United Kingdom). For the German data in 1996, we control additionally for region (West, East). Descriptive statistics of the variables used in this paper are shown in the appendix A1.

To analyze precarious employment, we apply multinomial logistic regression models (ML models) given our categorical dependent variables. ML models allow to estimate the effect of both interval and categorical independent variables on a categorical dependent variable with more than two categories (Long 1997).

6 Empirical analyses

6.1 Bivariate results

Prevalence of precarious work in Germany and the United Kingdom

In line with the observation that the deregulation of the labour market has been more far reaching in the United Kingdom precarious work is more common there than in Germany in 1996 (see table 3 and 4): 7% of British employees are in marginal forms of part-time work (less than 15 working hours a week) compared to 4% of the German employees. 20% percent work 15 to 34 hours a week in the United Kingdom compared to only 14% in Germany. Furthermore, about 10% of the British, but only 5% of the German labour force works in one-person-companies. No difference emerges, however, with respect to fixed-term contracts: In both countries 6% of the labour force has such a contract in 1996.

In both countries most forms of precarious employment have increased slightly since the 1980s. The proportion of marginal part-time work rose from about 2% to 5% in West Germany¹⁸ between 1982 and 1996¹⁹, but remained constant in the UK with 7% in 1984 and 1996 (see appendix A2, A4). At the same time, fixed-term positions have become somewhat more common in the UK: the percentage was 6% in 1996 compared to 4% in 1984 (see table 4 and appendix A2). For Germany, no data are

¹⁸ For this comparison we restrict the 1996 data to the Western part of Germany, since the data for 1982 refer to the „old“ FRG, that is, West Germany only.

¹⁹ A cautionary note is in order since we compare employees with less than 10 hours a week (1982) to employees with less than 15 hours (1996). As already mentioned, due to the categorization of working hours in 1982, we could not draw the line at 15 hours in both surveys. Thus, the growth of marginal part-time work is somewhat overstated.

available on the type of contract in 1982. The percentage of persons who were self-employed without employees increased slightly from 4% to 5% in West Germany (see appendix A3 and A5) and from 7% to 10% in the United Kingdom (see table 3 and appendix 5).

Age

The various forms of precarious work show different patterns of age dependencies: Marginal part-time work (i.e., part-time work with less than 15 hours per week) is most common among older workers and least common among young workers in both countries (table 3). The better protected part-time work of 15 to 34 hours is typical for the middle-aged and older workers. In contrast, fixed-term contracts are a domain of young employees aged 15 to 24 years (table 4): In the German sample 14% and in the British sample 10% of them have a temporary contract, compared to 4 to 7% and 4 to 6% percent in the other age groups. Thus, contrary to our expectations fixed-term positions are not only in Germany (closed labour market), but also in the United Kingdom (open labour market) more concentrated among young employees, though the concentration in young age groups is apparently somewhat higher in Germany. Finally, self-employment without employees is most common among middle-aged and older employees in both countries.

Nationality and region

The results provide no clear cut evidence that employees with a foreign citizenship are in general more likely to do precarious work: In Germany in 1996, they had only a slightly higher proportion of marginal part-time work (5% vs. 4% for the German employees) and lower proportion of part-time work with 15-34 hours (11% vs. 14% for the German employees) (see table 3). Further, they were somewhat more likely to hold a fixed-term position (8% vs. 6% of the Germans). Finally, one-person companies were equally common among Germans and foreigners (see table 4). For the United Kingdom, foreigners were somewhat less often found in marginal part-time work (5% vs. 7%) and similarly often in part-time employment with more working hours. They were more likely to work in precarious self-employment (12% vs. 9%) or in a fixed-term positions (9% vs. 5%). Hence, the most important similarity in both countries is that foreigners were less likely to receive a permanent contract than employees with the German or British citizenship in 1996.

The macroeconomic situation in the Eastern part of Germany was worse than in the Western part throughout the 1990s. This is clearly mirrored in the higher likelihood of working in non-permanent employment relationships: In 1996, 11% of the East German employees compared to only 5% of their West German colleagues had a fixed-term contract (see appendix A5). The higher percentage is partially due to government funded fixed-term contracts for persons who were long-term unemployed (Bielenski et al. 1994). With respect to the other types of precarious positions, we observe that East Germans were less likely to be employed in either form of part-time work (see appendix A4). This is certainly due to the fact, that in contrast to West Germany it was very uncommon to work part-time for women in the former GDR. After the unification this basic pattern has not changed tremendously. Further, self-employment – which was almost non-existent in the former GDR – was also less common in East Germany in 1996 (see appendix A5).

Gender

The results in table 3 and 4 confirm that female employees are in general more likely to find themselves in precarious work than male employees. Not surprisingly, part-time work is primarily a women's domain in both countries. In 1996, 4% of the men in Germany and 7% of them in the United Kingdom worked part-time, compared to 37% of the women in Germany and 49% of the women in the United Kingdom. Apparently, part-time work is in general more prevalent among British employees and, in particular, among women. Moreover, British women are more often found in the more precarious forms of part-time work than women in Germany; the respective proportions were 13% vs. 9% in 1996. The gender bias is stronger in this form of precarious work in the United Kingdom than in Germany²⁰. When we compare how the gender bias of part-time work has changed over time, we find stability in Germany and a reduction in the United Kingdom: In West Germany, women's proportion of part-time work (both categories) was 11 times higher than men's in 1982, and 10 times higher in 1996. In the United Kingdom the respective figure changed from 19 in 1984 to 11 in 1996 (see table 3, appendix A2 and A4).

Turning to self-employment we observe the expected gender pattern: In 1996, men in Germany were 1.5 and 1.8 times more likely to be self-employed (without and with employees) than women. The factors were – with 2.5 and 2.7 – even more biased towards men in the United Kingdom. Since the 1980s the gender bias seems to have decreased only for self-employment *with* employees in Germany, but remained virtually unchanged in all other cases²¹. Finally, women seem to be about as likely as men to work on a fixed-term contract in Germany; the percentages were 6% for women and 5% for men in 1996. In contrast, the risk was with 7% vs. 4% somewhat higher for women in the UK. The gender bias in fixed-term contracts seems to have decreased somewhat in the United Kingdom since 1984²².

To summarize, in contrast to our expectations we observe that the gender bias in precarious work is generally stronger in the United Kingdom than in Germany. This is true for fixed-term positions, for marginal part-time positions and for precarious self-employment. For the last group this means however – given the bias towards men in self-employment – that British women have a relatively²³ *lower* likelihood of taking up this form of work when compared to German women. Further, – and again in contrast to our expectations – the gender bias did not become smaller in most cases between the early 1980s and the mid 1990s.

²⁰ In the German sample, the proportion of women in marginal part-time work is about 9 times higher than that of men, whereas in the British sample the proportion of women is about 12 times higher than that of men.

²¹ For the UK the respective figures were 2.1 and 2.7 in 1984; for Germany they were 1.7 and 3.0 in 1982.

²² For Germany, a comparison is not possible since we do not have information on fixed-term contracts for 1982.

²³ “Relatively” means: compared to men. In absolute terms, British women were somewhat more likely to be self-employed without employees than German women (5 vs. 4%), since this form of work is in general more common in the UK.

Educational level

Our basic prediction was that all forms of precarious employment are more common at the bottom of the educational hierarchy, but that fixed-term and one-person-companies are in addition overrepresented in the top levels of education. With regard to part-time work we observe for both countries that persons with compulsory education only (without occupational qualification) have generally²⁴ the highest probability (see table 3). However, in Germany, proportions of part-time work are also higher for the lower and upper secondary level *without* occupational qualification. This clearly hints at the importance of occupational qualifications in the German institutional context. Such a relationship can barely be observed for British employees: For marginal part-time work the proportions in the British sample are 11% for the least qualified (category 1ab), 8% for those with lower secondary schooling without occupational qualification and between 3 and 6% for all other educational levels²⁵.

For self-employment without employees the results hardly fit our hypotheses (see table 4): In Germany, one-person companies are spread quite equally – with 4 to 5 percent – among those with compulsory schooling or lower secondary schooling with and without occupational qualification and those with higher secondary schooling with occupational qualification. The proportion is somewhat higher for employees with a technical college or university degree (6 and 7%) and exceptionally high (11%) for those with higher secondary education without any occupational qualification. The last result might indirectly reflect the German peculiarity that a vocational training certificate or a college or university degree is almost a prerequisite for finding a decent employment position. Self-employment might be a solution for those with a high general schooling level, but no occupational qualification. All in all, one-person-companies seem to be more an option for higher qualified persons in Germany. For the United Kingdom, the situation is apparently different: Self-employment without employees is mainly found among the low qualified (but not the least qualified), that is, those with compulsory schooling with occupational training and those with lower secondary schooling without occupational training. 13 and 15% of them have a one-person-company compared to 6 to 10% in the other educational levels.

Finally, for fixed-term contracts the empirical findings are again only partially consistent with our hypotheses (see table 4). In particular, we observe neither for the United Kingdom nor for Germany that those with the lowest educational level are most at risk. Instead the likelihood of a fixed-term contract seems to more or less increase with the educational level. In addition, however, in Germany, there is a tendency that within each level of general schooling those *without* a vocational training certificate are more likely to have a fixed-term position. This fits again the idea that those with an apprenticeship (and other qualified occupational qualifications) are better sheltered against precarious work than other groups. In the German sample, the proportion of fixed-term contracts is highest

²⁴ There is only one exception: In Germany, those with lower secondary education without occupational qualification have about the same likelihood of regular part-time work than those with compulsory schooling only (19.5% compared to 19.1%).

among those with upper secondary schooling and no vocational training (14%) and is also very high among those with a university degree (11%), followed by those with lower secondary schooling without vocational training (8%) and then the other educational groupings with 4 to 6%. For the United Kingdom, the group with the highest likelihood are employees with a university degree: 10% work on a fixed-term position compared to 4 to 7% among the other educational levels.

Occupational class

A look at the results for occupational class further substantiates our findings for education and shows interesting variations among the two countries (see table 3): Marginal part-time work is more prevalent among routine non-manual workers in services (IIIb) and un- and semi-skilled manual workers (VIIab) than in more qualified occupational positions. In the German sample, 12% of class IIIb and 8% of class VIIab worked part-time with less than 15 hours in 1996 (compared to 1 to 4% among the other dependent workers). The concentration in class IIIb is clearly more pronounced in the UK: 19% of this group and 10% of class VIIab (compared to 2 to 8% among the other employees) were marginally part-time employed in 1996. Further, in both countries better protected part-time work is most likely found in routine non-manual work (classes IIIa and IIIb). Given the strong female bias in part-time work this partially reflects the high concentration of women in lower level non-manual occupations. Moreover, in the UK part-time work of more than 15 hours is also rather common among lower service class workers (class II) and un- and semi-skilled manual workers (class VIIab).

For fixed-term contracts a weakly pronounced u-shaped pattern can be observed in the German data: The proportion of fixed term contracts is highest among un- and semi-skilled manual workers (class VIIab, 9%), followed by the higher service class (class I, 7%) and the non-manual workers in services (class IIIb, 6%). In the other groups the proportions are 4 and 5%. In contrast, in the UK fixed-term positions seem to be – with 6 and 5% – equally likely for all occupational groups, except for the qualified manual workers who show a somewhat lower proportion (3%).

6.2 Results of multiple regression models

We pursue the following aims with the multiple logistic regression models: We will study whether the observed relationships between education and the different types of precarious employment remain stable when we control for the composition of the sample with respect to gender, nationality and other demographic characteristics. Similarly, we will investigate how the apparent gender bias of precarious work changes when we take into account the composition of the female labour force with respect to educational level, occupational class position and other characteristics. Further, we will examine to what extent the relationship between education and precarious work holds equally for men and women. In addition, we will sketch the main results for the control variables. We start with the results

²⁵ For part-time work with higher weekly working hours employees with a technical college degree have also – quite unexpectedly a rather high proportion of 21% compared to 27% for compulsory schooling only and 24% for lower secondary schooling without occupational qualification.

on marginal part-time work, followed by those on self-employment without employees and those on fixed-term contracts.

Marginal part-time work

Our first row of models refers to weekly working hours (see table 5 and 6). We do not present joint models for men and women since it is clear from previous research and common sense that the strong gender bias in part-time work remains stable even when we control for the composition of the sample. Thus, we estimated multinomial logit models for men and women separately. In model 1 age, marital status, nationality, region (for Germany) and having children under age 6 (Germany) or age 5 (UK) are included; in model 2 educational level has been added; and in model 3 occupational class instead. Since the focus is on precarious work we concentrate on the odds of doing marginal part-time work (with less than 15 hours a week) compared to full-time work in our interpretation.

As can be seen from the coefficients for the constants in the models, women are much more likely to do marginal part-time work than men. Our first conclusion with respect to education is that it exerts similar effects on the likelihood of being in marginal part-time work as we already observed in the simple cross-tabulations, although with a few exceptions and differences between the sexes (see model 2 in tables 5 and 6). For men in Germany, having an occupational qualification or a technical college or university degree shields best from being in marginal part-time work, whereas having no occupational qualification – rather independently of the kind of general education – increases the likelihood²⁶. For women in Germany, the situation is slightly different in so far as compulsory education with an apprenticeship (CASMIN 1c) seems to be not as good a protection against marginal part-time work as for men. Turning to British women, the previous result is confirmed that, in contrast to Germany, having an occupational qualification makes less of a difference than the level of general education, except for the bottom of the hierarchy: Here, women without an occupational qualification are clearly worse off than those with some kind of qualification. For British men the findings are quite surprising, indicating that persons with compulsory or lower secondary education plus an occupational qualification are very unlikely to work part-time with low working hours, but that all other groups are more or less equally likely to do so - however, with one exception: Those with a university degree are most likely to do marginal part-time work. This might suggest that some men with very high education continue to work with reduced working hours in older age. Still, the results should be viewed with caution given the very low likelihood of British men to work in marginal part-time and the resulting small number of cases, namely 366 men (out of a sample of n=62377). We suspect that the results might be distorted due to the small sample size.

The results for occupational class (models 3 in table 5 and 6) give some additional hints on where marginal part-time work is most common: For women in Germany as well as in the United Kingdom, the risk of precarious work is greatest in routine non-manual service work (IIIb), followed by the un-

²⁶ The highest likelihood of marginal part-time work is found for men with upper secondary schooling and *no* occupational training. These are probably mostly young men who finished school and are waiting for entering a technical college or university or for doing military service.

and semi-skilled manual positions (VIIab), that is, in the lowest occupational positions. This applies also to men in Germany. In contrast, for men in the United Kingdom we observe that the odds are highest in routine non-manual service work, followed, however, by un- and semi-skilled manual work *and* all other types of non-manual work (including in the service classes).

A few further conclusions on the typical differences between male and female marginal part-time work can be drawn for both Germany and the United Kingdom (see model 1 in tables 5 and 6): Whereas men are mainly found in marginal part-time work when they are relatively old (55 years and older), women start at younger ages (with 35 years and older). We suppose that older men typically use marginal part-time work to earn some extra money in addition to their pensions. In contrast, for women marginal part-time work is closely linked to being married and having children, that is, being secured by a male breadwinner in most cases. In contrast, for men being single or divorced/widowed – that is, *not* being in a breadwinner role for several persons – increases the odds of being in marginal part-time work. Further, the results suggest that in Germany *male* employees with a foreign citizenship have a higher likelihood of working very low numbers of hours, whereas female employees in Germany as well as in the United Kingdom have a lower likelihood. However, the latter result should be read with caution since it is well-known that migrant women do marginal part-time work – unofficially – in great number in private households. Finally, it is worth mentioning that East German men seem to be somewhat more likely (if we control for education) than West German men to be in marginal part-time employment. In contrast, East German women seem to be very unlikely to be in this form of precarious work.

Self-employment without employees

We estimated common models for men and women with a dependent variable that distinguishes between self-employment without and with employees as well as between dependent workers with a fixed-term contract and with a permanent contract. The last category served as the reference group. Again we applied a stepwise procedure by including the demographic variables in the first model, then adding the educational level in model 2 and, finally, substituting education by occupational class in model 3 (see table 7). For the last model the dependent variable was reduced to fixed-term versus permanent contract, since self-employment is part of the occupational class scheme.

The results of model 1 and 2 reveal that even after controlling for demographic characteristics and education, men are more likely to be in self-employment of either kind. This is true for Germany as well as the United Kingdom, but the gender bias is stronger in the latter country: In the UK, the odds of working in one's own company without employees are about 2.7 higher for men than for women, while in Germany the respective odds are only 1.5 : 1.

Turning to the educational effects, the results from the multiple regressions mostly confirm those from section 6.1: In Germany, one-person-companies seem to be mainly an option for persons with middle

or higher educational levels, typically without an vocational training certificate²⁷. As already observed in the bivariate analyses, those with upper secondary schooling without any vocational training are most likely to be self-employed. In the UK, the picture is quite different: Persons with high levels of education – those with a technical college or university degree or upper secondary schooling with occupational qualification – are rarely found among the small entrepreneurs without further employees. Thus, we suspect that compared to German one-person-companies the British small entrepreneurs face on average more economic and temporal uncertainty given that the human capital basis they can rely on is lower.

In order to check for differential effects between the genders we estimated the models separately for men and women (results not presented in the table). The coefficients for educational level proved to be similar for the sexes, with one notable exception in both countries: Women with a university degree have a relatively higher likelihood to start their own business without employees than men. Further analyses showed that, in contrast, men with the same qualification have a higher likelihood to start their own business *with* employees. That is, men with a university degree seem to be better able to establish themselves in the more well-off ranks of self-employment.

To conclude with a few remarks on the effects of the socio-demographic characteristics included in the models: As was already apparent in the bivariate analyses (section 6.1), the likelihood of self-employment increases with age in both countries. In the United Kingdom persons with non-native citizenship are somewhat more likely to set up their own business than those with native citizenship. This is not true though for Germany, even when all other variables are controlled for. Further, West Germans are clearly more prone to become self-employed than East Germans. And finally, in Germany, one-person-companies are somewhat more common among non-married persons, while there is no variation with marital status in the UK. In contrast, self-employment with employees is more likely among married persons in both countries.

Fixed-term contracts

We again refer to the models in table 7. The gender effects observed in the cross-tables (section 6.1) remain virtually unchanged when the demographic characteristics and education are introduced into the models. While the odds of having a fixed-term job are only slightly higher for women compared to men in Germany, the difference is more pronounced in the United Kingdom: Women are about 1.5 times more likely to have a temporary contract than men.

Controlling for other important factors like the East-West divide, the education effects change to a rather clear pattern for Germany (model 2 table 7): Employees with a university degree and those with upper secondary education *without* occupational qualification are most likely to work on fixed-term contracts; in a middle position are those with compulsory or lower secondary schooling *without* apprenticeship, and least likely are persons who have some kind of general schooling *with* an

²⁷ An exception are persons with upper secondary schooling and an occupational qualification. They constitute,

occupational qualification. Graduates from technical colleges are in between the second and third group. This means, first, that having graduated from an apprenticeship or some kind of other formalized occupational education shields best from precarious employment in the form of a fixed-term contract. Secondly, those who have a relatively high risk of receiving a fixed-term contract are quite heterogeneous. Three groups can be distinguished: university graduates with typically rather good labour market chances who might choose fixed-term work to maximize their incomes; graduates with upper secondary schooling and no occupational qualification who might work in fixed-term positions being “in between educations”, that is, to earn money before they continue with an occupational education or (more likely) with university studies; and, finally, those with lower and middle secondary schooling levels (without occupational qualification) who are in a low bargaining position and, therefore, are not able to find a permanent position. In the first two groups we might also partially catch persons with training contracts which have become more and more common for highly qualified persons at employment entry in big firms.

In contrast, the general picture from the bivariate cross-tabulation (section 6.1) remains stable for the United Kingdom: Fixed-term contracts are most common among university graduates, followed by other high qualified groups – graduates from technical colleges and those with upper secondary education and an occupational qualification. All other groups have in general about the same low probability of being on fixed-term²⁸; occupational qualification does not seem to matter.

Estimating the models with occupational class as an explanatory variable reveals a u-shaped pattern for Germany: On the one hand, higher service class employees and, on the other hand, un- and semi-skilled manual workers have a higher likelihood of receiving a fixed-term contract than all other classes (model 3 in table 7). The results for the United Kingdom resemble those for Germany, but, in addition, routine non-manual employees (classes IIIa and IIIb) also belong to the high risk group.

Again, we also estimated separate models for men and women in order to investigate whether education plays a different role for men and women. The results show clearly the same pattern of effects for both sexes (not presented in a table).

Turning back to the joint models in table 7 we observe that the results for the other sociodemographic characteristics basically confirm what we already know from the cross-tables: Fixed-term positions are most common at young ages, with this being more pronounced in Germany (see in particular model 2, when education is controlled for). Further, in Germany employees from East Germany as well as employees with a foreign citizenship seem to be more at risk of fixed-term positions. The latter is also true for the United Kingdom.

however, a rather small group.

²⁸ An exception are those with lower secondary schooling with vocational training. They exhibit a somewhat higher likelihood of receiving a fixed-term contract than those with lower secondary schooling without vocational training.

7 Discussion and conclusions

At first sight the prevalence of precarious employment is surprisingly low in Germany as well as in the United Kingdom. For example, marginal part-time work of less than 15 hours was common only among 7% of the British employees and 4% of the German ones in 1996. However, the distribution is heavily gender biased, resulting in a proportion of 9% for German women and even 13% for British women. This part of the workforce has worse or no employment protection and is not covered by the major insurance schemes in either country. Moreover, it is to be expected that the actual proportion of marginal part-time work is higher given that some of it takes place in private households (often conducted by migrant women) without being registered and therefore being unlikely to show up in a survey of the statistical offices. It needs to be added that precariousness extends to part-time positions with higher working hours in the United Kingdom, since they tend to be excluded from bonus or grading schemes as well as from occupational sick pay and pension schemes, and until recently clearly enjoyed much less employment protection than full-time work.

The proportions of fixed-term contracts proved to be low (6%) and similar in Germany and the United Kingdom, with no big gender differences. Given the more pervasive deregulation of the labour market in the United Kingdom we had initially expected a bigger proportion there. However, as has been argued in section 2, given that the regular (permanent) employment contract does not enjoy much of an employment protection in the UK, there is usually no point for British employers to use a fixed-term contract. These contracts should actually be more relevant in countries like Germany where dismissal protection is strong (Bielenski et al. 1994). However, even here we find only a limited impact. We suspect that the vocational training system in Germany and more basically the general feature of the German economy – fostered by a number of institutional arrangements (see section 2.2) – to build upon long-term employment relationships are at least partially responsible for this. More concretely, if a firm trains a number of apprentices it seems rationale to bind these employees to the firm by offering permanent contracts given the training investments that have been made. The protective effect of apprenticeships (and other middle level occupational qualifications) showed up very clearly in our empirical findings for Germany: Those employees who have an occupational qualification are much less likely to work in a fixed-term position than those without an occupational qualification.

Turning to the research results on gender differences in precarious work, our most important finding was the generally stronger gender bias in the United Kingdom compared to Germany. We observed a higher female dominance in marginal part-time work as well as in fixed-term employment in the UK, although in the latter case the difference was less strong with overall much less of a female dominance. Furthermore, there was evidence that the gender difference is also bigger for one-person-companies in the UK, however, with a greater *male* dominance in these companies. Our hypothesis was just the opposite, namely, that the gender bias should be greater in Germany given that the male bread-winner model receives more support through the welfare state in this country than in the United Kingdom. How can we make sense out of the results? In fact, the equation “stronger bread-winner model = more precarious work”, is too simple. It assumes that women will be less likely to work full-

time and more likely to work part-time, and more general: to be employed in precarious positions, if the male breadwinner model is dominant. The argument neglects the “protective side” of this model. It seems plausible that German women will tend to choose regular part-time work instead of full-time work (in particular when they have young children), given the institutional support for the male breadwinner model (especially, the tax advantages). But at the same time German women can better afford not to do paid work at all, instead of taking up precarious employment, in particular, marginal part-time work or a fixed-term position. Nevertheless, we observe that British women are also *more* likely to be in part-time work with higher weekly working hours. We cannot resolve this fully; perhaps the result is caused by the fact that the child care situation in Britain is very problematic making full-time employment difficult.

The stronger male bias of one-person-companies in the United Kingdom might be linked to the composition of self-employment with respect to educational background and industry. In Germany one-person-companies tend to be run by higher qualified persons and are more likely to be in the service sector than in the UK, since there are rather high barriers to self-employment in the German crafts sector (see section 3). The service sector is traditionally dominated by women and, further, highly educated women are less likely to adapt to traditional gender roles. Thus, the lower male dominance in self-employment in Germany might simply result from the country specific composition of this group.

Turning to the differential effects of the educational systems in the two countries, the results of our analyses basically confirmed the findings of previous research for other employment outcomes (see e.g. Shavit/Müller 1998). As already mentioned, employees with an occupational qualification are relatively well shielded from fixed-term contracts in Germany whereas this is clearly not the case in the UK. Apart from this our findings showed that fixed-term contracts are an import option for highly qualified employees in both countries. Turning to marginal part-time work, we observed that German men with an apprenticeship (or another occupational qualification) are clearly less likely to be in this kind of employment. The protection through an apprenticeship was also visible for German women, except for those with the lowest level of general schooling. For the United Kingdom, the results clearly support the view that it is mostly the level of general education which is important in protecting women from marginal part-time work and not the fact whether the individual has an occupational qualification or not.

Coming back to our discussion on the various aspects of insecurity it should be stressed again that being in a precarious employment position might have very different meanings and consequences for the standard of living and the future perspectives of the individual. The examination of the national institutional contexts made clear that fixed-term contracts and both forms of part-time work are in fact associated with varying degrees of insecurity in the two countries. In particular, part-time work with more than 15 hours is more precarious in terms of welfare and temporal insecurity in the United Kingdom than in Germany. Fixed-term contracts are *relative* to full-time positions more insecure in Germany than in the United Kingdom. Besides this, our findings on the association between

precarious employment and education suggest further variation: Since education and earnings are usually positively correlated it is clear that a large proportion of fixed-term contracts are well-paid and, hence, economically secure. They might actually have been chosen by the employee in order to maximize his/her earnings as suggested by Schömann et al. (1998). The same should be true for part of the one-person-companies, in particular, in Germany. More generally, insecurity in one domain might be *compensated* by security in another domain in some cases of precarious work, while in other cases economic, temporal and/or welfare insecurity might *cumulate* – as in the case of fixed-term employment in low paid occupations (temporal and economic insecurity), of marginal part-time work (economic and welfare insecurity) or of self-employment in a low paid occupation with dim future prospects (economic, temporal and welfare insecurity). This heterogeneity, especially within self-employment and fixed-term contracts suggests that future research should depart from the relative rough categories of precarious employment towards a more refined approach that takes into account the extent to which individuals are actually subject to the different aspects of insecurity.

8 References

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Table 3. Part-Time Patterns in Germany and the UK in 1996

	Germany 96				United Kingdom 96			
	<15	15 – 34	35+		<15	15 - 34	35+	
	4.2%	13.8%	82.0%	206673	6.7%	19.9%	73.3%	62377
Gender								
Male	.9%	2.7%	96.4%	100%	1.1%	6.0%	92.9%	100%
Female	8.5%	28.4%	63.0%	100%	13.2%	35.9%	50.9%	100%
Age								
15 – 24	1.9%	5.8%	92.3%	100%	2.8%	13.6%	83.6%	100%
25 – 34	3.7%	10.7%	85.5%	100%	5.8%	16.1%	78.1%	100%
35 – 44	4.5%	16.4%	79.2%	100%	7.5%	21.9%	70.6%	100%
45 – 54	3.9%	16.1%	80.0%	100%	6.7%	22.5%	70.8%	100%
55 - 64	6.6%	14.9%	78.5%	100%	11.3%	24.8%	63.8%	100%
Nationality								
German/British	4.1%	14.0%	81.9%	100%	6.8%	19.9%	73.3%	100%
Foreign	5.3%	10.8%	83.9%	100%	5.3%	20.6%	74.2%	100%
Region								
West-Germany	4.8%	14.6%	80.6%	100%				
East-Germany	1.5%	10.4%	88.1%	100%				
Education (CASMIN)								
1ab	8.3%	19.1%	72.6%	100%	11.2%	26.6%	62.2%	100%
1c	4.4%	13.1%	82.5%	100%	5.5%	18.0%	76.5%	100%
2a	3.1%	13.6%	83.2%	100%	2.8%	11.3%	85.9%	100%
2b	6.4%	19.5%	74.1%	100%	8.4%	23.5%	68.1%	100%
2c	7.0%	16.1%	77.0%	100%	5.5%	15.6%	79.0%	100%
2c voc	3.3%	12.0%	84.7%	100%	3.4%	12.9%	83.7%	100%
3a	2.2%	8.7%	89.1%	100%	5.8%	21.4%	72.7%	100%
3b	3.0%	12.5%	84.5%	100%	4.6%	17.2%	78.2%	100%
Occupational class (EGP)								
I	1.7%	8.7%	89.6%	100%	2.2%	7.5%	90.3%	100%
II	3.0%	14.1%	82.9%	100%	4.3%	21.2%	74.5%	100%
IIIa	4.1%	22.7%	73.3%	100%	7.7%	27.4%	64.9%	100%
IIIb	11.5%	34.3%	54.1%	100%	19.3%	45.3%	35.4%	100%
IVabc	5.9%	8.7%	85.4%	100%	6.7%	13.6%	79.8%	100%
V+VI	.7%	3.3%	96.0%	100%	1.6%	9.0%	89.5%	100%
VIIab	8.0%	14.8%	77.2%	100%	9.8%	21.0%	69.2%	100%

Table 4: Employment Types in Germany and the UK in 1996

Germany 96						United Kingdom 96				
Employment typ	Self-empl. w/out	Self-empl. with e.	Fixed-term	Permanent		Self-empl. w/out	Self-empl. with e.	Fixed-term	Permanent	
Total	4.7%	5.9%	5.7%	83.8%	205074	9.5%	3.3%	5.5%	81.8%	62173
Gender										
Male	5.4%	7.2%	5.3%	82.1%	100%	13.0%	4.6%	4.3%	78.1%	100%
Female	3.7%	4.0%	6.2%	86.1%	100%	5.3%	1.7%	6.9%	86.0%	100%
Age										
15 – 24	1.2%	.9%	13.8%	84.1%	100%	4.2%	.4%	9.8%	85.6%	100%
25 – 34	4.0%	3.2%	7.3%	85.5%	100%	7.8%	1.8%	5.6%	84.8%	100%
35 – 44	5.1%	6.2%	4.6%	84.1%	100%	10.1%	4.0%	5.1%	80.8%	100%
45 – 54	5.1%	7.7%	3.7%	83.5%	100%	10.9%	4.6%	4.1%	80.4%	100%
55 – 64	6.3%	10.3%	3.8%	79.7%	100%	14.0%	4.9%	5.2%	76.0%	100%
Nationality										
German/British	4.7%	5.9%	5.5%	83.9%	100%	9.4%	3.3%	5.4%	82.0%	100%
Foreign	4.6%	5.0%	8.3%	82.1%	100%	11.8%	2.8%	9.4%	76.0%	100%
Region										
West-Germany	4.9%	6.2%	4.6%	84.3%	100%					
East-Germany	3.5%	4.3%	10.5%	81.7%	100%					
Education (CASMIN)										
1ab	4.1%	4.2%	5.6%	86.1%	100%	9.8%	3.0%	4.2%	82.9%	100%
1c	4.4%	6.0%	3.8%	85.9%	100%	12.9%	3.7%	4.6%	78.8	100%
2a	3.6%	4.7%	5.8%	85.9%	100%	14.7%	3.7%	3.6%	77.9%	100%
2b	4.8%	4.4%	8.2%	82.6%	100%	6.9%	2.3%	5.0%	85.8%	100%
2c	11.0%	7.9%	14.2%	67.0%	100%	8.4%	3.2%	4.9%	83.5%	100%
2c voc	5.2%	5.3%	5.0%	84.5%	100%	5.6%	2.1%	6.6%	85.6%	100%
3a	5.9%	6.1%	4.6%	83.4%	100%	6.4%	2.3%	6.0%	85.3%	100%
3b	6.9%	10.3%	10.5%	72.2%	100%	7.7%	4.8%	9.8%	77.6%	100%
Occupational class (EGP)										
I	5.3%	10.9%	7.2%	76.6%	100%	6.0%	5.5%	6.0%	82.5%	100%
II	4.1%	1.4%	4.5%	90.0%	100%	5.2%	.6%	5.6%	88.6%	100%
IIIa		.1%	4.9%	95.0%	100%			7.7%	92.3%	100%
IIIb			6.4%	93.6%	100%			7.4%	92.6%	100%
Ivabc	45.4%	54.6%		100%		75.6%	23.2%	.1%	1.2%	100%
V+VI			4.9%	95.1%	100%			3.4%	96.6%	100%
VIIab			9.4%	90.6%	100%			7.2%	92.8%	100%

Table 5. Risk of marginal part-time work in Germany (1996)

	Men						Women					
	Model I		Model II		Model III		Model I		Model II		Model III	
Working hours	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34
Constant	-3.82*	-3.50**	-3.31**	-3.20**	-3.10**	-3.17**	-.78**	.03	-.45**	.15**	-.14**	.18**
Age												
15-24	-1.37*	-.85**	-1.37**	-.71**	-1.18**	-.66**	-1.36**	-1.11**	-1.30**	-1.11**	-1.37**	-1.24**
25-34	-1.55*	-.55**	-1.52**	-.46**	-1.40**	-.45**	-1.06**	-.75**	-.90**	-.68**	-.94**	-.78**
35-44	-1.50*	-.33**	-1.50**	-.33**	-1.38**	-.28**	-.54**	-.11**	-.41**	-.04	-.36**	-.08**
45-54	-1.54*	-.34**	-1.55**	-.36**	-1.45**	-.32**	-.65**	-.15**	-.59**	-.11**	-.55**	-.13**
55-64 (ref.)												
Marital status												
Married (ref.)												
Single	.48*	.72**	.41**	.64**	.40**	.67**	-2.16**	-1.50**	-2.10**	-1.45**	-2.00**	-1.44**
Divorced/ Widowed	.44*	.69**	.47**	.73**	.32**	.65**	-.82**	-.67**	-.84**	-.68**	-.85**	-.70**
Nationality												
Native (ref.)												
Foreigner	1.07*	.50**	.79**	.28**	.57**	.29**	-.14**	-.51**	-.34**	-.56**	-.58**	-.61**
Region												
FRG (ref.)												
GDR	.12	-.28**	.29**	-.18**	.18*	-.19**	-1.99**	-.88**	-1.82	-.84**	-2.01**	-.92**
Children¹⁾												
Yes	.17	.12*	.08	.14	.14	.11+	1.16**	.65	1.21**	.67**	1.25**	.70**
No (ref.)												

Table 5. continued

	Men						Women					
	Model I		Model II		Model III		Model I		Model II		Model III	
	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34
Education(CASMIN)												
1ab (ref.)												
1c												
2a												
2b												
2c												
2c-voc												
3a												
3b												
Occupational class												
I												
II												
IIIa												
IIIb												
Ivabc												
V+VI												
VIIab (ref.)												
Number of cases	117472		112636		117383		89201		85458		89097	
Log-likelihood	-20033.8		-18689.5		-19289.9		-68539.3		-65381.4		-66403.5	

Note: German Microcensus 1996

**: Effect significant at $\alpha \leq 0.01$; *: Effect significant at $\alpha \leq 0.05$; +: Effect significant at $\alpha \leq 0.10$;

Categories of the dependent variable: Usual working hours per week: < 15; 15-34; 35+ (reference category)

1) Children under age 6 (Germany) or under age 5 (UK)

Table 6. Risk of marginal part-time work in the United Kingdom

	Men						Women					
	Model I		Model II		Model III		Model I		Model II		Model III	
Working hours:	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34
Constant	-3.17**	-2.13**	-3.15**	-2.10**	-3.21**	-2.07**	-.25**	.43**	.17**	.70**	.64**	.97**
Age												
15-24	-1.81**	-.61**	-1.82**	-.59**	-1.74**	-.59**	-1.76**	-1.03**	-1.59**	-.91**	-2.15**	-1.34**
25-34	-2.65**	-1.30**	-2.72**	-1.34**	-2.59**	-1.25**	-1.50**	-1.01**	-1.28**	-.86**	-1.41**	-.97**
35-44	-2.04**	-.97**	-2.11**	-1.03**	-2.00**	-.92**	-.78**	-.39**	-.59**	-.27**	-.62**	-.31**
45-54	-1.55**	-.75**	-1.61**	-.79**	-1.55**	-.73**	-.81**	-.38**	-.72**	-.33**	-.73**	-.34**
55-64 (ref.)												
Marital status												
Married (ref.)												
Single	.69**	.39**	.66**	.36**	.67**	.33**	-1.37**	-1.12**	-1.31**	-1.08**	-1.30**	-1.08**
Divorced/ Widowed	.29+	.24**	.35*	.25**	.29	.20*	-.63**	-.50**	-.66**	-.52**	-.73	-.57**
Nationality												
Native (ref.)												
Foreigner	.18	.53**	.21	.57**	.10	.48**	-.48**	-.22**	-.50**	-.24**	-.45**	-.19*
Children¹⁾												
Yes	.24	.20**	.21	.20	.27	.21**	1.60**	1.05**	1.67**	1.08**	1.78**	1.15**
No (ref.)												
Education (CASMIN)												
1ab (ref.)												
1c			-.33**	-.20**					-.55**	-.28**		
2a			-1.26**	-.35**					-.54**	-.23**		
2b			.04	.08					-.57**	-.39**		
2c			.21	.01					-1.02**	-.83**		
2c-voc			.18	-.24					-1.3**	-.78**		
3a			.06	-.10					-1.08**	-.56**		
3b			.71**	.49**					-1.20**	-.71**		

Table 6. continued

	Men						Women					
	Model I		Model II		Model III		Model I		Model II		Model III	
	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34	<15	15 - 34
Occupational Class (EGP)												
I					-.00	-.44**					-2.48**	-1.89**
II					.16	.28**					-1.96**	-.97**
IIIa					.06	.06					-1.39**	-.72**
IIIb					1.29**	.98					.45**	.64**
IVabc					.48**	.19*					-.75**	-.89**
V+VI					-1.63**	-.79**					-1.62**	-.70**
VIIab (ref.)												
Number of cases	33361		33091		29016		29016		28770		28928	
Log-likelihood	-9318.1		-9138.1		-9001.5		-26238.3		-25715.3		-24335.5	

Note: Labour Force Survey, United Kingdom 1996

** : Effect significant at $\alpha \leq 0.01$; * : Effect significant at $\alpha \leq 0.05$; + : Effect significant at $\alpha \leq 0.10$;

Categories of the dependent variable: Usual working hours per week: < 15; 15-34; 35+ (reference category)

1) Children under age 6 (Germany) or under age 5 (UK)

Table 7 Risk of precarious employment in Germany and the UK

Type of contract:	Germany 96							United Kingdom 96						
	Model I			Model II			Model III	Model I			Model II			Model III
	SWOE	SWE	FTC	SWOE	SWE	FTC	FTC	SWOE	SWE	FTC	SWOE	SWE	FTC	FTC
Constant	-2.41**	-1.75**	-3.45**	-2.61**	-2.15**	-3.39**	-3.13**	-1.37**	-2.32**	-2.93**	-1.39**	-2.41**	-3.18**	-2.75**
Age														
15-24	-1.86**	-2.13**	.85**	-1.83**	-2.14**	1.07**	1.08**	-1.32**	-1.98**	.27**	-1.31**	-1.97**	.36**	.32**
25-34	-.59**	-1.05**	.39**	-.61**	-1.10**	.48**	.51**	-.68**	-.89**	-.16*	-.63**	-.93**	-.22**	-.13*
35-44	-.24**	-.48**	.05	-.29**	-.55**	.07	.11**	-.35**	-.17*	-.13*	-.32**	-.21**	-.21**	-.11
45-54	-.22**	-.30**	-.12**	-.26**	-.34**	-.10*	-.08*	-.26**	-.06	-.33**	-.24**	-.09	-.37**	-.31**
44-64 (Ref.)														
Gender														
Male (Ref.)														
Female	-.43**	-.58**	.10**	-.41**	-.57**	.12**	.12**	-.99**	-1.06**	.40**	-.92**	-1.01**	.43**	.32**
Marital status														
Married (ref.)														
Single	.30**	-.45**	.49**	.24**	-.49**	.44**	.49**	.03	-.72**	.28**	.06	-.74**	.22**	.27**
Divorced/ Widowed	.25**	-.32**	.41**	.26**	-.30**	.42**	.43**	.00	-.43**	.05	-.01	-.41**	.09	.04
Nationality														
Native (ref.)														
Foreigner	.03**	-.15**	.65**	.05	-.07	.54**	.45**	.33**	-.06	.65**	.29**	-.06	.63**	.64**
Region														
FRG (ref.)														
GDR	-.28**	-.34**	.95**	-.26**	-.41**	1.05**	.10**							
Education (CASMIN)														
1ab (ref.)														
1c				.04	.27**	-.32**					.14**	.02	.18**	
2a				.38**	.45**	-.45**					.33**	.14	-.03	
2b				.10**	.38**	.12*					-.14**	.04	.05	
2c				1.35**	1.19**	.89**					-.07	.26*	.07	
2c-voc				.40**	.58**	-.35**					-.55**	-.25	.34**	
3a				.37**	.37**	-.20**					-.41**	-.23*	.33**	
3b				.69**	1.07**	.74**					-.25**	-.47**	.97**	

Table 7. continued

	Germany 96								UK 96							
	Model I			Model II			Model III		Model I			Model II			Model III	
	SWOE	SWE	FTC	SWOE	SWE	FTC	FTC	SWOE	SWE	FTC	SWOE	SWE	FTC	FTC		
Occupational Class (EGP)																
I							.11**							.03		
II							-.71**							-.23**		
IIIa							-.76**							-.06		
IIIb							-.52**							-.11		
V+VI							-.80**							-.74**		
VIIab (ref.)																
Number of cases		205074			196606		184872		62173			61636		54596		
		-122198.6			-114692.7		-40528.1		-39326.0			-38639.9		-12469.4		

Note: German Microcensus 1996; Labour Force Survey, United Kingdom 1996

** : Effect significant at $\alpha \leq 0.01$; * : Effect significant at $\alpha \leq 0.05$; + : Effect significant at $\alpha \leq 0.10$;

Categories of the dependent variable: Self-employment without employees (SWOE). self-employment with employees (SWE). fixed-term contract (FTC) permanent contract (Reference category)

Appendix

Appendix A1: Descriptive Statistics of the Variables

	1982	1984	1996	
	Germany	United Kingdom	Germany	United Kingdom
	%	%	%	%
Gender				
Male	61.4	58.4	56.7	53.4
Female	38.6	41.6	43.3	46.6
Total	(100)	(100)	(100)	(100)
Age				
15 – 24	14	18	7.2	11.3
25 – 34	23.8	23.3	28	26.8
35 – 44	26.9	25.2	28.7	26.1
45 – 54	24	20.5	23.5	24.5
55 – 64	11.4	13.1	12.7	11.3
Total	(100)	(100)	(100)	(100)
Marital Status				
Single	22.6	23	25.8	25.5
Married	71.1	71	66.1	64.1
Divorced	6.3	4.7	6.5	9.1
Widowed		1.2	1.6	1.3
Total	(100)	(100)	(100)	(100)
Nationality				
German/British	92.6	96	94.1	96.2
Foreign	7.4	4	5.9	3.8
Total	(100)	(100)	(100)	(100)
Region				
West Germany			81.1	
East Germany			18.9	
Total			(100)	
Children under 5/6 years				
Yes	13.7	13.8	14.2	15.1
No	86.3	86.2	85.8	84.9
Total	(100)	(100)	(100)	(100)
Education (CASMIN)				
1ab	22.9	40.4	11.7	19.8
1c	46.4	11.6	32.4	18.1
2a	15.1	9.1	30	9.8
2b	2.7	15.9	2.8	18.5
2c	1.1	5.7	1.4	6.8
2c voc	2.6	2.2	5.9	2.7
3a	2.9	5.6	5.7	9.2
3b	6.3	9.5	10	15.1
Total	(100)	(100)	(100)	(100)
Occupational class (EGP)				
I	9.8	10.3	15.6	15
II	10.6	16.6	13.3	19.8
IIIa	12.7	12.8	16.4	13.8
IIIb	12.8	8.2	9.1	10.6
Ivabc	9.8	9.9	7.4	10.2
V+VI	21	19.9	22.7	15
VIIab	23.2	22.4	15.4	15.7
Total	(100)	(100)	(100)	(100)

Data: German Microcensus; Labour Force Survey, United Kingdom
Numbers in the cells: column percentages

Appendix A2: Part-Time Patterns in Germany and the UK in 1982/1984

	West Germany 82				United Kingdom 84			
	<10	10 - 34	35+		<15	15 - 34	35+	
	1.5%	11.3%	87.2%	205983	6.7%	16.8%	76.5%	64650
Gender								
Male	.2%	1.3%	98.5%	100%	.5%	4.4%	95.1%	100%
Female	3.6%	28.4%	68.0%	100%	15.2%	34.3%	50.6%	100%
Age								
15 – 24	0.8%	4.2%	95.0%	100%	1.8%	7.8%	90.4%	100%
25 – 34	1.5%	11.2%	87.2%	100%	7.4%	14.5%	78.1%	100%
35 – 44	1.7%	14.2%	84.1%	100%	8.5%	20.7%	70.8%	100%
45 – 54	1.4%	12.2%	86.4%	100%	6.8%	21.4%	71.8%	100%
55 - 64	1.6%	11.8%	86.6%	100%	8.3%	18.9%	72.8%	100%
Nationality								
German/British	1.5%	11.8%	86.7%	100%	6.7%	16.9%	76.4%	100%
Foreign	0.9%	5.7%	93.4%	100%	6.0%	15.9%	78.1%	100%
Education (CASMIN)								
1ab	2.3%	16.8%	80.9%	100%	8.5%	19.4%	72.0%	100%
1c	1.0%	9.3%	89.6%	100%	4.9%	12.7%	82.4%	100%
2a	1.2%	10.9%	87.9%	100%	2.2%	5.7%	92.2%	100%
2b	2.3%	17.8%	79.9%	100%	6.5%	14.0%	79.4%	100%
2c	5.9%	16.5%	77.6%	100%	4.3%	11.0%	84.7%	100%
2c voc	1.3%	8.0%	90.7%	100%	1.2%	6.2%	92.6%	100%
3a	0.9%	4.5%	94.6%	100%	5.8%	26.0%	68.1%	100%
3b	1.6%	9.5%	88.9%	100%	5.0%	23.3%	71.7%	100%
Occupational class (EGP)								
I	.6%	4.1%	95.3%	100%	1.7%	8.9%	89.4%	100%
II	1.5%	9.8%	88.7%	100%	4.6%	23.0%	72.4%	100%
IIIa	1.0%	14.9%	84.1%	100%	7.4%	21.3%	71.4%	100%
IIIb	3.1%	29.4%	67.5%	100%	15.7%	34.3%	50.1%	100%
IVabc	1.5%	6.5%	92.0%	100%	5.8%	10.1%	84.0%	100%
V+VI	.2%	2.1%	97.7%	100%	1.0%	5.8%	93.2%	100%
VIIab	2.3%	12.9%	84.8%	100%	12.1%	19.8%	68.1%	100%

Appendix A3: Employment Types in Germany and the UK in 1982/1984

	West Germany 82				United Kingdom 84				
Employment typ	Self-empl. w/out employees	Self-empl. with employees	Employee		Self-empl. w/out employees	Self-empl. with employees	Fixed-term contract	Permanent contract	
Total	4.3%	5.0%	90.8%	205983 100%	7.2%	4.2%	3.8%	84.8%	64865 100%
Gender									
Male	5.0%	6.6%	88.5%	100%	9.2%	5.7%	2.4%	82.7%	100%
Female	3.1%	2.2%	94.7%	100%	4.4%	2.1%	5.6%	87.8%	100%
Age									
15 – 24	.9%	0.6%	98.5%	100%	4.0%	.8%	5.6%	89.6%	100%
25 – 34	3.4%	2.9%	93.7%	100%	7.5%	3.6%	4.3%	84.6%	100%
35 – 44	4.4%	6.0%	89.6%	100%	8.9%	5.8%	3.6%	81.7%	100%
45 – 54	5.2%	6.8%	88.0%	100%	7.3%	5.3%	2.4%	84.9%	100%
55 - 64	7.5%	13.4%	79.1%	100%	7.8%	5.2%	2.6%	84.4%	100%
Nationality									
German/British	4.4%	5.2%	90.4%	100%	7.2%	4.2%	3.7%	85.0%	100%
Foreign	2.4%	2.4%	95.2%	100%	8.5%	5.3%	6.0%	80.2%	100%
Education (CASMIN)									
1ab	5.6%	2.6%	91.8%	100%	7.1%	3.6%	3.5%	85.8%	100%
1c	3.8%	5.2%	91.0%	100%	10.3%	5.9%	3.0%	80.8%	100%
2a	3.5%	5.4%	91.1%	100%	10.7%	5.5%	2.6%	81.1%	100%
2b	4.6%	4.0%	91.3%	100%	5.9%	3.3%	3.7%	87.1%	100%
2c	7.1%	5.3%	87.6%	100%	6.4%	4.5%	4.1%	85.0%	100%
2c voc	4.9%	7.2%	87.9%	100%	5.4%	3.1%	2.9%	88.6%	100%
3a	5.4%	6.4%	88.2%	100%	4.0%	2.2%	5.1%	88.7%	100%
3b	3.7%	9.0%	87.3%	100%	5.6%	6.2%	6.2%	82.0%	100%
Occupational class (EGP)									
I	4.9%	13.1%	82.0%	100%	3.5%	6.7%	3.0%	86.9%	100%
II	2.1%	0.9%	97.0%	100%	2.9%	.4%	4.1%	92.6%	100%
IIIa			100.0%	100%			4.5%	95.5%	100%
IIIb			100.0%	100%			5.7%	94.3%	100%
IVabc	49.5%	49.7%	.8%	100%	64.3%	34.6%		1.1%	100%
V+VI			100.0%	100%			2.4%	97.6%	100%
VIIab			100.0%	100%			5.6%	94.4%	100%

Appendix A4: Part-Time Patterns in Germany by region in 1996

	West-Germany 96				East-Germany 96			
Usual working hours per week	<15	15 – 34	35+		<15	15 - 34	35+	
Total	4.8%	14.6%	80.6%	167651	1.5%	10.4%	88.1%	39022
Gender								
Male	.9%	2.8%	96.3%	100%	.9%	2.0%	97.1%	100%
Female	10.1%	30.5%	59.4%	100%	2.2%	20.3%	77.5%	100%
Age								
15 – 24	2.1%	5.6%	92.3%	100%	1.0%	6.7%	92.4%	100%
25 – 34	4.3%	10.8%	84.9%	100%	1.1%	10.7%	88.2%	100%
35 – 44	5.4%	18.0%	76.6%	100%	.8%	10.1%	89.1%	100%
45 – 54	4.5%	17.3%	78.2%	100%	1.1%	10.8%	88.1%	100%
55 – 64	6.8%	15.4%	77.8%	100%	5.3%	12.3%	82.4%	100%
Nationality								
German/British	4.8%	14.9%	80.3%	100%	1.5%	10.4%	88.1%	100%
Foreign	5.4%	10.8%	83.8%	100%	1.9%	8.4%	89.8%	100%
Education (CASMIN)								
1ab	8.4%	19.0%	72.6%	100%	6.0%	20.8%	73.3%	100%
1c	4.5%	13.3%	82.3%	100%	3.3%	11.5%	85.2%	100%
2a	4.5%	15.7%	79.8%	100%	1.0%	10.3%	88.7%	100%
2b	7.4%	20.6%	72.0%	100%	1.9%	14.5%	83.6%	100%
2c	7.3%	16.4%	76.2%	100%	1.3%	9.2%	89.5%	100%
2c voc	3.7%	11.9%	84.4%	100%	1.0%	12.4%	86.5%	100%
3a	2.4%	9.1%	88.5%	100%	.8%	6.8%	92.4%	100%
3b	3.5%	14.0%	82.6%	100%	1.2%	7.3%	91.5%	100%
Occupational class (EGP)								
I	1.9%	9.3%	88.8%	100%	.5%	6.0%	93.5%	100%
II	3.4%	14.5%	82.1%	100%	1.2%	12.2%	86.6%	100%
IIIa	4.7%	24.1%	71.2%	100%	.8%	15.5%	83.7%	100%
IIIb	13.7%	36.0%	50.3%	100%	3.4%	27.9%	68.7%	100%
Ivabc	6.4%	9.4%	84.3%	100%	3.0%	4.4%	92.6%	100%
V+VI	.8%	3.5%	95.7%	100%	.3%	2.6%	97.1%	100%
VIIab	8.9%	15.0%	76.2%	100%	4.1%	13.9%	82.0%	100%

Appendix A5: Employment types in Germany by region in 1996

West-Germany 96						East-Germany 96				
Employment typ	Self-empl. w/out employees	Self-empl. with employees	Fixed-term	Permanent		Self-empl. w/out employees	Self-empl. with employees	Fixed-term	Permanent	
Total	4.9%	6.2%	4.6%	84.6%	166320 100%	3.5%	4.3%	10.5%	81.7%	38754 100%
Gender										
Male	5.7%	7.6%	4.4%	82.3%	100%	4.1%	5.8%	9.2%	80.9%	100%
Female	3.9%	4.4%	4.8%	86.9%	100%	2.8%	2.5%	12.0%	82.7%	100%
Age										
15 – 24	1.2%	0.9%	13.2%	84.7%	100%	1.3%	.6%	16.5%	81.5%	100%
25 – 34	4.2%	3.3%	6.7%	85.8%	100%	3.3%	2.9%	9.9%	83.9%	100%
35 – 44	5.5%	6.6%	3.5%	84.4%	100%	3.7%	4.9%	8.7%	82.7%	100%
45 – 54	5.4%	8.2%	2.2%	84.2%	100%	4.0%	5.4%	10.0%	80.7%	100%
55 - 64	6.7%	11.0%	1.8%	80.5%	100%	4.2%	6.6%	13.8%	75.4%	100%
Nationality										
German/British	5.0%	6.3%	4.3%	84.4%	100%	3.5%	4.3%	10.4%	81.8%	100%
Foreign	4.4%	5.0%	8.2%	82.5%	100%	16.0%	6.6%	15.1%	62.3%	100%
Education (CASMIN)										
1ab	4.1%	4.3%	4.9%	86.7%	100%	2.7%	1.2%	23.6%	72.5%	100%
1c	4.5%	6.1%	2.9%	86.4%	100%	2.8%	4.4%	13.3%	79.5%	100%
2a	4.0%	5.4%	3.7%	86.9%	100%	3.0%	3.4%	9.2%	84.3%	100%
2b	5.0%	4.9%	6.7%	83.4%	100%	3.9%	2.3%	15.1%	78.7%	100%
2c	11.0%	8.2%	13.1%	67.7%	100%	10.7%	2.7%	32.7%	54.0%	100%
2c voc	5.4%	5.5%	4.5%	84.6%	100%	3.7%	4.5%	8.5%	83.4%	100%
3a	6.1%	6.1%	4.0%	83.8%	100%	5.3%	6.3%	7.5%	80.9%	100%
3b	7.1%	10.7%	10.5%	71.7%	100%	6.2%	8.8%	10.7%	74.3%	100%
Occupational class (EGP)										
I	5.6%	10.7%	6.8%	76.9%	100%	4.0%	12.0%	8.8%	75.2%	100%
II	4.5%	1.5%	3.7%	90.3%	100%	2.2%	.7%	8.5%	88.6%	100%
IIIa		.1%	4.0%	95.9%	100%			9.4%	90.6%	100%
IIIb			5.4%	94.6%	100%			10.2%	89.8%	100%
Ivabc	44.5%	55.5%			100%	51.3%	48.7%			100%
V+VI			3.9%	96.1%	100%			7.8%	92.2%	100%
VIIab			6.2%	93.8%	100%			24.6%	75.4%	100%