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# Working Paper Mobilising female labour market reserves: What promotes women's transitions from part-time to full-time work?

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# Mobilising female labour market reserves:

What promotes women's transitions from part-time to full-time work?

#### Abstract:

Considering the high female part-time rates in Norway, one may envisage a sizeable additional labour supply if more part-time working women would switch to full time. In view of an ageing population and increased demand for labour in the future, we investigate this issue by studying married and cohabiting women's transitions from part-time to full-time work based on panel data from 2003-2009. Contrary to evidence from other countries with well-established support for working mothers, we find that young children in the household still restrain Norwegian women's mobility to full-time work. On the other hand, there is a strong trend of higher full-time transition rates over our study period, which may reflect a vast expansion of the day care sector with more and cheaper day care, as well as a booming economy. Part timers who work in typical female occupations such as nursing, and sales and services are also less likely to switch to full time. Whether this is a result of true preferences or constraints is difficult to say, but previous research suggest that involuntary part time may be substantial. Voluntariness may further be a matter of degree, and "chosen" part timers may also switch to full time if conditions were right.

Keywords: Female labour supply, part-time, full-time transitions

JEL classification: J21, J22, J24, J13, J16

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#### Sammendrag

En felles utfordring for mange industrialiserte land er en raskt voksende eldre befolkning og stor etterspørsel etter fremtidig arbeidskraft. Mange ser derfor etter mulige måter for å kunne mobilisere flere arbeidskraftsressurser. I land der kvinnelig yrkesdeltaking er lav, kan mye oppnås gjennom offentlig politikk som gjør det mulig å kombinere familie og jobb, slik som lengre foreldrepermisjoner og økt tilgang på gode barnepassordninger. Men i land som Norge, der kvinnelig yrkesdeltaking allerede er svært høy, må politikerne se seg om etter andre løsninger. En mulig løsning kan være å få flere kvinner til å jobbe heltid, siden 40 prosent av alle kvinner, og nesten halvparten av alle mødre, fortsatt jobber deltid. I dette arbeidet studerer vi gifte og samboende kvinners overgang fra deltid til heltid basert på paneldata fra EU-SILC 2003-2009 og forsøker å identifisere faktorer som hemmer og faktorer som fremmer heltidsarbeid blant kvinner. I motsetning til enkelte funn fra andre land med godt utbygde ordninger for utearbeidende mødre finner vi at små barn fortsatt gjør at norske mødre lar være å gå fra deltid til heltid. På den annen side kan trenden med økende overgangsrater fra 2003 til 2009 reflektere både den sterke satsingen på barnehagesektoren med flere og billigere plasser og den økonomiske høykonjunkturen med stor etterspørsel etter arbeidskraft i denne perioden. Deltidsarbeidere i typiske kvinneyrker innen helse og sosialsektoren og i kontor-, salg- og serviceyrker er også mindre tilbøyelige til å begynne å jobbe heltid. Om dette skyldes virkelige preferanser eller strukturelle hindringer, er vanskelig å si, men tidligere forskning tyder på at det er en god del ufrivillig deltid i disse yrkene. Det vil også være ulike grader av frivillighet, og flere såkalt "frivillige" deltidsarbeidere kan også tenkes å begynne med heltid hvis omstendighetene var annerledes.

# Introduction

Most industrialised countries face an ageing population and a great demand for future labour, and countries like Norway already experience a shortage of labour in certain sectors of the economy, which persists in spite of the recent financial crisis. Norwegian women have a high employment level, but at the same time one of the highest part-time rates in Europe as well as in the Nordic countries (Bø, Kitterød, Køber, Nerland, and Skoglund, 2008). About 40 percent of all employed women work part time, and one may envisage a sizeable additional labour supply if more part-time workers would start to work full time. Part-time work may also have negative effects at the individual level. Although part timers in Norway usually enjoy working conditions similar to those in full-time work in terms wages and social rights, part time inevitably implies less income, and generally lower investments in work-related human capital and reduced pension disbursements. In this paper we study women's transitions from part-time to full-time work and try to distinguish barriers that prevent and measures that may release an increase in their labour supply.

In Norway, as well as at the international level, there is a large body of research on the prevalence and characteristics of various types of part-time work. Comparative welfare state research has focused on the role of political and institutional factors (Esping-Andersen, 1990 and 1999; Ellingsæter, 1992; Gash, 2008; O'Reilly and Bothfeld, 2002) as well as the role of national cultures and norms (Pfau-Effinger, 1998). For instance, it has been argued that a large service sector and poor public childcare facilities are important factors in promoting women's part-time work. It has also been emphasized that women's labour market participation and working hours are heavily influenced by the predominant norms and values concerning the gender division of labour in a country. Previous research at the national level in Norway has also shed light on the impact of women's family obligations, educational attainment, type of profession and sector of work (Kjeldstad, 2006), as well as the role of the "workculture" and incidence of part time, full time and overtime at the place of work (Abrahamsen, 2002). For instance, it is well established that part-time work is overrepresented among women with young children and those with less education, as well as in female-dominated occupations in the service sector, particularly in health and social work and in sales and services. Most studies of part-time work in Norway have been based on cross-sectional data. However, recent longitudinal analyses based on the panel part of the national Labour Force Surveys indicate that there are substantial mobility in and out of various types of part-time employment in Norway (Fevang, Røed, Raaum and Zhang, 2004; Nergaard, 2010). Several researchers, both in Norway and abroad, further argue that the couple perspective is promising in understanding female (and male) labour supply (e. g. Jacobs and Gerson, 1998, 2000; Jacobs and Gornick, 2001; Blossfeld and Drobnič, 2001; Verbakel and de Graaf, 2009; Abrahamsen and Storvik, 2002), but so far there has been little systematic research on the effect of the partner's characteristics on women's mobility between various working-hours arrangements.

A much debated question in analyses of women's part-time work is whether this adaptation is a result of preferences or constraints. The preference proponents argue that part time is a voluntary adaptation by women who have stronger family orientation and weaker work orientation than their high workoriented counterparts in full-time jobs (e.g. Fortin, 2005; Hakim, 2002). The constraint proponents, on the other hand, maintain that there are structural barriers that prevent women from working full time due to it's incompatibility with family obligations rather than their weaker work orientation (e.g. Ginn et al., 1996; McRae, 2003). This debate can only be resolved if there is an adequate understanding of the role of both preferences and institutional structures in women's employment adaptations. One problem in this connection is a lack of preference data, but evidence from studies that have had access to such information suggests that part time is quite frequently a "chosen" option in countries that are supportive of maternal employment and/or where part-time work is common and well integrated in the ordinary labour market (Gash, 2008; Booth and van Ours, 2010). Still, it is difficult to distinguish between "real" preferences and "accommodated" preferences, i.e. between women who work part time because this is what they really want versus women who say they prefer part time given the impossibility of balancing a full-time job with other obligations. Whether preferences determine women's labour market outcomes or whether preferences shift to reflect such outcomes is impossible to determine without preference measurements both before and after the actual behavioural changes.

Since we lack appropriate preference data, we cannot contribute to solve this puzzle, but would argue that voluntariness is a matter of degree, and that some of the so-called voluntary part timers may also switch to full time under different circumstances. Based on this assumption, we analyse the determinants of women's transitions from part-time to full-time work using panel data from the Norwegian EU-SILC surveys, which have a longer panel than the Labour Force Surveys. The EU-SILC data contains ample information on the labour force participation and working hours of all members of the household, and detailed information on income and education are linked to the data from Statistics Norway's registers. We look at married and cohabiting women of prime working age and investigate factors that are known to affect the prevalence of women's part-time work, such as for instance the number and ages of children in the household, educational attainment and type of occupation. In addition we consider the characteristics of the partner.

This paper thus adds to the existing literature by observing women over a longer time period, having better human capital data including health and more detailed information on educational level, and by examining several partner characteristics. The results show that young children in the household, health restrictions, higher age and employment in typical part-time jobs are factors that constrain Norwegian women's full-time transitions, whereas promoting factors at the individual level are higher education and self-employment. Increasing full-time entry rates over our study period further suggests that a flourishing economy and more and cheaper day care provide important incentives at the macro level. Somewhat surprising, there is only weak indication that the partner's characteristics have an impact on women's full-time transitions, but some of the results point in the expected direction and might have been significant in a larger sample.

## The Norwegian context

An important ambition of Norwegian work-family policies is to facilitate and enhance women's labour market participation, and women's employment rate is now nearly as high as men's. According to the Norwegian Labour Force Survey 2010, 75.5 percent of women aged 25-66 years were gainfully employed, whereas the corresponding figure for men was 82.2 percent (http://www.ssb.no/emner/06/01/aku/tab-2011-02-02-03a.html). However, women's part-time rate is still high by international standards. About four out of ten employed women work reduced hours, and the proportion is even higher when there are children in the household. According to the official definition in the Labour Force Statistics, the large majority of the part-time employees are so-called voluntary part timers (Kjeldstad, 2006). Recently, there has been a great deal of focus on the unutilised labour supply of involuntary part timers in Norway (NOU, 2004:29), but as already discussed, there may also be an unutilised reserve among the voluntary part-time workers that could be released if conditions were right.

Women and men still face different norms of caring and providing in Norway. While full-time work and long hours is still the norm for men, women face more mixed messages concerning the combination of employment and caring obligations. They are increasingly expected to provide for themselves and prioritize their career to the same extent as men do. Still, they face strong norms of spending much time with their children and adapting their employment to the family's need for care (Leira, 2006). Long working hours for the mother are often portrayed as incompatible with young children (Ellingsæter, 2005), and mothers are usually the ones to be blamed for the family's time crunch. Accordingly, Skrede (2004) has labelled the typical division of paid and unpaid labour in Norwegian couples 'gender-equality light'. Yet, childcare facilities have improved tremendously in Norway in recent years, and there is now a high coverage of affordable and high-quality public childcare, also for the youngest children. This may facilitate mothers' transition to full time. The fact that fathers are now increasingly expected to be involved in childcare may also be an important factor. Moreover, standard working hours in Norway are shorter than in many other countries; 37.5 hours per week.

Like the other Scandinavian countries, Norway has a highly gender-segregated labour market with high percentages of women in the public sector and in education, health and social work, and men concentrated in the private sector and in manufacturing and finance (Anker, 1998; OECD, 2000). Part time is common in typical female-dominated jobs, whereas long hours are widespread in typical male

jobs (Abrahamsen, 2002; Kjeldstad and Nymoen, 2004). Hence, public-sector jobs are usually depicted as more flexible and family friendly than private-sector jobs (Ellingsæter, 1999; Halrynjo and Lyng, 2009). The wage penalty due to children is also smaller in the public sector (Hardoy and Schøne, 2008), which may entail that people lose less in terms of wages from working reduced hours for some years. Moreover, female-dominated jobs are typically less well paid than male-dominated jobs, have shorter career ladders and fewer promotion possibilities. Therefore, if a couple finds it too strenuous with two full-time jobs, the female partner will usually be the one who reduces her hours. Good part-time jobs are generally easily available in Norway, particularly for parents. According to the Norwegian Work Environment Act, parents have the right to work reduced hours unless this puts the interest of the company seriously at risk.

Like in many other countries it has been disputed whether the growth in part-time work since the early 1970s has been driven by supply or demand. Researchers now generally agree that part-time work is a result of both supply and demand factors. On the one hand, people may prefer reduced hours because this enables the combination of employment and other activities, such as unpaid family work, education or leisure activities. On the other hand employers in certain industries and occupations may offer part-time contracts in order to accommodate the company's productions processes. In Norway, this is particularly true in the service sector where staff is needed round the clock, sometimes with shifting work-loads.

Overall, part-time jobs in Norway now show few signs of being marginal employment (Ellingsæter, 2009). In the early 1980s, part-time work underwent a normalisation process in that part-timers increased their hours, got more secure work contracts and more frequently belonged to a labour union (Ellingsæter, 1989). In more recent work, Hardoy and Schøne (2004) and Schøne and Hardoy (2006) also report of relatively small wage differences between part timers and full timers. However, Abrahamsen (2001 and 2002) suggests that part time may have other negative consequences, such as poorer career prospects, less challenging work and less favourable working conditions. Longer spells of part time may also reduce women's human capital, and result in lower income and old-age pension, relative to working full time. However, women in their prime working ages in Norway now rarely work very short hours, i.e. less than 20 hours per week.

## **Previous research**

The prevalence and characteristics of part-time work have often been explored with cross-sectional data in Norway (for instance Abrahamsen, 2002; Kjeldstad, 2006; Næsheim and Lohne, 2003), whereas longitudinal analyses of flows in and out of part-time work are more rare except for a few recent contributions. Exploring the flows in and out of involuntary part-time work based on the

Norwegian Labour Force survey 1997-2003, Fevang et al. (2004) found considerable mobility between different states. The expected duration of spells with underemployment was no more than two quarters, and a considerable proportion obtained longer working hours after a spell of underemployment. Longer hours were more frequently obtained by men than women, more frequently among the more educated than the less educated, more frequently by the younger than the older, and more frequently among professional nurses than less educated health- and social workers.

Also utilizing the Labour Force Survey, Nergaard (2010) explored the mobility from one year to the next between short part-time, long part-time and full-time work in the Nordic countries during 2000-2006. Only changes of at least five hours were counted. She discovered considerable mobility between different states in all the countries, and particularly among Norwegian women, who also had the highest part-time rate. They shifted to longer hours more often than women in the other countries, but also had the highest mobility from longer to shorter hours. Women with children increased their working hours more seldom than other groups in the labour market, whereas young employees, fixed-term employees and self-employed persons were overrepresented among part timers who extended their working time. Nergaard (2010) found, however, no clear effect of educational level or industry of employment when transitions to longer working hours were concerned.

Internationally, there are more studies of women's transition from part-time to full-time work, some comparing differences between countries and some exploring country-specific processes. For instance, Gash (2008) investigates whether women work part-time through preference or constraint by analysing the mobility from part-time to full-time work in Denmark, France and the UK based on the European Community Household Panel (ECHP) for the years 1994-2001. She assumes that countries supportive of maternal employment, such as Denmark and France, will have greater proportions of "chosen" as opposed to "constrained", part-time workers than the UK with its poor childcare facilities and long standard working hours. Her principal independent variables are the respondent's selfreported reasons for working part time as well as the number and ages of children in the household. In agreement with her expectations, she found no negative effect of young children on women's transition to full-time employment in Denmark and France, whereas the presence of children in the home negatively affected part-time workers' transitions to full time in the UK. The supposition that women's self-reported reasons for working part time were stronger predictors of changes from part time to full time in Denmark and France, than in the UK, was only modestly supported, but more so for Danish than for French women. Gash argues that countries such as Denmark, with good public childcare facilities, short standard working hours and good access to high-quality part-time work, provide the best opportunities for women to obtain their preferred working hours, whether it is part time or full time. According to this reasoning, Norwegian part-time working women are mostly

voluntary part timers and face no strong hindrances if they want to extend their hours. Still, in a recent analysis, Rønsen and Kitterød (2010) found that about 30 per cent of female employees who worked short part time (1-19 hours) preferred to work longer hours, and among those who worked long part time (20-36 hours) the proportion was almost 20 per cent. Thus, constraint is still an element to be considered in the labour market adaptations of Norwegian part-time workers.

O'Riley and Bothfeld (2002) examine whether transitions through part-time work facilitate women's integration into the labour market in Britain and Western Germany based on panel data from 1991-1995. They look at the effect of human capital such as educational attainment and previous employment status, labour market segmentation such as size of the firm and sector of work, with particular focus on various types of services, and finally, household- and life-course characteristics such as respondent's age, number and ages of children in the household, the presence of a partner, the partner's employment status, and household income. In both countries, the proportion of women with a transition to full-time work was more modest than the transition into non-employment. Hence, they conclude that part-time work as a temporary alternative to full-time was very rare in both countries in the early 1990s. Also in both countries, having previously held a full-time job strongly increased the likelihood of returning to full time after a spell of part-time work. Surprisingly, women's level of education was of no importance, nor did the labour market segmentation variables have any effect in either country. However, young children in the household prevented women's transitions to full-time work which probably reflects the poor childcare facilities in both countries at that time. In Britain, there was also a noticeable difference by age in that younger women were more likely to shift to fulltime work than older women. The partner's employment status had no impact in any country, but in Germany, women in high-earning households were less likely to shift to full-time work compared with women in low-income households.

#### **Data and methods**

The analysis is based on data from the Norwegian EU-SILC survey (European Union Statistics on Income and Living Conditions). The survey has been conducted every year since 2003 and includes cross-sectional as well as panel information. It covers topics such as housing, economy, child care and employment, and information on income, property, education and place of work is linked to the survey data from various registers. Individual people are sampled for the survey, but information is collected for all household members 16 years and older. Each individual is asked to participate in eight waves, and one eighth of the sample is replaced by new respondents every year.

The survey has a personal part on health and employment activity, which can only be answered by the respondent him/herself, and a part on housing, economy and childcare, which may be answered by the respondent or another household member. Finally, all household members 16 years and older are asked

about their employment activity. This information may be provided by the respondent if the household members are not present and cannot be easily contacted. There are fewer questions on employment activity for the household members than for the respondent him/herself, however. For instance, household members are not asked if they have a leading position or not, but this is captured for the respondent.

Our group of interest is married or cohabiting women aged 25-54 who at least once answer that they work part time. Information on working hours was captured by a question on how many hours they usually work per week in their main occupation as well as in a possible secondary occupation. Working hours in our analysis are the total hours from both main and secondary occupations. Part time is classified as working less than 37 hours, except for respondents who work 32-36 hours and claim that this constitutes full time in their current job. We utilise data from seven waves collected in 2003-2009.

As information is recorded on an annual basis, we use a discrete time event history model to explore the association between several independent variables and the decision to switch from part-time to full-time work. Exposure time or duration is a central variable in hazard rate models. In our case it is the number of years since we first observe the woman as a part-time worker in the panel and until she starts working full time, stops working, no longer belong to our study group (i.e. become older than 54 years or single), or exits the panel for some other reason. That is, we right-censor women on the first occurrence of such events. Besides, some of the women in our data will be left-censored, as they may have worked part time before they were first observed in the panel. Some women may therefore have been longer "under risk" of changing from part time to full time than we observe.

There were 1 441 married or cohabiting women aged 25-54 years who worked part time at least once during the interview rounds. However, in order to observe a change in working hours, we need information from at least two consecutive years. This means that women who worked part time in 2003, but left the panel in 2004, drop out of the analysis, as do women who were first observed as part-time workers in 2009. Our final analysis sample is thus reduced to 919 women who contribute with a total of 2 717 person years, of which 1 798 are used in the hazard rate model<sup>1</sup>. In Figure 1 we show a survival plot of the transitions to full time during the follow-up period for these part-time workers. The plot depicts the "survival rate" as a part-time worker, and indicates that after three years 37% had started working full time. After five years 59% are still working part time. The transitions at the end, however, are based on a small number of cases as many of the observations will be censored during the follow-up period.

<sup>&</sup>lt;sup>1</sup> In the estimation procedure, the first year of part-time work drops out as there are no transitions that year. The number of observations used is thus 2717 - 919 = 1798. In addition one observation is lost due to missing value on one covariate.

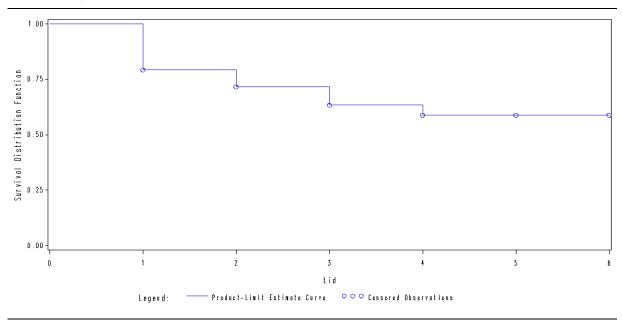


Figure 1. Kaplan Meyer plot of transitions from part-time to full-time work. Norwegian married and cohabiting women 25-54 years

# **Independent variables**

The covariates in the model are variables that reflect domestic duties, women's human capital and labour market resources, employment status and occupational characteristics, as well as characteristics of the partner. Below we describe the variables in more detail and discuss their expected effects. Descriptive statistics measured the first time women are included in the analysis (i.e. the year after they are first observed as a part-time worker) are shown in Table 1.

#### **Domestic duties**

*Children in the household*: Combining children and full-time employment may be strenuous, and hence, we assume that young children and more children decrease women's likelihood of shifting from part time to full time. Still, previous evidence from Denmark, France and Britain indicate that young children are less restrictive for mothers' full-time transitions when child-care provisions are good (Gash, 2008). As child-care in Norway is now generally easily available and relatively cheap, the effect of children in the household may be less important also here. In the model we distinguish between women with no children below age 18 in the household and women with one or more children where the youngest child is aged 0-5, 6-12, and 13 years or more (see Table 1)<sup>2</sup>. Women with no children constitute the reference group.

<sup>&</sup>lt;sup>2</sup> We also tested a model with number of children as covariate, but this variable had no significant effect.

Independent variable	Ν	Per cent
Children		
No children below 18 years	269	29.3
Youngest child 0-5 years	292	31.8
Youngest child 6-12 years	253	27.5
Youngest child 13-17 years	105	11.4
Respondent's education		
Primary school	88	9.6
Secondary school	463	50.4
University, short	318	34.6
University, long	35	3.8
Missing	15	1.6
Respondent's age	10	1.0
25-34 years	251	27.3
35-44 years	369	40.2
		32.5
45-54 years	299	32.5
Respondent has health restrictions	1.50	16.2
Yes	150	16.3
No	768	83.7
Respondent is a student		
Yes	45	4.9
No	874	95.1
Respondent is self-employed		
Yes	36	3.9
No	883	96.1
Respondent's weekly working hours	919	25.2
Respondent's occupation		
Teaching	105	11.4
Professional and practical nursing	166	18.1
Other professional and practical health and social workers	99	10.8
Senior managers and professionals	81	8.8
Other high-school professionals	103	11.2
Clerical work, sales and services	243	26.4
	92 92	
Other occupations		10.0
Missing	30	3.3
Respondent's union status		
Married	668	72.7
Cohabiting	251	27.3
Male partner's education		
Primary school	106	11.5
Secondary school	480	52.2
University, short	184	20.0
University, long	96	10.5
Missing	53	5.8
Male partner's weekly working hours		
Not working	57	6.2
1-37	102	11.1
38-44	532	57.9
45 hours +	202	22.0
Missing	26	2.8
Male partner's income (NOK)	51.4	55.0
- 299 999	514	55.9
300 000–399 999	208	22.6
400 000-499 999	87	9.5
500 000 +	71	7.7
Missing	39	4.2
Calendar year		
2004	309	33.6
2005	208	22.6
2006	137	14.9
2007	106	11.5
2008	100	10.9
2008		
2009	59	6.4

Table 1. Descriptive statistics of independent variables measured at first year of inclusion in the analysis. Norwegian women 25-54 years

#### Human capital resources:

*Respondent's educational attainment:* Educational attainment represents an important labour market resource. Highly educated women have invested more in their labour-market qualifications than the less educated and may therefore lose more in terms of skills, promotion opportunities and wages from working reduced hours. They may also have more interesting jobs than the less educated. Hence, we expect higher mobility to full-time work for highly educated part timers. We distinguish between four levels of education: primary school (reference), secondary school and short and long university education (1-4 years versus minimum 5 years). As mentioned above, Nergaard (2010) found no clear effect of educational level on transitions to longer working hours in Norway, but she did not distinguish between short and long university education. Cross-sectional studies of women's labour market behaviour suggest that this distinction is important to make, however. For instance, women with at least five years of university education usually work longer hours than the less educated (Kitterød, 2010).

*Respondent's health:* Good health is an important labour market resource. We expect that part timers without health limitations shift to full time work more often than those without such limitations. Our health indicator is based on a question capturing whether or not the respondent is limited in their activities by health problems.

*Respondent's age:* Assuming that older women have more labour-market experience and thereby more human capital than the younger ones, we include respondent's age as an indicator of labour market resources. In the model we discriminate between three age groups: 25-34 years (reference), 35-44 years and 45-54 years. The association with mobility to full-time work is not clear a priori, however. On the one hand, we may expect that older women are more likely to shift to full-time work since they are more experienced and therefore more easily may obtain a full-time job. On the other hand, older women probably have reached their career ambitions more often than those who are younger and therefore tend to be satisfied with a part-time position. The predicting power of age as indicator of labour-market experience may further be limited as women take longer or shorter career breaks, and tenure with the present employer may be more important than their total employment experience. Moreover age may reflect vitality and strength, and also birth cohort as 45-54 year old women were mainly born in the 1950s, while 25-34 year old women were mainly born in the 1970s. Since part-time work was more of a norm and common practice in the older generation, it may be more persistent in this group.

#### **Employment status, working hours and occupational characteristics**

*Respondent's employment status:* Assuming that self-employed have a greater say over their working hours than employees have, and that self-employment often requires much involvement and long hours, we expect higher mobility to full-time work among self-employed than among employees (the reference group). There is also a small minority of unpaid family workers, who are classified as self-employed in the analysis.

*Respondent's working hours:* Since the part timers in our analysis work a variety of hours ranging from 1-36, we control for weekly working hours in the model. It is a continuous variable that is lagged one year. Presumably, it will be easier to switch to full time if the hours are fairly long already. Hence, we expect a positive association between the part timers working hours and their transitions to full-time work.

Respondent's occupation: Based on the Norwegian Standard Classification of Occupations, we differentiate between seven occupational groups, namely teaching (reference), professional and practical nurses, other health and social workers, leaders and academic workers, other university professions, clerical work and sales and services, and finally a residual group of "other occupations", which mainly includes jobs in the primary industries, transport and manufacturing, craft and trade workers and jobs with no educational attainments. This classification is particularly suitable for categorizing women's occupations in studies of women's employment in Norway (Håland and Næringsrud, 2004). We are especially interested in occupations with high part-time rates, such as professional and practical nursing and clerical work, sales and services. Since a high part-time rate implies many potential "changers", we might expect higher mobility to full time in these occupations. However, this presupposes that there are few constraints on the demand side, which is questionable at least when the health and social sector is concerned where previous research has documented a greater predominance of involuntary part-time than in other sectors of the economy (Moland and Gautun, 2002). Besides, women in these occupations are likely to have a long part-time experience. All in all, we would therefore expect lower transitions to full time in typical part-time occupations than in other occupations.

*Respondent is a student:* Since it is quite common for students to work part time, and their full-time transition pattern may differ from those who have finished their education, we include a dummy for being a student as control. Those reporting that they attend school or study at least ten hours per week are classified as students in the analysis. As long as the education is ongoing, we expect part-time working students to be less likely to switch to full time than others, since they have less time available

for other activities. However, upon completion of education, students are probably more likely to start working full time than others. The expected effect of being a student is therefore not certain a priori.

#### Union status and partner characteristics

*Union status:* Although tax policy and the social security system have moved in the direction of equating cohabitation with marriage in Norway, married couples are more likely to pool their economic resources than are cohabiting couples, at least if they have no marriage plans (Lyngstad et al., 2010). Previous research has also found that cohabiting women are less inclined to work part time than their married counterparts (Kjeldstad and Nymoen, 2004). We therefore include a dummy indicating whether the woman is married or cohabiting.

*Partner's educational attainment:* Since highly educated men usually have more modern views on women's employment and family role than the less educated (Knudsen and Wærness, 1996), we hypothesise that they are more supportive of their partner shifting from part time to full time. Female part timers with a highly educated partner may therefore switch to full time more often than those with a less educated partner. We include the same dummies for the partner's educational attainment as we do for the respondent herself. Since information on partner's education is lacking for about 5 per cent of the sample, we include missing as a separate category to avoid having to discard these observations.

*Partner's weekly working hours:* It is unclear from existing theories and research what association we may expect between a female part-timer's likelihood of switching to full-time work and her partner's working hours. According to Becker's theory on comparative advantages and specialisation (Becker 1991), we would assume that long working hours for the partner reduce a woman's likelihood of changing to full-time work. Also more practical considerations concerning the time schedules and domestic needs of families may suggest specialisation and mutual adjustments between the partners' time inputs in the labour market. Particularly if the partner works long hours, a switch to full-time work for the woman may entail stress and time pressure for the couple.

As opposed to the theory on specialisation, the social capital theory predicts a positive relationship between the partners' labour market resources. It is assumed that the partners may provide each other with skills, network resources and knowledge and thereby help each other to find good jobs and enhance their labour supply. According to this theory, having a resourceful partner would facilitate both men's and women's employment and careers. Verbarkel and de Graaf (2009) argue, however, that positive partner effects are dominant in predicting husbands' and wives' job level, but not their working hours, since there is a natural boundary for the couple's total working hours. Still, up to a certain limit there may be a positive association between the partners' working hours, because carrieroriented partners may stimulate and encourage one another to put in large efforts in the labour market (Aarseth, 2007). According to this perspective, we would expect that long working hours for the partner increase the likelihood of switching to full time for female part timers.

It may also be argued that that the partners' working hours may be mutually independent so that the male partner's working hours does not affects a female part timer's likelihood of shifting to full-time work at all. Women as well as men are increasingly expected to provide for themselves, and in Norway entitlements in the national insurance and social security systems are strongly linked to individual earnings. Moreover, good access to public childcare and after-school programs may lessen the need for fathers to work less even if mothers work more.

In the analysis, the partner's working hours are categorised as follows: Not employed (0 hours), 1-37 hours, 38-44 hours, and 45 hours + per week. Because some woman have missing information on partner's working hours (about 3 per cent), we also include missing as a separate category for this variable.

*Partner's income after tax:* Assuming that a high income for the partner reduces part-time working women's propensity to extend their paid hours, we include the partner's income in the analysis. We look at income after tax and include income from employment, property income and various transfers. Income is measured in Norwegian Kroner (NOK) and divided into less then 300000, 300000-300999, 400000-499999 and 500000 or more. Due to about 4 per cent with missing information on partner's income, this variable also has a separate category for missing values.

#### Macro trends

We include *calendar year* in the model primarily to control for trends in labour demand and day-care supply during our study period. During most of the period there was a strong economic upturn in Norway, which peaked in 2008 and was followed by a slight downturn in 2009 after the global financial crisis. Increasing labour demand may make it easier to obtain full-time work for those who prefer, which is supported by recent Norwegian research (Kjeldstad, 2009). On the other hand, contented part timers may feel safer in their jobs when the economy is booming, and therefore be less eager to change to full time than in times with lower job security. The years 2003-2009 was also a period of rapid expansion of the day-care sector and increasing day-care supply. Accordingly, the proportion of pre-school children (1-5 year olds) enrolled in day-care institutions rose from 69 per cent in 2003 to 89 per cent in 2009, and the growth among 1-2 year olds was even larger, from 44 to 77 per cent. Furthermore, the parental pay for a day-care place was reduced substantially during 2003-2006 following a political compromise introducing maximum fees from May 2004. More and cheaper day

care is likely to encourage women to work longer hours and promote full-time work. All in all, we therefore expect the macro trends of increasing labour demand and better day care supply to have contributed to increasing transitions from part-time to full-time work during 2003-2009.

# Results

The results from our multivariate analysis are reported in Table 2. The estimates are reported as odds ratios. This means that coefficients lower than one indicate a negative effect, and coefficients higher than one indicate a positive effect. Turning to domestic duties, we find that young children in the household are still a constraint in women's transitions to full-time work. Since Norway is a country with relatively good childcare provision, this does not corroborate the hypothesis that children are no longer an obstacle to women's full-time engagement in countries with good institutional work-family support as suggested by the above-mentioned study of Denmark and France by Gash (2008). However, in her analysis Gash controlled for women's main reason for working part time, where one of the options was "housework/looking after others". When compared to those who answered "want but cannot find a full-time job", those who regarded housework and childcare as the main reason for part-time work were less likely to move to full-time work in Denmark, but their more persistent part-time work was then interpreted more as a preference than a constraint. This could of course also be the case in Norway, but since we lack information on preferences for a large proportion of our part timers,<sup>3</sup> we cannot disentangle these influences in the present analysis.

As expected, we find a strong negative effect of health restrictions and a positive effect of higher education on transitions to full-time work, indicating that human capital resources and earnings potential are important determinants of women's decision to work longer hours. As previous studies rarely have had access to information on health, the clear negative impact of health restrictions has received little attention so far. Moreover, our analysis documents that the educational differentials are mainly between women with long university education and women at lower levels of education. This may be one reason why previous Norwegian studies that do not distinguish between long and short university courses, have found no clear effect of education (Nergaard, 2010). Similarly, O'Reilly and Bothfeld (2002) do not detect any positive educational impact on part-time to full-time mobility for either British or Western-German women when collapsing all education A-levels and above. Gash (2008), on the other hand, finds a positive effect of higher education on British women's propensity to switch from part time to full time when distinguishing between university education and upper secondary education.

<sup>&</sup>lt;sup>3</sup> Women who work less than 30 hours per week were also asked about their main reason for working part time in our survey data, but we use a broader definition of part time as many women work long part time, and this often constitutes more than 30 hours per week.

Children (ref: no children in household) Youngest child 0-5 years Youngest child 6-12 years Youngest child 13-17 years Respondent's education (ref: primary school) Secondary school University, short University, long Respondent's age (ref: 25-34 years) 35-44 years 45-54 years Respondent has health restrictions (ref: no) Yes Respondent is a student (ref: no) Yes Respondent is self-employed (ref: employee) Yes Respondent's occupation (ref: teaching) Professional and practical nursing	0.576 0.773 1.041 0.937 1.036 2.574 0.662 0.452 0.508 0.629 5.261	0.381-0.871 0.521-1.148 0.675-1.605 0.590-1.487 0.613-1.752 1.176-5.634 0.462-0.948 0.292-0.697 0.339-0.763
Youngest child 6-12 years Youngest child 13-17 years <b>Respondent's education (ref: primary school)</b> Secondary school University, short University, long <b>Respondent's age (ref: 25-34 years)</b> 35-44 years 45-54 years <b>Respondent has health restrictions (ref: no)</b> Yes <b>Respondent is a student (ref: no)</b> Yes <b>Respondent is self-employed (ref: employee)</b> Yes <b>Respondent is self-employed (ref: employee)</b> Yes <b>Respondent's working hours</b> <b>Respondent's occupation (ref: teaching)</b>	0.773 1.041 0.937 1.036 2.574 0.662 0.452 0.508 0.629	0.521-1.148 0.675-1.605 0.590-1.487 0.613-1.752 1.176-5.634 0.462-0.948 0.292-0.697 0.339-0.763
Youngest child 13-17 years <b>Respondent's education (ref: primary school)</b> Secondary school University, short University, long <b>Respondent's age (ref: 25-34 years)</b> 35-44 years 45-54 years <b>Respondent has health restrictions (ref: no)</b> Yes <b>Respondent is a student (ref: no)</b> Yes <b>Respondent is self-employed (ref: employee)</b> Yes <b>Respondent is working hours</b> <b>Respondent's occupation (ref: teaching)</b>	1.041 0.937 1.036 2.574 0.662 0.452 0.508 0.629	0.675-1.605 0.590-1.487 0.613-1.752 1.176-5.634 0.462-0.948 0.292-0.697 0.339-0.763
Respondent's education (ref: primary school)Secondary schoolUniversity, shortUniversity, longRespondent's age (ref: 25-34 years)35-44 years45-54 yearsRespondent has health restrictions (ref: no)YesRespondent is a student (ref: no)YesRespodent is self-employed (ref: employee)YesRespondent's working hoursRespondent's occupation (ref: teaching)	0.937 1.036 2.574 0.662 0.452 0.508 0.629	0.590-1.487 0.613-1.752 1.176-5.634 0.462-0.948 0.292-0.697 0.339-0.763
Secondary school University, short University, long Respondent's age (ref: 25-34 years) 35-44 years 45-54 years Respondent has health restrictions (ref: no) Yes Respondent is a student (ref: no) Yes Respondent is self-employed (ref: employee) Yes Respondent's working hours Respondent's occupation (ref: teaching)	1.036 2.574 0.662 0.452 0.508 0.629	0.613-1.752 1.176-5.634 0.462-0.948 0.292-0.697 0.339-0.763
University, short University, long Respondent's age (ref: 25-34 years) 35-44 years 45-54 years Respondent has health restrictions (ref: no) Yes Respondent is a student (ref: no) Yes Respondent is self-employed (ref: employee) Yes Respondent's working hours Respondent's occupation (ref: teaching)	1.036 2.574 0.662 0.452 0.508 0.629	0.613-1.752 1.176-5.634 0.462-0.948 0.292-0.697 0.339-0.763
University, long <b>Respondent's age (ref: 25-34 years)</b> 35-44 years 45-54 years <b>Respondent has health restrictions (ref: no)</b> Yes <b>Respondent is a student (ref: no)</b> Yes <b>Respondent is self-employed (ref: employee)</b> Yes <b>Respondent's soccupation hours</b> <b>Respondent's occupation (ref: teaching)</b>	2.574 0.662 0.452 0.508 0.629	1.176-5.634 0.462-0.948 0.292-0.697 0.339-0.763
Respondent's age (ref: 25-34 years) 35-44 years 45-54 years Respondent has health restrictions (ref: no) Yes Respondent is a student (ref: no) Yes Respodent is self-employed (ref: employee) Yes Responden's working hours Respondent's occupation (ref: teaching)	0.662 0.452 0.508 0.629	0.462-0.948 0.292-0.697 0.339-0.763
35-44 years 45-54 years Respondent has health restrictions (ref: no) Yes Respondent is a student (ref: no) Yes Respodent is self-employed (ref: employee) Yes Responden's working hours Respondent's occupation (ref: teaching)	<b>0.452</b> <b>0.508</b> 0.629	0.292-0.697 0.339-0.763
45-54 years <b>Respondent has health restrictions (ref: no)</b> Yes <b>Respondent is a student (ref: no)</b> Yes <b>Respodent is self-employed (ref: employee)</b> Yes <b>Responden's working hours</b> <b>Respondent's occupation (ref: teaching)</b>	<b>0.452</b> <b>0.508</b> 0.629	0.292-0.697 0.339-0.763
Respondent has health restrictions (ref: no) Yes Respondent is a student (ref: no) Yes Respodent is self-employed (ref: employee) Yes Responden's working hours Respondent's occupation (ref: teaching)	<b>0.508</b> 0.629	0.339-0.763
Yes Respondent is a student (ref: no) Yes Respodent is self-employed (ref: employee) Yes Responden's working hours Respondent's occupation (ref: teaching)	0.629	
Respondent is a student (ref: no) Yes Respodent is self-employed (ref: employee) Yes Responden's working hours Respondent's occupation (ref: teaching)	0.629	
Yes Respodent is self-employed (ref: employee) Yes Responden's working hours Respondent's occupation (ref: teaching)		0 210 1 241
Respodent is self-employed (ref: employee) Yes Responden's working hours Respondent's occupation (ref: teaching)		0 210 1 241
Yes Responden's working hours Respondent's occupation (ref: teaching)	5,261	0.319-1.241
Responden's working hours Respondent's occupation (ref: teaching)	5.261	
Respondent's occupation (ref: teaching)		2.847-9.724
	1.035	1.016-1.054
	0.497	0.296-0.835
Other professional and practical health and social workers	0.832	0.470-1.472
Senior managers and professionals	1.108	0.651-1.886
Other high-school professionals	0.893	0.553-1.440
Clerical work, sales and services	0.481	0.292-0.793
Other occupations	0.455	0.244-0.851
Respondent's union status (ref: married)		
Cohabiting	1.166	0.865-1.573
Male partner's education (ref: primary school)		
Secondary school	1.047	0.700-1.565
University, short	0.979	0.608-1.577
University, long	0.887	0.491-1.600
Missing	2.966	1.215-7.243
Male partner's working hours (ref: not working)		
1-37 hours	1.090	0.708-1.680
38-44 hours	1.449	0.897-2.343
45 hours +	0.720	0.356-1.459
Male partner's income (ref: ≤ 299 000 NOK)	0.720	0.000 1.109
300 000-399 000	0.924	0.671-1.272
400 000-499 000	0.795	0.504-1.255
500 000 +	0.701	0.425-1.156
Calendar year (ref: 2004)	0., 01	0.120 11100
2005	1.401	0.880-2.232
2006	2.076	1.299-3.318
2007	2.342	1.444-3.799
2008	2.342	1.489-4.038
2009	2.432	1.171-3.611
Duration (ref=1 year)	2.037	1.1/1-3.011
2 years	0.621	0.451-0.855
3 years	0.421	0.269-0.660
4 years	0.421	0.269-0.850
5 years	0.478	0.209-0.830
J years	0.490	0.220-1.003

 Table 2. Transitions from part-time to full-time employment. Norwegian married and cohabiting women 25-54 years.

 Discrete hazard rate model. Odds ratios

Number of obs (person-years) Bold: p<=0.05, italics: p<=0.10.

The primary intention of our last human capital indicator, respondent's age, was to capture differentials in women's labour market experience. However, age has several caveats as indicator of employment experience, as mentioned earlier. It does not take into account women's career breaks due to childbirth and childcare, nor does it tell anything about tenure with the present employer, and even

if we control for health restriction, age may pick up other health-related attributes like strength and vitality. Furthermore, there may be a cohort effect involved, as our youngest and oldest age-groups are born twenty years apart. Finally, the association between experience and full-time transitions is not unambiguous, as argued before. More experience may make it easier to get a full-time job and therefore lead to more full-time transitions, but the more experienced may also be more satisfied with shorter hours and therefore be more persistent part-time workers. In our model, age turns out negative and significant, suggesting that the latter argument weighs more heavily than the former. However, the negative association may also in part be due to less vigour and vitality among women in the oldest age group, and/or to part-time work being more of a norm and common practice in this group, which was born mainly in the 1950s and entered the labour market in the 1970s, the prime part-time era in Norway.

When the respondent's job characteristics are concerned, we find that professional and practical nurses, clerical workers and sales and service workers, and women in "other occupations" (mainly jobs with few formal educational requirements) have significantly lower full-time transition rates than teachers which is our reference group. The occupations with low mobility from part time to full time are thus primarily in sectors where part-time work is prevalent. This does not support the notion that large part-time proportions could imply more transitions because of many potential "changers". Rather, part-time may have been "chosen" to a larger degree in these than in other occupations, and/or full-time work could be more constrained because part-time contracts fit better with the staffing needs and production process of the employers.

In line with our expectations, we find that women who work longer part-time hours are much more likely to switch to full time than women with shorter part time jobs. Being a student does not seem to affect part timers' likelihood of shifting to full-time work, but being self-employed clearly promotes full-time work among women. This probably reflects that running one's own business is not easily done on a part time basis, even if self-employed women are free to set their own working hours and probably have more job flexibility than female employees.

Turning to union status and the partner's characteristics, we see, firstly, that there is no difference in mobility to full time between cohabiting and married part-time workers. This is not necessarily at odds with previous findings that married women are more inclined to work part time than cohabitants (Kjeldstad and Nymoen, 2004), as all women in our study already work part time in the first place. Our result thus shows that cohabiting women who work part time are not more inclined to switch to full time than are married women. Secondly, and somewhat surprising, we find no significant effects of the partner's education, working hours or income. To be sure, there is a positive effect for the group with missing information on partner's education, but this is not very informative as we do not know who this group is. As discussed earlier, different theories yield different predictions about the association between the partner's working hours and women's full-time transitions. If a negative effect due to greater specialisation and more comparative advantage operates alongside a positive effect due to more social capital, a non-significant outcome for this variable is not unlikely. Moreover, increased emphasis on individual rights in the pension and social security system in present-day Norway is an incentive for women's greater independence of their male partner. However, we should point out that the estimated gradient for partner's working hours is not linear, but increasingly positive up to fairly normal weekly hours (38-44), and quite negative for very long hours (45+). This may indicate a positive association up to a certain limit, and a negative association for very long partner's hours, as hypothesised above, but with the present sample size we cannot conclude more firmly now. The same applies for partner's income, where the gradient is negative, as expected, but the effects do not reach significance at conventional levels.

Finally, we observe a strong positive trend in full-time transitions over our study period, peaking in 2007-2008 and declining slightly in 2009. As discussed, this could be due to both a flourishing economy and more abundant day-care supply with lower parental payment. Unfortunately, we are not able to disentangle the relative importance of these factors in the present analysis, but this will be an ambition for the future.

The last variable in Table 2, duration, is a model-specific variable common to all hazard rate analyses. As shown, the coefficients are negative, indicating that the chance of full-time entry is smaller later in the observation period than in the first year after the woman was observed as a part-time worker. This is as expected, but one reservation with this result is that our data are left-censored, and we do not know the true exposure time for all women<sup>4</sup>.

# Summary and discussion

A common challenge for most industrialised countries is a rapidly growing elderly population and a future shrinking of the labour force. Many are therefore looking for ways to mobilise potential labour

<sup>&</sup>lt;sup>4</sup> To test the sensitivity of the results to the left-censoring of the data, we did a couple of robustness checks. First, we included a dummy variable in the model indicating whether or not the woman started to work part time after she entered the panel or not, i.e. whether or not we know her "true" starting time. Since those whose part-time spell started before entering the panel are likely to be the most persistent part time workers, we would expect them to be less inclined to switch to full time than those who started with part time in the panel, and this was confirmed by the analysis. However, the inclusion of this dummy did not bring about any noticeable change in the estimates of the other covariates. Second, we estimated the model based on women with known starting times only. This greatly reduced the sample and led to fewer significant results, but the general pattern was the same and the duration profile was also very similar. The robustness checks thus indicate that the results are not very sensitive to the left-censoring of the data.

reserves. In countries where female labour participation is relatively low, much may be achieved through policies that facilitate the combination of family and employment, such as longer parental leaves and ample, high quality, day-care supply, but in countries where female employment is already high, politicians have to look elsewhere for possible solutions. This is the situation in Norway, where the proportion gainfully employed is almost as high among women as among men. On the other hand, part time is prevalent among women, and if more female workers would start to work full time, one may envisage a sizeable additional labour supply. In this paper we study barriers that impede and factors that promote transitions from part-time to full-time work among married and cohabiting women based on panel data from the Norwegian EU-SILC surveys 2003-2009.

Contrary to evidence from other countries with well-established support for working mothers, we find that young children in the household still restrain Norwegian women in shifting from part- time to fulltime work. Another constraining factor is health restrictions, which indicates that human capital resources are important, as is also confirmed by higher transitions rates to full time by women with long university education. Besides, part-time work is more persistent among older than among younger women, which may reflect that older women have reached their career ambitions and therefore are more satisfied with a part-time job, or that there are other unobserved factors beside health restrictions that make full time less attractive for older women. In addition they belong to a generation where part-time work has been common and more of a norm than in younger generations.

Considering the highly gender-segregated labour market in Norway and high part-time rates particularly in typical female-dominated jobs, we expected to find large occupational differentials in women's transitions to full time. The analysis substantiated this supposition, and it was primarily women in occupations with much part-time work that were less likely to switch to full time, namely nurses, clerical workers and sales- and service workers. Whether this is a result of their own preference or structural constraints in the mentioned occupations is difficult to say, but both influences are likely to be at work, since previous research has documented a greater predominance of involuntary part time in the health and social sector than in other sectors of the economy (Moland and Gautun, 2002).

Another job characteristic that has a great impact on a woman's propensity to switch from part time to full time is whether she is an employee or self-employed. In fact, we find that self-employed women have about five times higher transition rates to full time than female employees. This may be a result of more flexibility in deciding on their working hours, but probably even more so because self-employment and entrepreneurship usually require larger efforts and time inputs than salaried employment.

A somewhat surprising result in our analysis was the lack of impact of the partner's characteristics, represented by his education, working hours and income. However, we hesitate to draw too firm conclusions here, as some of the patterns pointed in the expected directions. For instance, fairly strong negative estimates were obtained for both very long hours and high income of the partner, but in our sample these were not significant at conventional levels. It may also be that the main influence of the partner's characteristics is on women's initial decision to work part time, and not so much on part-time workers' further propensity to switch to full time. Previous research for Norway indicates for example that higher income on the husband's part increases the likelihood that their spouse works part time (Kjeldstad and Nymoen, 2004).

There are thus clearly factors that both promote and restrain the mobilisation of more female labour reserves through increased full-time participation. The fact that young children still prevent women's full-time transitions in a country with good day-care supply and other support for working mothers indicates that also other factors are at stake. One such factor is likely to be the gendered division of household labour, as it is well known from previous research that women still spend more time on housework and children than men (Vaage, 2002) and continue to face stronger norms of caring and providing (Leira, 2006). A prerequisite for more full-time involvement among mothers of young children may thus be a greater household involvement by fathers. At present there is a movement in this direction in Norway, stimulated amongst others by policy measures such as a special father's quota in the parental leave that has been extended several times in the last few years. This may be a small ingredient in the strong positive time trend we observe for women's full-time transitions over our study period, but of far greater importance is probably the vast expansion of the day-care sector with more and cheaper child care, improved after school programs, and a flourishing economy with surplus demand for labour.

Another area in need of more attention is possible barriers to full-time work in typical female occupations in the health and social sector and in sales- and services. This may be related to organisational structures and employers' preferences for flexible part-time contracts in jobs which require staffing outside of normal working hours, and one remedy that has been debated is to legalise the right to full time in these occupations if employees prefer such a job. Previous evidence further suggests that women who work shift and rota are less content with full-time work than women who work ordinary day time, and we have argued elsewhere that part-time work may be one way for women to secure more flexibility into an otherwise low-flexible, non-standard schedule. A somewhat shorter full-time contract could then be one measure that would encourage more part-time workers to take on a full-time job (Rønsen and Kitterød, 2010).

An important underlying issue in all these deliberations is the extent to which women's labour market adaptations are determined by preferences or constraints, as discussed introductorily. Our study does not contribute to resolve this puzzle as we lack appropriate preference data, but this is a central area for future research. A further valuable extension of the present analysis would be to study more employment transitions, for example from full time to part time or repeated shifts between full time, part time and spells out of paid work over the employment career. This would give a fuller picture of the determinants of the various transitions and the direction of their impact, but is beyond the scope of the present paper.

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