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Title: Female atypical employment in the service occupations: a comparative study of time trends in Germany and the UK

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Non-Standard Employment in a Comparative Perspective

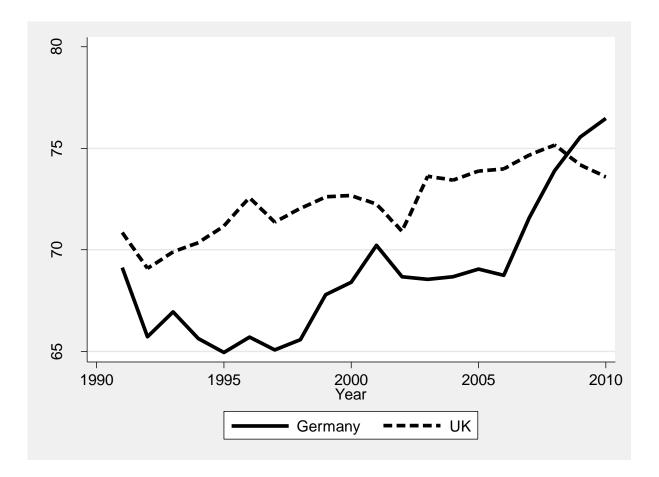
(Eds.: Werner Eichorst und Paul Marx)

## INTRODUCTION

Atypical employment comprises 'any type of employment that is not full-time and permanent with a single direct employer' (Hevenstone, 2010: 315). Employment on fixed-term contracts, by a temporary work agency, on a part-time basis as well as self-employment and freelancing constitute atypical work (ibid.). Atypical jobs are a central dimension of labour market inequality. Despite important differences between the various forms of atypical employment, they have in common that they offer lower pay, fewer opportunities for career advancement, and more limited access to work-related benefits than standard employment (e.g. Kalleberg, 2000; Kalleberg et al., 2000; OECD, 2002; Mertens and McGinnity, 2004; McGovern et al., 2004; Russo and Hassink, 2008; Fouarge and Muffels, 2009;). One form of atypical work – fixed-term employment – carries the additional disadvantage of employment insecurity: employees on fixed-term contracts have a high risk of repeat spells of temporary work as well as unemployment (e.g. Giesecke and Groß, 2003).

Existing work has shown that atypical work is especially prevalent in the service sector (e.g. Kalleberg, 2000) – arguably due to its high demand for flexible labour (Euwals and Hogerbrugge, 2006) – which is why here we chose to focus on this segment of the labour market.

Our analyses are constrained to women in Germany and the UK. Women's labour market participation has increased continuously over the past decades (see Figure 13.1 below). The result of this is a growing pool of workers willing to supply their labour in a 'flexible manner' (see Introduction to this volume). This 'willingness' is likely to be due to constraints, however. Lack of supportive policies can force women out of employment following childbirth and force them to seek part-time or fixed-term employment upon their return to the labour market.



Source: BHPS and Understanding Society, SOEP (own calculations).

Figure 13.1 Female labour participation rates, UK and Germany 1991–2010

The focus in this chapter will be on fixed-term, part-time as well as marginal employment. We undertake a comparative and longitudinal analysis of the incidence of atypical employment and its determinants in the service sector. The two countries studied exhibit important variation in some of the institutions deemed relevant in shaping demand for and supply of atypical work and are thus fruitful cases for a cross-national comparison, while there has also been important institutional change over time. It is worth studying how these trends have affected female labour market outcomes. In Germany, for example, temporary employment has been deregulated substantially and continuously over the past decades and has become more and more similar to the UK where atypical employment has traditionally been highly deregulated. Our comparative analyses will, inter alia, be able to unveil whether this institutional convergence has also led to a convergence in female employment outcomes.

The aim of this chapter is threefold. First, it investigates time trends in atypical employment and the institutional factors that may explain differences or similarities in time trends between the two countries. Second, it analyses how household composition shapes female labour supply (to forms of atypical employment) in the service sector and tests existing theories. Third, it explores whether the influence of household composition on labour supply has changed over time and whether this can be explained by institutional change. Our analyses draw on the British Household Panel Survey (BHPS see Taylor (ed.), 2010) and the Socio-Economic Panel (SOEP see Wagner, Frick and Schupp, 2007) which provide longitudinal data spanning the period from 1991 to 2010.

# THEORETICAL CONTEXT: DEMAND FOR AND SUPPLY OF ATYPICAL WORK

#### The Female Employee Perspective

There exist abundant theories as to why female workers choose atypical forms of employment. The following discussion will be constrained to the forms of atypical work which are analysed in this study: fixed-term employment<sup>1</sup> and part-time work (15–34 hours per week). Given that marginal work (1–14 hours per week) can be seen as a 'severe' form of part-time employment it will not be discussed separately below.

#### **Part-time work**

Labour supply theory posits that female labour supply is negatively associated with a number of 'family variables' – amongst them, number of dependent children and presence of small children (e.g. Long and Jones, 1981). Empirical evidence has confirmed the negative relationship between the presence of children and women's working hours (e.g. Paull, 2008; Misra et al., 2011). 'Positive' perspectives, hence, see female part-time work as the possibility of combining work with care responsibilities to achieve a work-family balance (Warren, 2004: 101). Unsurprisingly, institutional context mediates the effect that children have on female labour supply: availability of childcare is central in shaping mothers' labour supply to part-time work – if it is pricey (as is the case in the UK, see e.g. Viitanen, 2005) or coverage

<sup>&</sup>lt;sup>1</sup> We do not differentiate between temporary employment (i.e. temporary agency workers) and fixed-term employment in our theoretical discussion because with the data at hand we are not able to identify temporary workers either. In the vast majority of cases, they would have classified themselves as fixed-term employees. Only rarely do temporary workers have permanent contracts with their agency (Arrowsmith, 2006).

is incomplete (as is the case in Germany, see e.g. Hank and Kreyenfeld, 2003), women are more likely to be 'forced' into part-time work in order to achieve a work-family balance. The partner's income is another 'family variable' considered to negatively affect female labour supply (e.g. Long and Jones, 1981), following the economic assumption that a successful partner reduces the incentives of the other partner to spend long hours in market work (Bernardi, 1999; Verbakel and de Graaf, 2009). In line with such an assumption, some writers attribute the general trend of increased female labour supply in Western societies partly to men's reduced earning power since the 1980s (Esping-Andersen, 2009). This trend can be most strikingly observed for wives of low-skilled men whose income and job security have experienced drastic declines. Female labour market participation then is of a (partly) compensatory nature (ibid.).

But why is it that children and partner's income are predicted to have negative effects on female but not on male labour supply? Becker's (1993) household production theory (Becker, 1993) describes how male and female labour supply is structured by their utility maximizing strategies within marriage. Men are argued to have stronger market-specific human capital endowments (higher wage earning abilities, better occupational positions, etc.) and will thus devote more time to work in the market and less to domestic work, while women spend more time in unpaid work due to their strong 'biological commitment' to the care of children (Becker, 1993). Alternative approaches emphasize the role of household bargaining (or, the relative resources approach) and gender norms (see e.g. Shelton and John, 1996 for a review). The former of these two alternative approaches presumes that housework is unattractive for both men and women and that both have a way of negotiating a reduction of their share (ibid.)

Aside from family-context, two individual-level variables deemed relevant in affecting female labour supply are education and labour force experience (e.g. Long and Jones, 1981; Kanji, 2011). The economic argument for this is that highly educated women with high levels of labour market experience have developed a market specialisation which would result in higher wages and thus a higher opportunity cost attached to part-time work than for comparable women with lower levels of education and experience (Becker, 1993; Kanji, 2011). However, a sociological perspective would argue for a different underlying mechanism: higher education increases a woman's likelihood of full-time employment as high educational investment can be seen as representing a 'non-traditional attitude towards the sexual division of labour' (Verbakel and de Graaf, 2009: 636), which may incline women to

insist on equitably sharing household and childcare tasks, thus making it more likely that they can supply their work to the market full-time (ibid.).

#### **Temporary/fixed-term employment**

It has been argued by some that fixed-term and temporary employment affords employees a higher degree of flexibility and variety (Kunda et al., 2002; Marler et al., 2002). If fixed-term and temporary employment would indeed entail more flexibility for workers, it should be especially attractive for young mothers with children who aim to strike the balance between paid work and care (Krausz, 2000). However, there are reasons to question this presumption. While there is little doubt that fixed-term employment affords employers more flexibility compared to permanent contracts, it is rather questionable whether it does so for employees. Firing workers on permanent contracts can entail substantial costs for employers (though this depends strongly on the level of employment protection legislation). For workers, however, no monetary costs are normally attached to resignation. More generally, it tends to be easier for employees than for employers to terminate a regular employment contract.

Booth et al. (2002: F191) develop a different argument as to why temporary employment should be especially attractive for women: female workers have a higher propensity to make a transition to non-employment than their male counterparts and are thus reluctant to invest in firm-specific human capital. Since it is inefficient for firms to invest in the training of temporary workers, they are also unlikely to expect their temporary employees to make investments in firm-specific human capital. Temporary employment is therefore argued to 'be an attractive option for women who tend to have lower labour market attachment' (ibid.).

#### The Employer's Perspective

#### **Part-time work**

Critical voices argue that part-time work has 'changed from an activity that mainly accommodates the needs of the workforce for shorter hours to one that meets employers' needs and preferences for such things as lower costs and more flexible staffing' (Kalleberg, 2000: 344). However, the cost efficiency argument, at least regarding *regular* part-time work, is more likely to hold in institutional contexts which allow unequal treatment between part-time and full-time employees such as in the US (ibid.). In the EU context, the European

Directive on Part-Time-Work (1997)<sup>2</sup> stipulates equal treatment of part-timers and full-timers thereby, at least formally, preventing unequal treatment of part-time workers.<sup>1</sup> This means that there is no difference, pro rata, in the costs of part-timers and full-timers concerning wages, fringe benefits and social security contributions. Given that there are fewer hours to cover quasi-fixed costs, part-time work in the European context is actually rather expensive for the employer (Euwals and Hogerbrugge, 2006). The situation is different for short part-time work, i.e. marginal employment. This type of employment tends to be very 'cost-efficient' for employers as they have to pay substantially lower social security contributions for these workers. In Germany, much marginal employment falls into the category of so-called *mini-jobs*.

The increased need for flexible staffing has indeed been regularly emphasised as one central incentive for employers to use part-time workers (Bentolila and Dolado, 1994). Especially in the service sector, staffing and organizational flexibility is deemed crucial (see e.g. Euwals and Hogerbrugge, 2006). More generally, in order to achieve high levels of productivity and employee commitment, employers need to take their employee's needs and preferences into account (Purcell et al., 1999). Part-time employment can be an important way of responding to (mostly) female employees' desires to reduce work-family conflict, thereby attracting or retaining valued workers (e.g. Tilly, 1992).

#### **Temporary/fixed-term employment**

From the employer's perspective fixed-term and temporary employment carry the advantage of relatively risk-free hiring. The employment relationship ceases with the end of the contract without any firing costs attached. Especially in contexts where regular employment protection is strict, fixed-term contracts are an attractive and risk-free alternative to permanent contracts (e.g. Boockmann and Hagen, 2001; Pierre and Scarpetta, 2004) – particularly when it comes to the hiring of *labour market outsiders*. Women are more likely than men to have career interruptions and are thus often categorised as labour market 'outsiders' along with young

<sup>&</sup>lt;sup>2</sup> See: <u>http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0081:EN:NOT</u> (accessed 1 August 2013).

<sup>&</sup>lt;sup>3</sup> Even though part-time and full-time workers have to be treated equally, Gregory and Conolly (2008) showed that around one-quarter of all women who move from full-time to part-time experience an occupational downgrade. About 20 per cent of professional women downgrade with half of them moving to low-skilled jobs (ibid.). Mainly due to the occupational downgrading, women earn lower wages than in full-time jobs (compare Wolf 2002; Manning and Petrongolo 2008).

persons (labour market entrants), the unemployed, immigrants and the low-skilled (e.g. Lindbeck and Snower, 2001; McGinnity et al. 2005). Because of their higher propensity of career discontinuity, women are more likely to be affected (or have recently been affected) by hiring processes compared to their male counterparts. At the same time it can be assumed that it is harder for the employer to judge female applicants' productivity because of their career interruptions. Moreover, women tend to make fewer investments in job-specific skills (see e.g. Booth et al. 2002; Polavieja, 2012), which makes them more easily replaceable than their male counterparts (also see Introduction to this volume). For employers it can therefore be attractive to hire women on such risk-free temporary contracts. The attractiveness of using temporary employment for outsiders does not only depend on the degree to which regular employment is protected, but also on the level of regulation of temporary contracts (Nunziata and Staffolani, 2007). Kahn (2010) has shown that increased deregulation of temporary work has led to an overall increase of temporary employment amongst the employed population.

#### INSTITUTIONS AND INSTITUTIONAL CHANGE

As already noted in the above discussion, institutions are generally expected to critically shape the demand for and supply of atypical work. Germany and the UK exhibit crucial variations in some of the relevant institutions as well as diverse time trends therein.

#### **Employment Protection Legislation**

The degree of employment protection of regular (i.e. permanent) contracts has frequently been argued to affect employers' incentives to hire workers – especially women or other labour market outsiders – on these contracts. The ease with which fixed-term contracts can be concluded has also been theorised to influence the volume of such contracts. In Germany regular contracts enjoy a substantially higher level of protection than in the UK. The OECD has developed indicators to measure the strictness of employment protection legislation (EPL hereafter) which take values from 0 (weak) to 6 (strong) (Venn, 2009; OECD, 2013). In 2010, Germany scored 2.9 on the indicator measuring the strictness of employment protection for permanent contracts, while the UK score only amounted to 1.20. The level of employment protection in Germany is clearly above the OECD average of 2.15, while that of the UK falls clearly below (OECD, 2013). If the theoretical argument that strictly protected permanent contracts for employers to offer temporary employment to labour market

outsiders holds, then the risk of being employed on a temporary contract should be higher for German women compared to British ones. Notably, our data allow us to look at change over time spanning a time-period of 20 years. This provides us with the additional opportunity to examine whether change in employment protection legislation has affected women's temporary employment risk. Both countries have experienced a slight increase in the level of strictness: Germany has moved from 2.58 in 1990 to 2.9 in 2010, while the UK has moved from 1.03 to 1.20 over the same period. It is unlikely, however, that these small changes have significantly affected employers' hiring strategies.

How do Germany and the UK compare regarding the regulation of temporary work? In line with the picture for regular employment, the regulation of temporary contracts is also stricter in Germany than in the UK. In 2010 Germany scored 1.00 on the relevant OECD indicator while the UK scored 0.38. In contrast to the protection of regular contracts, there has been substantial change over time in Germany: the level of regulation of temporary contracts has dropped continuously over the past 20 years, from 3.25 in 1990 to 1.00 in 2010. The UK, by contrast, has experienced a minute increase from 0.25 to 0.38 (OECD, 2013) – hence there is no time trend to speak of. If the deregulation of fixed-term contracts further increases the incentives to hire 'labour market outsiders' on contracts with limited duration, we should find a significant increase of female temporary employment in Germany over time. No such trend would be predicted for the UK where regular contracts receive very little protection and where the regulation of temporary employment has been stable over time.

#### Childcare

Mothers' willingness to work full-time is frequently presented as a function of their access to, as well as their ability to pay the costs of, childcare. In a cross-national study of 19 countries, Pettit and Hook (2005) have provided evidence that high levels of childcare positively affect women's labour market participation. Prevalent neoclassical models understand day-care costs to effectively lessen women's net wages and thereby to reduce the likelihood of mothers engaging in market work (full-time) (Heckman, 1974). However, as argued by Hank and Kreyenfeld (2003), in national contexts where public providers dominate access to childcare, 'availability' becomes more crucial in shaping female labour supply than the costs involved, 'affordability'. In Germany there are relatively few private childcare providers (Hank and Kreyenfeld, 2003) and public childcare provision – especially for children below three years of age – does not meet demand (ibid.). In the UK, by contrast, childcare provision follows a

very clear market logic (Viitanen 2005: 150). Subsidised childcare exists but is only available to low-income or single-parent households. Moreover, childcare places in local authority nurseries are reserved for families in crisis (ibid.). In the UK it tends to be the costs of childcare that affect female labour supply (Chevalier and Viitanen, 2002). Moreover, attendance hours for British and German children are low: in 2005, for example, the average hours of attendance were 16 in the UK and 23 in Germany (compared to an average of above 30 hours in all of the Northern European countries, France as well as the US) (OECD, 2012). Not surprisingly, then, both countries are often cited as contexts where inadequate childcare provision has negative implications for women's labour market opportunities (e.g. Gash, 2009). It is thus to be expected that dependent children – and especially the presence of small children – increases the likelihood of British and German women to be employed in atypical jobs. As argued earlier, this may increase women's entrapment in temporary employment. Reduced access to (affordable) childcare may also increase the 'risk' of part-time or marginal work, as women rely on informal care arrangements which often do not cater for full-time employment.

How has childcare coverage developed over time? It is very difficult to obtain timeseries information on childcare services. Often figures are incomplete and do not allow differentiation between different forms of childcare services (e.g. nurseries for very small children and forms of pre-primary education). In both countries we can observe notable increases in the enrolment rates for children of pre-primary age over the period spanning from the early 1990s to the late 2000s (Gauthier, 2011). This indicator is not ideal (for us), however, as it mainly pertains to children between three and six years of age for which coverage rates have always been much less problematic (see e.g. Hank and Kreyenfeld, 2003; De Henau et al., 2008: 37). Historical series pertaining to childcare for children below three years of age is – for the two countries under study – only available as of the early 2000s. These data suggest a continuous and substantial rise in the enrolment rates of these small children in both countries between 2003 and 2010 (with enrolment at any point in time pronouncedly higher in the UK) (OECD, 2012).

#### Hypotheses

• Overall time trends in atypical employment: Given the substantial deregulation of atypical contracts in combination with highly protected permanent employment, we expect a significant increase of female fixed-term employment in the service sector in Germany (*Hypothesis 1*). In the UK there are fewer incentives for employers to use fixed-term contracts

as permanent employment does not enjoy high levels of protection. Moreover, in the UK there has hardly been any change in the regulation of temporary work over time.

Individual-level determinants of atypical employment: drawing on existing theories of female labour supply and given the inadequacy of childcare arrangements in both countries, the number of dependent children as well as the presence of children under three years of age should increase the likelihood of part-time or marginal employment for female workers (Hypothesis 2). Given that low levels of childcare coverage are also likely to prevent many women from outsourcing their childcare duties thereby temporarily forcing them out of the labour market, we further predict that children increase women's risk of being employed on fixed-term contracts (assuming that employers prefer to use these risk-free contracts when hiring labour market outsiders with career interruptions) (Hypothesis 3). Moreover, we predict that higher levels of education reduce the risk of part-time employment because for higher educated women, this type of employment entails higher opportunity costs than for their lower educated counterparts due to their stronger market specialisation (Hypothesis 4a). The same holds for career interruptions following childbirth. To the extent that career interruptions increase the risk of fixed-term employment, higher educated women should thus also have a lower risk of fixed-term employment (Hypothesis 4b). Finally, it is predicted that a low spousal income will reduce the likelihood that a woman is employed part-time (Hypothesis 5).

• *Time trends in the relevance of individual level*: We expect that the effect of children on women's propensity to work part-time or to be in marginal employment has decreased over time due to a notable increase in childcare coverage in both countries (*Hypothesis 6*).

## DATA AND SAMPLE SELECTION

The analyses in this chapter draw on data from the SOEP (German Socio-Economic Panel) and the BHPS (British Household Panel). The SOEP is a representative, interdisciplinary, and longitudinal survey of the German population (Wager et al., 2007). The panel started in 1984 and has been repeated yearly since. For our analyses we apply the SOEP data from 1991 to 2010. The structure and logic of the BHPS, which started in 1991, is akin to that of the SOEP (see Taylor et al., 2010). As of 2010 the BHPS has been part of the much larger longitudinal study 'Understanding Society' that follows 40,000 households. However, the number of observations for the BHPS sample is now considerably smaller than previously.

The following selections were carried out in order to obtain the final German and UK samples for the analysis: we selected only women aged between 25 and 54 years and constrained our analyses to female workers with a positive labour income and for whom information on occupation and working hours were available. Further, the sub-sample G ("High income") of the SOEP has been excluded for the analysis. After these selections, the resulting number of observations is about 60,000 in the case of Germany and 41,000 in the case of the UK.

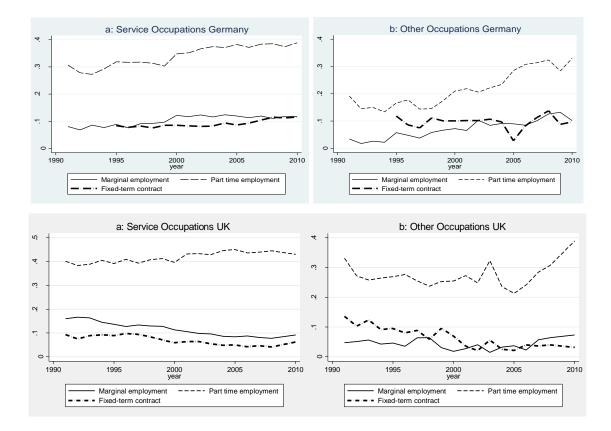
In the multivariate analyses, further restrictions apply. Here we included only women working in the service sector for whom partner information was available (in order to test the effect of household composition on labour supply). The distinction between service and other occupations has been based on the ISCO classification. According to this classification, the majority of women in our sample (about 95 per cent) were working in the service sector. These further selections reduce our number of observations to about 38,000 women in the German data and about 24,000 in the UK data. We distinguish between marginal employment (1 to 14 hours per week) and part-time employment (15 to 34 hours per week). Those who stated that they were working on contracts with limited duration were classified as fixed-term workers. As the data on fixed-term contracts in Germany is reliable only as of 1994, the time period for the analyses on fixed-term employment is shorter for Germany than for the UK.

# FINDINGS: ATYPICAL EMPLOYMENT IN GERMANY AND THE UK

#### Time Trends in Atypical Employment: Descriptive Evidence

Figure 13.2 shows the evolution of non-standard employment of women in our data. We contrast employment in the service sector with employment in other sectors. For the UK context, we observe that part-time employment in service occupations went up slightly, while there is a small but steady downward trend for fixed-term and marginal employment. In other occupations, where we have a much smaller number of observations, trends are less clear, except for fixed-term contracts which seem to be in decline for all occupations in the UK. In the German context, we observe a clear upward trend in part-time employment for both service and other occupations. The evidence further suggests a minute increase in marginal employment for the service sector and a somewhat more notable growth in other sectors. Finally, we find no clear evidence of the increased risk of fixed-term employment over time in either service occupations or other occupations. Notwithstanding our evidence on time trends, it is notable that, in both Germany and the UK the incidence of part-time work has at all times been markedly higher in the service sector.

<Figure 13.2 near here>



Notes: No comparable information on fixed-term contracts for Germany in the period 1991–1994.

Source: BHPS and Understanding Society, SOEP (own calculations).

#### Figure 13.2 Time trends female atypical employment in service occupations versus other

In a next step we explore whether households have become increasingly dependent on atypical employment over time (Table 13.1). The dependent variable indicates the dependency of the household on atypical employment: it takes the value 1 if no adult in the household has a standard-employment contract but at least one adult is in atypical employment and the value 0 if at least one adult in the household is employed on a standard contract. We find an increased tendency in Germany primarily, where the growth of atypical employment has been much stronger. Here the risk of a household depending on atypical employment has grown continuously and substantially over time. These trends show the importance of an in-depth analysis of the determinants of atypical employment. <Table 13.1 near here>

Table 13.1	τ	JK	Ge	Germany		
Households dependent on atypical employment (all occupations); probit regression						
	Coeff.	s.e.	Coeff.	s.e.		
1991–1995	0.04*	0.02	-0.32***	0.02		
2001-2005	0.03	0.02	0.10***	0.18		
2006-2010	0.03	0.02	0.25***	0.02		
Constant	-1.32***	0.02	-1.47***	0.01		

*Notes*:Reference period: 1996–2000.No comparable information on fixed term contracts for Germany in the period 1991–1994. Therefore, the dependent variable for Germany between 1991–1994 only includes part-time or marginal employment.

\*P <0.1; \*\*P <0.05;\*\*\*P<0.001

Source: BHPS and Understanding Society, SOEP (own calculations).

#### Atypical Employment and Household/Family Context

One of the key assumptions of existing theories of female labour supply is that household context is a central determinant. Going beyond existing theories of labour supply theory which focus predominantly on the impact of household context on working hours, we further argued that household variables can be important determinants of female temporary employment, too. It was predicted that family variables - such as the presence of children make it more likely that women have career breaks and are trapped in fixed-term or temporary employment upon their return. Table 13.2 explores atypical employment incidence by household type. In these descriptive analyses, we distinguish between high paid service occupations and low paid service occupations. High paid service occupations consist of: professionals, technicians and associate professionals. Low paid service occupations are composed of: service workers, shop and market sales workers and other elementary service occupations. We excluded occupations with medium pay. Our results suggest that having dependent children (whether in a relationship or not) has a strong bearing on women's employment in part-time and marginal jobs for both high and low paid service occupations. There is less support, however, for the assertion that the household context affects the risk of fixed-term employment for women. The only confirmation we find pertains to lone parents in Germany and couples with dependent children in the UK (for both high and low paid service occupations). However, the non-existence of a 'household effect' of the descriptive results for fixed-term employment may be due to an age effect which is not controlled for here: young persons have a higher risk of being in temporary employment while at the same time have a lower 'risk' of already having dependent children. These descriptive findings will be scrutinised further in our multivariate estimations.

	High Paid Service Occupations			Low Paid Service Occupations			
Household Type	Part-	Marginal	Fixed-	Part-	Marginal	Fixed-	
	Time		Term*	Time		Term*	
UK	34.22	5.59	8.66	54.08	20.84	6.29	
Single	13.86	1.42	8.92	29.62	6.34	5.30	
Couple no children	18.29	2.07	7.63	43.77	10.59	3.67	
Couple dep. children	48.25	9.44	9.61	55.89	27.52	7.59	
Couple non-dep. children	36.40	5.97	7.85	63.47	15.15	3.95	
Lone parent dep. Children	40.96	3.32	8.02	61.47	22.58	8.66	
Lone parent non-dep.	28.51	0.44	6.94	50.39	9.25	3.95	
children							
N of observations	3,982	650	967	7,417	2,858	832	
GERMANY	30.83	6.08	10.86	41.40	21.26	8.15	
Single	11.65	2.14	14.42	21.03	7.17	11.06	
Couple no children	16.54	2.09	10.70	34.89	10.46	7.34	
Couple dep. children	46.44	11.48	11.56	45.68	29.66	8.16	
Couple non-dep. children	33.28	4.47	5.23	46.35	21.13	5.79	
Lone parent dep. children	37.30	3.77	16.22	43.73	18.40	15.46	
Lone parent non-dep.	19.79	1.53	6,20	32.02	7.61	5.54	
children							
N of observations	7,956	1,570	2,219	5,625	2,888	802	

Table 13.2 Atypical employment of women by type of household (in %)

Notes: \* No comparable information on fixed term contracts for Germany in the period 1991–1994.

Source: BHPS and Understanding Society, SOEP (own calculations).

#### **Multivariate Estimations**

In our multivariate regressions we focus on women in service occupations only. Table 13.3 presents a multinomial logistic regression of the predictors of part-time and marginal employment relative to full-time employment. These models control for standard socio-demographic variables, occupations, as well as household variables and partner characteristics. The aim of the last two sets of variables is to determine the effect of partners' socio-demographic status on the female supply to atypical employment. We find strong differences over time in the tendency to be employed as a part-time worker in Germany and the UK. In Germany there is an increased risk to work part-time during the observation period, while in the UK this risk decreased in the mid-1990s (compared to the first half of that decade) and remained constant since. Moreover, marginal part-time work has also become more common in Germany over time, while there is a negative tendency for the UK.

Concerning different types of service occupations, we find highly significant differences. For women working in personal, protective, sales and other service occupations, the likelihood to be in part-time or marginal employment is considerably higher than for those working in clerical and secretarial occupations (which constitute our reference category). Professional and technical occupations are associated with a lower likelihood of part-time or marginal employment. Notably, we do not find that employment in the public sector is related to a higher probability of part-time employment. Our results show, however, that public sector employees in the UK have a higher likelihood of being in marginal employment.

With respect to socio-demographic and personal variables, we find – as expected (see *hypothesis 2*) and as shown repeatedly by existing empirical work on this topic – that women with children are considerably more likely to work reduced hours (both part-time and marginal part-time). The likelihood increases with the number of children and is higher for women with children under three years of age. Moreover, our results suggest that women with lower levels of education are more likely to work reduced hours than women with higher levels of education in both countries. This is in line with the prediction that opportunity costs attached to part-time work are higher for women with higher levels of education (see *hypothesis 4 a*). We also know that many part-time jobs have low skill demands, which further increases the losses of highly educated women pursuing reduced hour jobs (e.g. Gregory and Connolly, 2008). It is also interesting to note variations in the tendency to work part-time by migration status. We find that UK-born women are considerably more likely to

work part-time hours than foreign-born women. This tendency has been previously documented. We observe this not only for part-time but also for marginal employment.

In line with our predictions, the analyses reveal strong effects of partner characteristics on women's working time. The results suggest that women whose partners earn a low income are considerably less likely to work part-time in both countries (in the case of Germany, partners' earning status also significantly affects the propensity of marginal employment). It is interesting to note that the strength of this partner effect appears more pronounced in Germany than in the UK. This differential has some resonance with the work of McGinnity (2004) who also found German women's employment transitions to be more responsive to partner status than those of UK women. We define low income as income below 60 per cent of median equivalised household income. We also observe that women in Germany are more likely to supply themselves to reduced hour jobs if their partner is working in the services sector. In the UK it is the other way round: there partners' employment in the service sector reduces the likelihood of female part-time employment. A possible explanation could be that the working conditions of the UK service sector – with employment generally more unstable and less well paid – might discourage women from supplying themselves to part-time jobs which offer little financial security.

	UK		GERMA	NY
	Coeff.	s.e.	Coeff.	s.e.
Marginal employment				
Age	-0.079**	0.037	-0.010	0.042
Age squared	0.002***	0.000	0.001	0.001
UK-born / German	0.322***	0.104	-0.010	0.085
1991–1995	0.321***	0.060	-0.616***	0.690
2001–2005	-0.244***	0.061	0.331***	0.058
2006–2010	-0.397***	0.078	0.309***	0.063
Number of children	1.095***	0.026	1.334***	0.030
Child under three years	0.723***	0.079	1.515***	0.073
Training	-0.308***	0.065	-0.096	0.070
Tertiary education	-0.588***	0.109	-1.347***	0.102
Public service	0.157***	0.052	-0.829***	0.054
Self-employed	0.050	0.097	0.0296	0.090
Spouse age	0.036	0.025	0.140***	0.035
Spouse age squared	0.000	0.000	-0.001	0.000
Spouse training	0.012	0.059	-0.027	0.075
Spouse tertiary	0.629***	0.087	0.353***	0.913
Spouse service sector	-0.121**	0.050	0.393***	0.050
Spouse self-employed	0.252***	0.064	-0.138*	0.075
Low spouse income	-0.042	0.061	-0.310*	0.182
Professionals	-0.322***	0.099	-0.338**	0.102
Associate professionals and technical				
	-0.590***	0.088	-0.390***	0.065
Personal, protective and sales				
occupations	1.484***	0.062	0.714***	0.064
Other service occupations	2.641***	0.094	2.772***	0.089
Constant	-3.622***	0.641	-7.020***	0.689

Table 13.3 Multinomial logit to be in part-time or marginal employment vs. full-time employment

Table 13.3 continued				
Part-time employment				
Age	0.034	0.024	0.054**	0.027
Age squared	0.000	0.000	-0.000	0.000
UK-born / German	0.263***	0.067	0.043	0.064
1991–1995	0.086**	0.043	-0.362***	0.042
2001–2005	0.060	0.040	0.260***	0.038
2006–2010	0.065	0.049	0.272***	0.041
Number of children	0.740***	0.019	0.906***	0.022
Child under three years	0.550***	0.057	0.822***	0.058
Training	-0.313***	0.049	-0.120**	0.050
Tertiary education	-0.322***	0.070	-0.912***	0.063
Public service	0.029	0.035	-0.036	0.031
Self-employed	-0.186***	0.072	-0.525***	0.071
Spouse age	0.045***	0.016	0.168***	0.023
Spouse age squared	0.000***	0.000	-0.002***	0.000
Spouse training	-0.036	0.042	-0.172**	0.051
Spouse tertiary	0.167***	0.059	-0.031	0.060
Spouse service sector	-0.073**	0.032	0.246***	0.033
Spouse self-employed	0.120***	0.045	-0.037	0.047
Low spouse income	-0.238***	0.043	-0.248**	0.114
Professionals	-0.379***	0.057	-0.236***	0.058
Associate professionals and technical	-0.284***	0.045	-0.282***	0.039
Personal, protective and sales			0.414***	0.043
occupations	0.864***	0.040		
Other service occupations	1.448***	0.078	1.090***	0.076
Constant	-3.589***	0.414	-6.673***	0.431

*Notes:* Only women with partner and service occupations. N of observations (Germany)=28.298. Reference period: 1996–2000. Reference occupations: clerical and secretarial

\*P <0.1; \*\*P <0.05;\*\*\*P<0.001

Source: BHPS and Understanding Society, SOEP (own calculations)..

In a next step, we conduct a similar analysis of women's risk to be employed on a fixed-term contract compared to a permanent one (*Table 13.4*). As indicated before, the data on fixed-term contracts in Germany is reliable only as of 1994, so the time period available for the analyses is shorter than for the UK. We observe that in the UK, the probability of fixed-term contracts has decreased over time. In Germany, by contrast, we find some indication that this type of employment has grown. Partnered women in 2006–2010 had a significantly higher probability of being employed on a fixed-term contract than in 1996–2000. We therefore find some support for *hypothesis 1* which stated that the German trend of deregulating temporary

work paralleled by continuously strict protection of standard permanent contracts would increase the incidence of fixed-term employment – especially for women as labour market outsiders. We find no clear 'occupational ordering' of the likelihood to be in fixed-term employment. In both countries professionals are more likely to be on a fixed-term contract. In Germany, all occupations are more likely than the reference category 'clerical and secretarial occupations' to offer fixed-term employment. We find the public sector to disproportionately rely on fixed-term jobs in both countries. In our estimation we also control for working hours to account for the possible interaction between fixed-term contracts and working part-time. Our results suggest that this control is justified for both countries, where part-time workers are also more likely to have fixed-term contracts.

Interestingly, our results indicate that women with a young child under three years of age do not have an increased likelihood of being employed on fixed-term contracts in either country. We had expected that small children would increase the likelihood of fixed-term employment as childbearing and rearing often goes hand-in-hand with mothers' career interruptions, and employers prefer risk-free temporary contracts when hiring these labour market outsiders (hypothesis 3). The fact that our prediction does not receive support may have to do with selection effects. In our analyses we focus on employed women. Women with small children who are in the labour market are likely to have returned relatively quickly to the job they previously held rather than 'entering' into a new employment contract after having 'properly' exited the labour market. The risk for fixed-term employment, however, increases with the number of children. This does suggest that the experience of motherhood appears to have a cumulative (and negative) effect on women's employment. Presumably women's likelihood of leaving the labour market for extended periods and then having to reenter on fixed-term jobs increases with the number of children. We thus received partial confirmation of our *hypothesis* 3 – the presence of small children does not significantly affect the risk of fixed-term employment, but the number of children does. Furthermore, we find women with higher levels of education are more likely to be employed in fixed-term jobs. This tendency is not line with our predictions of hypothesis 4b. We also find some evidence that partner characteristics are predictive of women's likelihood of being employed on fixedterm contracts, though they appear less important than for models looking at working time.

	UK		GERM	ANY
	Coeff.	s.e.	Coeff.	s.e.
Age	-0.024	0.024	-0.125***	0.025
Age squared	0.000	0.000	0.001***	0.000
UK-born / German	-0.247***	0.055	-0.022	0.063
1991–1995	0.081**	0.039	-	-
2001–2005	-0.236***	0.040	-0.006	0.033
2006–2010	-0.380***	0.052	0.109**	0.035
Part-time	0.228***	0.033	0.091**	0.031
Number of children	0.093***	0.017	0.103***	0.020
Child under 3 years	-0.111**	0.054	-0.107**	0.051
Training	-0.106**	0.049	0.050	0.055
Tertiary education	0.098	0.066	0.147**	0.064
Public service	0.231***	0.034	0.201***	0.030
Self-employed	0.482***	0.056	0.331**	0.128
Spouse age	0.009	0.015	-0.017	0.021
Spouse age squared	0.000	0.000	0.000	0.000
Spouse training	0.148***	0.044	0.057	0.054
Spouse tertiary	0.382***	0.056	0.164**	0.062
Spouse service sector	0.062*	0.032	-0.017	0.033
Spouse self-employed	0.029	0.042	-0.064	0.049
Low spouse income	0.124***	0.041	0.246**	0.092
Professionals	0.114**	0.053	0.441***	0.054
Associate professionals and technical	0.020	0.046	0.112**	0.042
Personal, protective and sales occupations	-0.008	0.042	0.195***	0.046
Other service occupations	0.067	0.070	0.292***	0.077
Constant	-1.406***	0.404	1.395***	0.381

Table 13.4 Probability of having a fixed term contract (Probit)<sup>a</sup>

*Notes:* Only women with partner and service occupations. N of observations (Germany)=18.904. Reference period: 1996-2000. Reference occupations: clerical and secretarial. In Germany the period 1991–1995 for fixed term contracts is not considered. \*P <0.1; \*\*P <0.05;\*\*\*P<0.001

Source: BHPS and Understanding Society, SOEP (own calculations).

Finally, we explore whether the influence of family context on women's employment has changed over time. As we have shown earlier in this chapter, childcare coverage has improved over time in both countries. We therefore test whether the effect of having small children under the age of three on the probability of being in part-time or marginal employment has changed over time as was predicted by *hypothesis 6*. To test this, the period

dummies were interacted with the variable that indicates whether there are small children under three years of age in the household.

Table 13.5 shows the effects of these interaction terms on the probability of being in part-time or marginal employment. The results differ between both countries. In Germany we observe that the effect of having small children on the probability of being in marginal and part-time employment decreases with time. In the UK, we observe the opposite trend. The effect of having small children on the probability of being in marginal or part-time employment increases with time. Although childcare coverage has increased in both countries we observe opposite trends in terms of female labour supply

*Table 13.5 Multinomial logit to be in part-time or marginal employment vs. full-time employment – Interaction effects* 

	UK		GERM	ANY
	Coeff.	s.e.	Coeff.	s.e.
Marginal employment				
(CONTROLS NOT SHOWN)				
Child under three years in the household				
(yes/no) x				
1991–1995	-0.009	0.196	-0.740***	0.192
2001–2005	0.305*	0.187	-0.250	1.778
2006–2010	0.615***	0.238	-1.005***	1.882
Part-time employment				
(CONTROLS NOT SHOWN)				
Child under threeyears in the household				
(yes/no) x				
1991–1995	-0.104	0.152	-0.565***	0.153
2001–2005	0.441***	0.135	-0.241	0.153
2006–2010	0.623***	0.169	-0.622***	0.158

Notes:

Only women with partner and service occupations. Reference period: 1996-2000.

\*P <0.1; \*\*P <0.05;\*\*\*P<0.001

Source: BHPS and Understanding Society, SOEP (own calculations).

In Table 13.6, we observe the effects of the interaction terms on the probability of having a fixed-term contract. For both countries we do not observe any period effect, so that the effect of having small children on the probability of having a fixed-term contract does not change with time. We observed in Table 13.4 that the presence of small children has a negative effect

on the probability of fixed-term employment. Our analysis of period effects indicates that for both countries this negative effect remains constant over time.<sup>4</sup>

	UK		GERM	IANY
	Coeff.	s.e.	Coeff.	s.e.
Fixed-term employment				
(CONTROLS NOT SHOWN)				
Small children in the household (yes/no) x				
1991–1995	0.192	0.139	_	_
2001–2005	0.121	0.131	0.053	0.114
2006–2010	-0.149	0.185	0.011	0.118

Table 13.6 Probability of having a fixed term contract (Probit) – Interaction effects

*Notes:* Only women with partner and service occupations only. Reference period: 1996–2000. In Germany the period 1991–1995 for fixed term contracts is not considered.

\*P <0.1; \*\*P <0.05;\*\*\*P<0.001

Source: Source: BHPS and Understanding Society, SOEP (own calculations).

# SUMMARY

In this chapter, we undertook a comparative and longitudinal analysis of the incidence of atypical female employment in the service sector and its determinants in the UK and Germany. First, we investigated general trends in the incidence of atypical employment. Our descriptive evidence indicates that there has been an upward trend in part-time employment in Germany and in the UK since the beginning of the 1990s in service occupations. This time trend has been more pronounced for Germany (where it was also not constrained to the service sector). Furthermore, for both countries (especially in Germany) we observe a higher incidence of part-time work in the service sector than in other occupations. Marginal employment has slightly increased in Germany in both service and non-service occupations. However, we find no clear evidence of increased fixed-term employment in Germany – this was surprising given fixed-term employment in this country has undergone substantial deregulation during our observation window. In the UK we observed a decline in fixed-term employment in the service sector as well as in other occupations.

Another central concern of our analyses has been to investigate how household composition shapes female labour supply in the service sector. Our descriptive and multivariate analyses show that having children has a strong effect on women's incidence in part-time and marginal employment in both countries. Both the presence of small children

<sup>&</sup>lt;sup>4</sup> Tables 13.3 to 13.6 have been also estimated separately for high and low paid service occupations. No remarkable results have been found by conducting the regressions separately. Results are available under request.

(under three years), as well as the total number of children, positively affect female workers' probability of being employed part-time or in marginal arrangements. However, the effect of children on the probability of having a fixed-term contract is less straightforward. We had expected that the career breaks that childbearing and rearing often entails for young mothers make it more likely that they are employed on fixed-term contracts. While our results showed that the number of children in the household correlates positively with fixed-term employment, the presence of small children under three years of age reduces women's probability of a fixed-term contract. This ambivalent evidence is likely due to selection effects. Women who are in the labour market, despite having small children, are likely to not have taken extended career breaks but instead returned into their old jobs comparatively swiftly following their maternity leave. More generally these women may differ systematically from the 'average' woman in terms of their career commitment, which could further explain the negative effect of very small children on contract type. However, the finding that the number of children increases the risk of fixed-term contracts - suggesting a negative (and cumulative) effect of motherhood on employment outcome - does provide some support to the argument that employers prefer to use temporary contracts when hiring women with career interruptions.

Finally, we investigated how the influence of household composition on labour supply has changed over time and whether this can be explained by institutional change. Our focus here has been on the presence of small children, and our results suggest that the effect of having small children on the probability of working in part-time and marginal employment has changed with time. We observe opposite trends in the UK and Germany. While in Germany the effect of having small children on the probability of being in marginal and parttime employment decreases with time, we observe for the UK a time trend of increased parttime employment starting in 2001. The UK finding does not correspond with the predictions that the influence of children on female labour supply declines as childcare coverage increases. Additional analyses of a larger number of countries that directly investigate the effect of institutional change on labour supply via multi-level models could help to better understand and unveil the underlying mechanisms and could be an interesting avenue for future research.

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