Female atypical employment in the Service Occupations: a comparative study of time trends in Germany and the UK

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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. OECD, 2002; Mertens and McGinnity, 2004; McGovern et al., 2004; Fourage and Muffels, 2009; Kalleberg, 2000; Kalleberg et al., 2000; Russo and Hassink, 2008). 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 & Hogerbrugge, 2006) – which is why here we chose to focus on this segment of the labour market. Our analyses are constrained to women as they tend to have a more flexible labour supply than men. 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 Germany and the UK. Both countries 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. At the same time, there has also been interesting institutional change over time and 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 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 analysis draws on the British Household Panel Survey (BHPS) and the German Socioeconomic Panel (GSOEP) 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 will be analysed in this study: fixed-term employment[1] 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. Misra et al., 2011; Paull, 2008). It is hence not surprising that 'positive' perspectives see female part-time work as a possibility to combine work with care responsibilities and achieving a work-family balance (Warren, 2004: 101). Availability of childcare is also central in shaping labour supply to part-time work – if childcare is pricey (as is the case in the UK, see e.g. Viitanen, 2005) or

[1] 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 (if the contract with their work agency if of limited duration). Only rarely do temporary workers have permanent contracts with their agency (Arrowsmith, 2006).

coverage is incomplete (as is the case in Germany, see e.g. Hank & Kreyenfeld, 2003) women are more likely to be 'forced' into part-time work in order to achieve work-family balance. Husband'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).

The household production theory (Becker, 1993) suggests that families maximize their utility by deciding the time to be allocated to work on the market, in the housework and at leisure. Since men have stronger market-specific human capital endowments (higher wage earning abilities, better occupational positions, etc.) they will tend to 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). On the other hand, the household bargaining model suggests in contrast that task allocation in a household is governed by a bargaining process, so that the individual with most market related resources (like higher wages or higher occupational prestige) will have more bargaining power (Manser / Brown, 1980). 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 much labour force 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, 1991; 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 and thus make 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 than 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 – EPL hereafter). For workers, however, no monetary costs are generally 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.). Along the same lines, temporary work is sometimes a relatively simply option to gain access to reduced hours and prevent skill depreciation if full-time work is either not available or possible.

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 the US. In the EU context, the European Directive on Part-Time-Work (1997)[2] stipulates equal treat of part-timers and full-timers thereby at

[2] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0081:EN:NOT

least formally preventing the unequal treatment of part-time workers. 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 then, 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 & Hogerbrugge, 2006). The situation is different for short part-time work, so-called marginal employment. This type of employment tends can 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*. Even though part-time and full-time workers have to be treated equally, Gregory and Conolly (2008) showed that around on quarter of all women who move from full-time to part-time experience an occupational downgrade. About 20% of professional women downgrade with half of them moving to low-skilled jobs (ibid). Mainly due to the occupational downgrading, women eran lower wages than in full-time jobs (compare Wolf 2002, Manning and Petrongolo 2008). Similar wage effects are found for fixed-term workers (e.g. ; Booth et al. 2002, Mertens et al. 2007).

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 & Hogerbrugge, 2006). Employers may also generate part-time jobs in order to attract or retain workers they value, generally women with (small) children (e.g. Tilly, 1992). 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' desire to reduce work-family conflict.

Temporary/Fixed-term Employment

From the employer's perspective fixed-term and temporary employment carries 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). This is especially the case 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 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 than 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. For employers it can therefore be attractive to hire women on 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 an increasing deregulation of temporary work as 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 variation in some of the relevant institutions as well as diverse time trends therein.

Employment Protection Legislation

As discussed above, 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 which take values from 0 (weak) to 6 (strong) (OECD, 2012; Venn, 2009). In 2008 – which is the most recent figure available at the time of writing – Germany scored 3.0 on the indicator measuring the strictness of employment protection

for permanent contracts, while the UK only reached 1.12. The level of employment protection in Germany is clearly above the OECD average of 2.11, while that of the UK falls clearly below (OECD, 2012). If the theoretical argument that strictly protected permanent contracts create incentives for employers to offer temporary employment to labour market outsiders, then the risk of being employed on a temporary contract should be higher for German women then British ones. However, our data allow us to look at change over time spanning a time-period of 20 years. We can thus also 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 3.0 in 2008, while the UK has moved from 0.95 to 1.12 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? The regulation of temporary contracts is also stricter in Germany than in the UK. In 2008 Germany scored 1.25 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 regarding the regulation of temporary employment: the level of regulation has dropped continuously over the past 20 years, from 3.75 in 1990 to 1.25 in 2008. The UK, by contrast, has experienced a minute increase from 0.25 to 0.38 (OECD, 2012). If the deregulation of fixed-term contracts further increases the incentives to hire labour market outsider in contexts where regular employment is highly protected, we should find a significant increase of female temporary employment in Germany over time, while 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, Petit and Hook (2005) have provided evidence that high levels of childcare positively affect women's labour market participation. Prevalent neo-classical 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 very few private child care providers (Hank and Kreyenfeld, 2003) and public childcare provision – especially for children below 3 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 rather than the limited availability of childcare that affect female labour supply (Chevalier and Viitanen, 2002). Despite the differences in childcare provision in both countries, Germany and the UK are thus similar in one respect: childcare coverage rates for small children under 3 years of age are low. Moreover, attendance hours for children below 3 in both countries are low: in 2005 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 USA) (OECD, 2012a). Not surprisingly, then, both Germany and the UK 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 – will increase the likelihood of British and German women to be employed in atypical jobs. As argued above, 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. Likewise, the low average hours of attendance increase women's risk of part-time work.

In both countries we can observe notable increases in childcare enrolment rates (Gauthier, 2011). Over the period spanning from the early nineties to the late noughties coverage rates for children of pre-primary age have increased by 20 percentage points in Germany and by 36 percentage points in the UK (ibid.). Admittedly, this indicator is not ideal as it also includes children between 3 and 6 years of age for which coverage rates have always been less problematic (see e.g. Hank and Kreyenfeld, 2003; De Henau et al., 2008:37). However, we were not able to obtain time-series information on childcare coverage or spending which pertains to children below age 3 only. Nevertheless, it is unlikely that the notable increase in

both countries would have exclusively affected the care arrangements of children above 3 years of age. To the contrary, we deem it likely that the time trend of this indicator also captures a 'catching up' effect pertaining to the coverage of very small children.

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. 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, we predict that the number of dependent children as well as the presence of children under 3 years of age will increase the likelihood of part-time or marginal employment for female workers. Given that low levels of childcare coverage are also likely to prevent many women from out-sourcing their childcare duties thereby temporarily forcing them out of the labour market, we further predict that children increase women's risk to be employed on fixed-term contracts (assuming that employers prefer to use these risk-free contracts when hiring labour market outsiders with career interruptions). Moreover, we predict that higher levels of education reduce the risk of part-time employment, because for higher educated women part-time employment entails higher opportunity costs than for their lower-educated counterparts due to their stronger market specialisation. 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. Finally, it is predicted that a low spousal income will reduce the likelihood that a women is employed part-time.
- *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 substantial increase in childcare coverage in both countries.

Data and Sample Selection

This analysis uses data from the SOEP (German Socio-Economic Panel) and the BHPS (British Household Panel). The SOEPis a representative, interdisciplinary, and longitudinal survey of the German population (Frick, Groh-Samberg, Schupp, & Spieß, 2008). The panel began in 1984 and has been repeated yearly since then. For our analysis we apply the SOEP data from 1991 to 2010. The BHPS has a similar structure and logic like the SOEP. It started in 1991 and is an annual survey consisting of a nationally representative sample of originally 5,500 households and a total of approximately 10,000 interviewed individuals. Over the years there have been extensions of the original data set which covered about 10,00 households in the last wave of the BHPS proper in 2008/09 (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 in the wave colleted in 2008/09.

Following selections have been carried out in order to obtain the final sample for the analysis. Only women with ages between 25 and 54 have been selected. Further, only women have been considered who have a positive labour income and for whom occupation and labour hours information are available. After these selections, the resulting number of observations is about 60.000 in Germany and 41.000 in the UK. 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 (almost 90 percent) are working in the service sector. For the multivariate analysis, only women working in the service sector for whom partner information is available have been included in order to test the effect of household composition on labour supply. These selections reduce our number of observation to about 38.000 women in Germany and about 24.000 in the UK respectively.

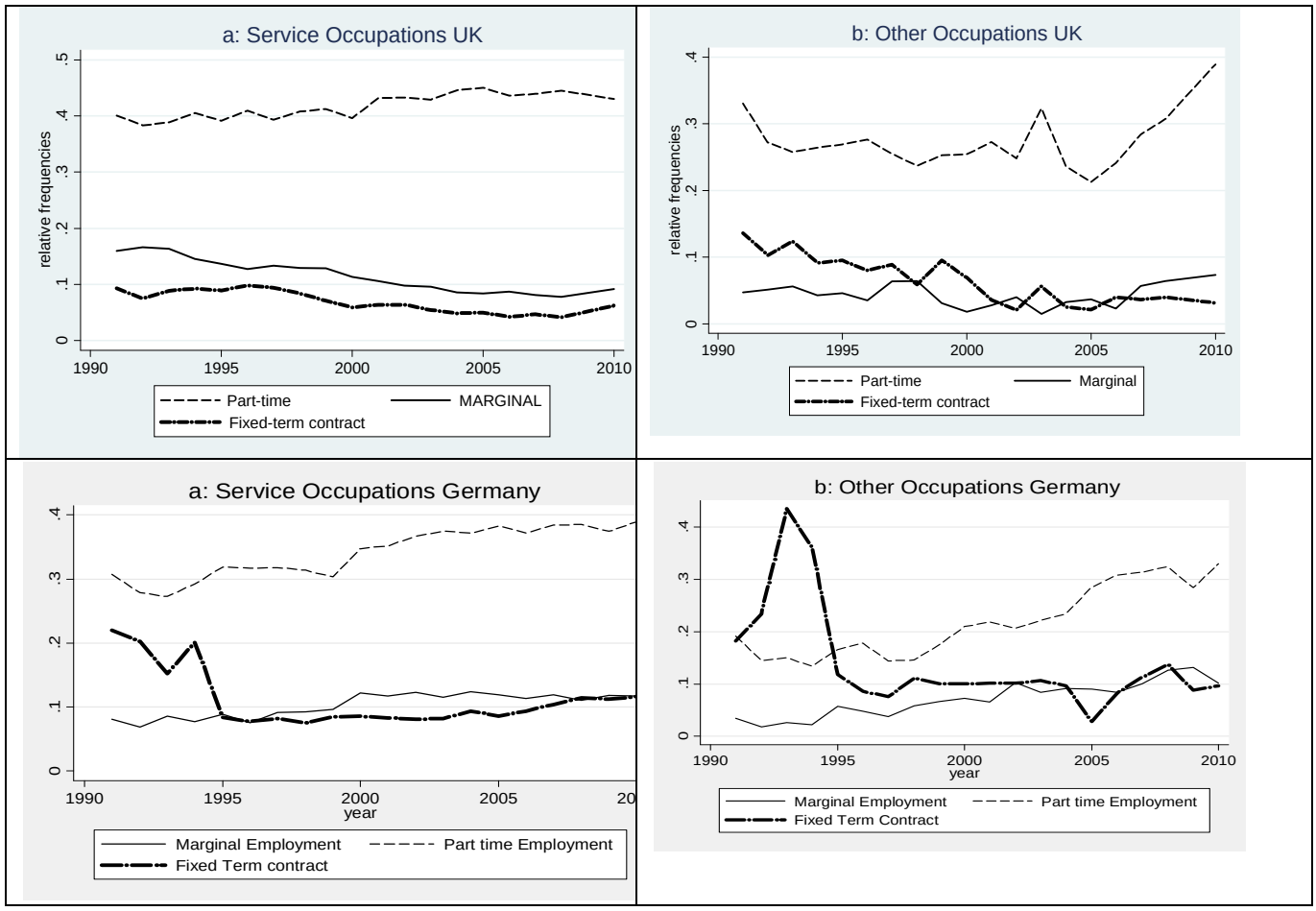
We distinguish between marginal employment (1 to 14 hours per week) and part time employment (15 to 34 hours per week). On fixed-term employment are those individuals who report to have a fixed-term contract.

Findings: Atypical Employment in Germany and the UK

Time Trends in Atypical Employment: Descriptive Evidence

Figure 1 shows the evolution of non-standard employment of women in our data. We contrast employment in the service sector with employment in other sectors. While part-time employment in service occupations in the UK went up slightly, 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 have gone down in 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. We find no clear evidence of the increased risk of fixed-term or marginal employment over time in either service occupations or other occupations. In sum, then, our data would neither suggest a strong increase in fixed-term or marginal employment over time nor clear differences in time trends between service occupations as compared to other occupations. Notably, however, in both Germany and the UK the incidence of part-time work has at all times been notably higher in the service sector.

FIGURE 1: Time Trends Female Atypical Employment in service occupations versus other



Source: For the UK BHPS and Understanding Society; for Germany SOEP. Own calculations.

In a next step we explore whether households have become increasingly dependent on atypical employment over time (TABLE 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. Unemployed singles and couples where both partners are unemployed or inactive are not included in the analysis. We find an increased tendency in Germany primarily, where the growth of atypical employment use 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 relevance of analysing deeply the determinants of atypical employment.

TABLE 1 – Households Dependent on Atypical Employment (all occupations) ; Probit Regression

	UK		**Germany**	
	Coeff.	s.e.	Coeff.	s.e.
1996-2000	0.041*	0.023	0.243***	0.022
2001-2005	0.032	0.022	0.340***	0.021
2006-2010	0.033	0.024	0.494***	0.021
Constant	-1.321***	0.017	-1.711***	0.017

Source: For the UK BHPS and Understanding Society; for Germany SOEP. Own calculations.
*P <0.1; **P <0.05;***P<0.001

Atypical Employment and Household/Family Context

As was outlined in the theory section of this chapter, 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. 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 2 explores atypical employment incidence by household type. We find that having children (whether in a relationship or not) has a strong bearing on women's incidence in part-time and marginal employment. There is less support, however, for the assertion that the household context affects the risk of fixed-term employment for women, the one exception being lone parents in Germany. These tendencies for women do not vary much by sector.

However, the non-existence of a 'household effect' of the descriptive results pertaining to fixed-term employment may be due to an age effect which is not controlled for here: young people have a higher risk of being in temporary employment while at the same time having a lower 'risk' of already having dependent children.

TABLE 2 – Atypical Employment of Women by Type of Household (in %)

	Service Occupations			**Other Occupations**		
Household Type	**Part-time**	**Marginal**	**Fixed-term**	**Part-time**	**Marginal**	**Fixed-term**
UK	**43.49**	**11.79**	**6.57**	**28.45**	**4.40**	**6.73**
Single	17.43	2.87	7.91	11.33		4.93
Couple no kids	25.28	4.62	5.48	11.34	3.31	4.63
Couple dep. Kids	53.54	17.5	7.41	43.20	6.31	9.89
Couple non-dep. Kids	50.79	10.42	4.36	22.84	3.62	4.72
Lone parent dep. Kids	54.21	12.27	7.55	40.76	1.63	4.42
Lone parent non-dep. kids	34.96	4.31	4.59	7.37	0	1.08
N of observations	*15,553*	*4,218*	*2,269*	*698*	*108*	*159*
GER	**34.90**	**10.72**	**9.57**	**21.48**	**6.92**	**10.59**
Single	**12.77**	2.99	12.54	9.47	4.16	10.84
Couple no kids	21.46	4.10	9.03	11.18	4.40	8.39
Couple dep. Kids	47.37	18.04	10.16	30.19	10.83	11.88
Couple non-dep. Kids	39.60	10.22	5.53	20.18	3.79	8.92
Lone parent dep. Kids	41.81	8.44	15.28	29.36	5.52	16.30
Lone parent non-dep. kids	24.37	3.49	5.87	9.38	4.69	9.85
N of observations	*17,486*	*5,371*	*3,848*	*1,236*	*398*	*437*

Source: For the UK BHPS and Understanding Society; for Germany SOEP. Own calculations.

Multivariate Estimations

Table 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 as well as household variables/partner characteristics and occupations. The aim of the latter variables is to determine what effect partners' socio-demographic status has on female supply to atypical employment. We find strong differences in the tendency to be employed as a part-time worker overtime 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 decreases over the time period. Moreover, marginal part-time work has also become more common in Germany over time, while there is a negative tendency for the UK. We observe notable differences between different types of service occupation. We find that that for women working in personal, protective and sales occupations the likelihood to work reduced hours is considerable higher than for those working in clerical and secretarial occupations. We find a similar tendency for public sector employment, which has also long been recognised as a female friendly employment sector that also offers reduced hour positions, though the public sector tends to be regarded as offering superior working conditions than the service sector is. Professional and technical occupations are associated with a lower likelihood to work part-time or marginal. The effect of having children in the household is as expected, women are considerably more likely to work reduced hours (both part-time and marginal part-time) if there are children in the household. 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 our prediction that opportunity costs attached to part-time work are higher for women with higher levels of education. We also know that many part-time jobs are less skilled 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 variation in the tendency to work part-time by migration status. We find that native born German and English women are considerably more likely to work part-time hours than foreign born women. This tendency has been previously documented for the UK (Dale et al., 2006). In the UK, we observe this also for marginal employment.

In line with our predictions, our analyses show strong effects of partner characteristics on women's tendencies to work reduced hours. Our results suggest that women whose partners earn a low income are considerably less likely to work part-time, or indeed marginal part-time, in both countries. However, it is interesting to note that the strength of the difference in this tendency appears more pronounced in Germany than it is of 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 UK women. We define low income as income below 60% of median equivalised household income, estimated separately for both countries.

We also find that women in Germany are much less likely to supply themselves to reduced hour jobs if their partner is working in the services sector themselves. This suggests that the employment conditions of service sector employment (with employment tending to be more unstable and less well paid) might discourage women from supplying themselves to a similarly less financially secure form of employment.

TABLE 3 Multinomial logit to be in part-time or marginal employment vs. full-time employment

	UK		GERMANY	
	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	-0.100	0.085
1996-2000	-0.321***	0.060	0.616***	0.069
2001-2005	-0.565***	0.062	0.947***	0.065
2006-2010	-0.718***	0.079	0.925***	0.070
Number of kids	1.095***	0.026	1.334***	0.030
Child under 3 years	0.723***	0.079	1.515***	0.0732
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	0.030	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***	0.091
Spouse service sector	-0.121**	0.050	0.393***	0.049

Table 3 continued	UK		GERMANY	
	Coeff.	s.e.	Coeff.	s.e.
Spouse self employed	0.252***	0.064	-0.138*	0.075
Spouse income too low	-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	-3.301***	0.641	-7.636***	0.686
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
1996-2000	-0.086**	0.043	0.362***	0.042
2001-2005	-0.026	0.042	0.623***	0.041
2006-2010	-0.021	0.051	0.634***	0.044
Number of kids	0.740***	0.019	0.906***	0.022
Child under 3 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
Spouse income too low	-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 occupations	0.864***	0.040	0.414***	0.043
Other service occupations	1.448***	0.078	1.090***	0.076
Constant	-3.503***	0.415	-7.036***	0.430

Source: SOEP, BHPS and Understanding Society, Only Women with Partner and service occupations only. Own calculations. N of observations (Germany)=28.298. *P <0.1; **P <0.05;***P<0.001

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 4). For fixed-term work we observe a decreased tendency for this form of employment for both countries over the observation window. Unlike part-time work, we find no disproportionate tendency for workers to be

employed on fixed-term contracts in the service sector in the UK, and observe no difference in the tendency between sectors in Germany. We do, however, find the public sector to disproportionately rely on fixed-term jobs in both countries. We control for working hours to account for the possible interaction between fixed-term contracts and reduced hour contracts. 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 age 3 in either country do not have increased odds of being employed on fixed-term contracts. However, our empirical evidence conveys that as women have more children they are more likely to be employed on fixed-term contracts. This does suggest that the experience of motherhood appears to have a cumulative (and negative) effect on women's employment status. Unlike part-time jobs, we find women with higher levels of education are more likely to be employed in fixed-term jobs. This tendency has been documented elsewhere as a function of fixed-term worker heterogeneity, with many fixed-term workers high skilled workers on probation before entry to a stable and skilled core (e.g. Gash 2008). We also find some evidence that partner characteristics predictive of women's odds to be employed fixed-term contracts, though they appear less important than for models looking at working-time.

***TABLE 4* – Probability to have a fixed term contract (Probit)**

	UK		GERMANY	
	Coeff.	s.e.	Coeff.	s.e.
Age	-0.024	0.024	-0.116***	0.024
Age squared	0.000	0.000	0.001***	0.000
UK-born / German	-0.247***	0.055	-0.034	0.060
1996-2000	-0.081**	0.039	-0.245***	0.045
2001-2005	-0.317***	0.041	-0.248***	0.044
2006-2010	-0.461***	0.053	-0.147**	0.046
Part-time	0.228***	0.033	0.079**	0.030
Number of kids	0.093***	0.017	0.092***	0.019
Child under 3 years	-0.111**	0.054	-0.083	0.048
Training	-0.106**	0.049	0.068	0.052
Tertiary education	0.098	0.066	0.157**	0.062
Public service	0.231***	0.034	0.213***	0.028
Self-employed	0.482***	0.056	0.307**	0.127
Spouse age	0.009	0.015	-0.009	0.020
Spouse age squared	0.000	0.000	0.000	0.000
Spouse training	0.148***	0.044	0.037	0.052
Spouse tertiary	0.382***	0.056	0.148**	0.059
Spouse service sector	0.062**	0.032	-0.020	0.031
Spouse self employed	0.029	0.042	-0.075	0.048
Spouse income too low	0.124***	0.041	0.075	0.048
Professionals	0.114**	0.053	0.423***	0.051
Associate professionals and technical	0.01965	0.046	0.096**	0.039
Personal, protective and sales occupations	0.020	0.042	0.165***	0.044
Other service occupations	-0.008	0.070	0.260***	0.072
Constant	0.067***	0.404	1.348***	0.363

Source: SOEP, BHPS and Understanding Society, Only Women with Partner and service occupations only. Own calculations. N of observations (Germany)=19.792. *P <0.1; **P <0.05;***P<0.001

Has the influence of household/family context on atypical employment changed over time?

As we have seen in the theoretical part, childcare coverage has improved in the period considered in both countries. Next, we test whether as a result of the improvement in childcare coverage the effect of having small children on the probability of atypical employment has changed over time. For this goal the period dummies have been interacted with the dummy variable which indicates whether there are small children in the household. In Table 5 the effects of these interaction terms on the probability to be in part-time or marginal employment are shown. The results differ between both countries. In Germany we observe that the effect of having small children on the probability to be in marginal and part-

time employment decreases with time, so that in the last period (2006-2010) we do not observe a significant effect of having small children. In the UK, we observe the opposite trend. The effect of having small children on the probability to be in marginal or part-time employment increases with time.

Although childcare coverage has increased in both countries we observe opposite trends. One possible explanation is the cost factor of childcare in the UK. While in Germany the improvement in childcare coverage has been mainly state funded, this is not the case in the UK. So that the increase in coverage in the UK has not been translated into changes in labour supply.

***TABLE 5* – Multinomial logit to be in part-time or marginal employment vs. full-time employment – Interaction effects.**

	UK		GERMANY	
	Coeff.	**s.e.**	**Coeff.**	**s.e.**
Marginal employment				
(CONTROLS NOT SHOWN)				
Small children in the Household (yes/no) x				
1996-2000	0.009	0.196	0.740***	0.192
2001-2005	0.314*	0.192	0.491**	0.178
2006-2010	0.624***	0.241	-0.264	0.186
Part time employment				
(CONTROLS NOT SHOWN)				
Small children in the Household (yes/no) x				
1996-2000	0.104	0.152	0.566***	0.153
2001-2005	0.545***	0.145	0.324**	0.141
2006-2010	0.727***	0.177	-0.056	0.146

Source: SOEP, BHPS and Understanding Society, Only Women with Partner and service occupations only. Reference period: 1991-1995. Own calculations. N of observations (Germany)=28.298.
*P <0.1; **P <0.05;***P<0.001

In table 6, we observe the effects of the interaction terms on the probability of having a fixed term contract. In the case of Germany 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 already observed in table 4 that for Germany the presence of small children is no determinant for having a fixed-term contract. This is not the case in the UK, where we observed that the presence of small children has a negative effect on the

probability of fixed term employment. By considering time effects, we observe that in the UK this negative effect increases in the last period (2006-2010) taking as a reference period 1991-1995.

***TABLE 6* – Probability to have a fixed term contract (Probit) – Interaction effects**

	UK		GERMANY	
	Coeff.	**s.e.**	**Coeff.**	**s.e.**
Fixed term employment				
(CONTROLS NOT SHOWN)				
Small children in the Household (yes/no) x				
1996-2000	-0.192	0.139	0.085	0.140
2001-2005	-0.071	0.130	0.101	0.133
2006-2010	-0.341*	0.184	0.057	0.136

Source: SOEP, BHPS and Understanding Society, Only Women with Partner and service occupations only. Reference period: 1991-1995. Own calculations. N of observations (Germany)=19.792.
*P <0.1; **P <0.05;***P<0.001

Summarising, we can conclude that childcare coverage may influence the effect of small children on labour supply, when the increase in coverage is state funded. Further, in spite of the improvements in childcare coverage the effect of having small children on the probability of having a fixed term contract has not changed significantly over time.

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