# Educational Enrolment, Double Status Positions and the Transition to Motherhood. Evidence from the Generations and Gender Survey

Tamás Bartus

Corvinus University of Budapest, Hungary tamas.bartus@uni-corvinus.hu

Zsolt Spéder

Hungarian Demographic Research Institute, Hungary speder@demografia.hu

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# Abstract

Participation in education may be combined with employment, resulting in double status positions. The presence of double status positions in several European countries calls for the reassessment of the widely shared notion that participation in education is incompatible with motherhood. Relying on normative and economic approaches, we develop original and competing hypotheses about the fertility implications of double status positions. The hypotheses are tested using event-history data from the second wave of the Generations and Gender Survey. For our empirical work, we select four countries: Austria, France, Georgia and Hungary. Our preliminary findings are as follows. (1) First birth rates are significantly larger among women who are employed (but not enrolled) than among those who study and work at the same time. (2) Compared to double status positions, participation in education has a negative effect on the transition to motherhood in France and in Hungary, but we do not find a significant enrolment effect in Austria and Georgia. (3) With the exception of Austria, there is no evidence that first birth rates would be the lowest in double status positions. Our findings suggest that the conflict between participation in education and motherhood is mitigated in double status positions, but that mitigating effect is absent if double status positions emerge in the context of a dual education system.

# **1** Introduction

In their seminal papers, Hoem (1986) as well as Blossfeld and Huinink (1991) demonstrated the negative effect of participation in education on the transition to marriage and motherhood. Since then, several empirical studies demonstrated the negative effect of educational enrolment on first birth rates ((Hoem, 1986, Blossfeld and Huinink 1991, Liefbroer and Corijn 1999, Andersson 2000; Kantorova 2004, Lappegard and Ronsen 2005 Balbo et al. 2013). Parallel to the micro-level relationship between participation in education and the transition to motherhood, there are plausible empirical and theoretical arguments about the macro-level relationship between educational expansion and fertility decline. Ní Bhrolcháin and Beaujouan (2012) argued that fertility postponement in France and England is mainly due to educational expansion. Educational expansion plays a key role in the "postponement transition" approach (Kohler et al., 2002), that describes the diffusion of postponement and declining period fertility. Educational expansion is identified as one of the major factors behind the rapid fertility decline in post-communist countries (Sobotka 2002, 2011, Thornton and Philipov 2009).

Our paper explores the implications of the fact that participation in education may be combined with employment, and students (or employees) often find themselves in double status positions (Wolbers 2003, Róbert and Saar 2012). Double status positions emerge in various ways: students become employees in order to finance their lives or to accumulate some work experience which might help to find a job after the completion of studies; employees start to study in order to upgrade their skills or to obtain credentials and thereby improve their career prospects; and students who participate in dual education systems are simply requested to work. These different forms of double status positons have thus different meanings for students in different social positions and social contexts (Wolbers 2003,

Darmody and Smyth 2008, Beerekens et al. 2010, Róbert and Saar 2012). The extent of double status positions is related to the availability of part-time educational programmes and that of part-time jobs.

The central claim of our paper is that the presence of double status positions calls for a reassessment of the assumption that participation in education is incompatible with motherhood. While participation in education was found to delay the transition to marriage and parenthood, there is mixed evidence on the relationship between employment and the transition to motherhood (Liebforer and Corijn 1999, Andersson 2000, Andersson and Scott 2005, Felmlee 1993, Budig 2003, Rausher 2011), and the direction of the effect seems to be conditional on the characteristics of the welfare regime (Matyisak and Vignoli 2008). The fertility effects of double status positions are unclear for theoretical reasons as well. On the one hand, the conflict between the roles of being a student and being a mother might be even more pronounced if one is also employed at the same time since allocating sufficient time to studies, employment and child-care is too demanding and conflicting. Childbearing in a double status position may jeopardize both the chances of completing the studies and securing a job. On the other hand, employment status and the associated income might mitigate the conflict between the seemingly contradictory social roles. Blossfeld and Huinink (1991) argued that the negative fertility effect of educational participation is due to normative expectations in societies which prohibit students from becoming a mother. They also note that there are no normative expectations which would prohibit employees from becoming mothers, and mothers from returning to the labour market. If women in double status positions are mainly perceived as employees, rather than as students, there should be no normative conflict between the roles of being a student and being a mother among employees. This line of argument suggests that the conflict between the roles of being a student and being a mother is mitigated, rather than deepened, among women in double status positions.

In the present paper, we make an effort to estimate the impact of double status positions on the transition to motherhood. In Section 2, we begin with discussing the relevant literature and formulate original and competing hypotheses on the fertility effects of double status positions. The sample and the analytical strategy are described in Section 3. We use the second wave of the Generations and Gender Survey (GGS). For our empirical work, we select four countries: Austria, France, Georgia and Hungary. Discrete-time event history models are employed to test the hypotheses. Estimation results are presented in Section 4. Our preliminary findings are as follows. (1) First birth rates are significantly larger among women who are employed (but not enrolled) than among those who study and work at the same time. (2) Compared to double status positions, participation in education has a negative effect on the transition to motherhood in France and in Hungary, but we do not find a significant enrolment effect in Austria and Georgia. (3) There is no evidence that net first birth rates would be the lowest in double status positions. Our findings suggest that the conflict between participation in education and motherhood is mitigated in double status positions. However, the Austrian case suggests that in the context of a dual education system, double status positions deepen the conflict between the roles of a student and a parent. Section 5 concludes.

## 2 Theory and hypotheses

Hypotheses on the fertility implications of double status positions are developed as follows. First, we briefly review the normative and the economic explanations of why participation in education leads to the postponement of motherhood. Then we apply these explanations to double status positions, without considering the particular institutional and societal context, in order to obtain general hypotheses on the fertility effects of double status positions.

#### 2.1 The normative and the economic approaches

In their seminal paper on the effect of educational enrolment on parenthood, Blossfeld and Huinink (1991) argued against home economics and advanced a normative approach. More specifically, they stressed the prevalence of *sequencing norms* especially in case of education and parenthood; the individual should complete education first, and then enter into parenthood thereafter. Completing education is a necessary pre-requisite of becoming a parent (Blossfeld and Huinink 1991, Huinink 1995, Liefbroer and Billari 2010, Ballbo et al. 2013). Such sequencing norms reflect the common experience that students usually do not possess material resources which are necessary to fulfil the role of a parent successfully. The role incompatibility approach has also normative elements however stress also the time- and resource demanding aspects of the two roles. Both being enrolled and being a mother are demanding societal roles and need time and resources in order to fulfil roles. Time scarcity and different orientations of commitments make the two roles incompatible; therefore both roles could not be fulfilled successfully at the same time. The role incompatibility go back to the role strain theory (cf. Goode 1960), and often used to understand the childbearing decision of employed women (Rindfuss and Brewster 1996), but is also used to understand the education and fertility relation (Huinink 1995).

The negative relationship between participation in education and childbearing can also be understood using the economic approach to fertility, which focuses on the costs of childbearing (Gustafsson 2001, Kantorova 2004). These costs include (i) direct expenditures (ii) direct opportunity cost due to engagement in child-care, and (iii) losses in future earnings due to human capital investments forgone (the "wage penalty").<sup>1</sup> Since woman enrolled do not receive wage, the direct opportunity cost of becoming mother is zero. In contrary, lifetime forgone wage (wage penalty) is huge due to termination of education before receiving credential. Participation in education is a substantial investment into human capital, and is rewarded with a wage premium. Hence, the interruption or postponement of studies and the associated delay in entering the labour market reduces lifetime earnings. Educational enrolment thus reduces the incentives to become a parent during the studies.

# 2.2 The fertility effect of double status positions

To derive hypotheses on the fertility effect of double status positions, we consider both normative expectations and costs of childbearing. Making assumptions on the strength of normative and economic mechanism in double status positions is not trivial. On the one hand, double status positions might resemble student statuses where there are strong normative expectations and sizable economic costs. On the other hand, double status positions might resemble employment positions where normative constraints are weak or absent, but economic cost are not negligible. In this subsection, we consider both possibilities. Our argument is summarized in Table 1.

<sup>&</sup>lt;sup>1</sup> For reasons of simplicity, the present discussion of these cost components as well as subsequent derivations of hypotheses neglect the partners. We are of course aware of theories and empirical research which explores the effect of partner's income and education on the fertility behaviour of women. Partner effects of this kind are not considered in the present paper.

#### TABLE 1 ABOUT HERE

*Case I. Double status positions are predominantly student positions.* Students in higher education who find employment in order to finance their studies or to acquire some experience are good and visible examples. In this case, the dominant social role remains that of being a student. The normative expectations regarding parenthood are the same as among students since the choice of employment status is motivated by the lack of career resources. Moreover, role incompatibility may be more pronounced because three societal roles, that of student, mother and employee, must be reconciled. Besides, motherhood in double status positions implies not only the interrupted or postponed completion of studies but also an interruption of a career. Therefore, the costs of childbearing are even higher in double status positions than among enrolled but not employed women. Although forgone loss of returns of human capital may be the same as in case of enrolled only, direct opportunity costs are higher because upon becoming a mother less time can be allocated to employment. Our first hypothesis regarding the fertility implications of double status positions reads as follows:

**H1** *The multiple role conflict hypothesis.* The transition rate to motherhood among women in double status positions is lower than the transition rate among students and that among employees.

*Case II. Double-status positions are predominantly employment positions.* This case might be exemplified by employees who wish to upgrade their skills (or educational credentials) in order to protect or improve their career prospects. Entering a double-status position indicates a relatively high investment in human capital compared to the investment made by those who are employed but not enrolled in education. The most important feature of the present case (compared to the previous one) is that normative expectations regarding the sequencing of life-course events have no influence in double-status positions. In those positions, people can

perceive themselves as employees rather than as students because they have a more or less completed educational career and are financially independent of their parents. Women in double-status positions are perceived as being "ready" for parenthood; unlike their enrolled but not employed counterparts. In the absence of sequencing norms, birth rates should be higher in double-status positions than in 'mere' enrolment positions.

The relationship of birth rates in double-status positions to employment positions is less clear. First, although reconciliation of family, studies and employment should be difficult, the availability of part-time educational programmes and part-time employment might reduce role incompatibility. Second, the losses from career interruptions might be even higher than those among pure employees. Double-status positions are chosen in order to attain a new educational qualification and to replace a stagnating and possibly uncertain career with either an upward-sloping or a certain (but flat) wage curve.

If double-status positions can be characterised by a large wage penalty or a large degree of role incompatibility, then we have the following hypothesis:

**H2a.** *The mitigated role conflict hypothesis.* The transition rate to motherhood among women in double-status positions is higher than the transition rate among students but is lower than the transition rate among employees.

If the wage penalty in double-status positons is smaller than that in employment positions, and/or there is no serious role conflict between enrolment, employment and motherhood, we have a modified version of the above hypothesis:

**H2b**. *The job status dominance hypothesis*. The transition rate to motherhood among women in double-status positions is higher than the transition rate among students but is the same as the transition rate among employees.

# **3** Data and methods

#### **3.1. Data and variables**

We use the second wave of the Generations and Gender Survey (GGS) (UNECE 2005). The data were obtained from the Generations and Gender Programme Data Archive. The second wave GGS questionnaire included several questions eliciting retrospective employment and educational enrolment histories. It also enables one to identify the timing of first conceptions. Our analyses are restricted to four countries: Austria, France, Georgia and Hungary. During the preparation of the data file for empirical analyses, we encountered different sorts of data problems in the other countries that participated in the second wave. We omitted Germany because of the high proportion of nonresponse in the second wave. Date of month is unknown in the Czech and Dutch data files, which prevents the construction of person-month datasets. Finally, the coding of education in Bulgaria is not compatible with the ISCED coding system employed by the other countries.

Several social surveys include questions which elicit employment status using a single question with several response categories. This method of data collection does not allow one to identify double status positions because employment and enrolment statuses are mutually exclusive response categories. Fortunately, the second wave GGS questionnaire included separate questions eliciting retrospective employment and educational enrolment histories. We are thus in a position to identify those who work and study at the same time. Furthermore, the question format allows us to construct a person-month dataset in which each record contains monthly information on both employment and enrolment status.

For the purposes of our empirical analyses, we use women born between 1961 and 1980. We also selected the calendar years 1977-2008 available in all four countries. Data analyses will

make use of a person-month dataset. Observations in the dataset span the risk period of conceptions. The risk period begins when the observed women turns 16. The reason is that the retrospective employment history questions did not go beyond that age. The last observation within any women is either conception or censoring. Conceptions were identified using information on live births; the date of the conception is the date of the live birth minus 9 months.

The person-month dataset allows us to create variables which (can and do) vary over time. Our key explanatory variables are related to employment and enrolment status. Employment status is captured by a dummy variable indicating those who are employed, self-employed or owners. Enrolment is a dummy identifying those who participate in either full-time or parttime education. The joint employment-enrolment status variable obtains as a Cartesian product of the employment and enrolment dummies. The four categories of the joint employment-enrolment status variable are: double status (that is, employed and enrolled), employed only, enrolled only, and neither employed nor enrolled. Before proceeding, note that the term double status position is mostly used to denote college and university students who are employed at the same time (Róbert and Saar 2012). We do not place such a restriction on our joint employment-enrolment variable; rather, it is constructed in a way that double status position also applies to those who are enrolled in secondary or primary education and happen to work at the same time.

We use four equally spaced birth cohort categories to capture the effects of changes in societal conditions, as well as interaction terms between status categories of our interest and birth cohort categories. As noted, we use cohorts to capture the interrelated effects of period and cohort. In the selected post-socialist countries, the oldest and youngest of our four cohorts are representing the respective childbearing behaviour before and after the transition. Members of

the 1961-65 cohort group were 25-29 years old when the post-communist transition begun in 1990, and typically started the fertility career during the socialist times (mean age at first birth was 23.1 in 1990). In contrast, members of 1971-1975 and 1976-1980 cohorts were below 20 at the beginning of the transition, and therefore their fertility career reflects the societal conditions during the first and later phases of the transition.

We will use age, age-squared and level of education as control variables.<sup>2</sup> Age is timevarying. In order to minimize the correlation between age and age-squared, we center the age variable around 25 before calculating the squared term. Level of education is a time-varying categorical variable with three categories: primary and lower secondary education, upper secondary education and higher education.

#### TABLE 2 ABOUT HERE

Table 2 presents the main features of the sample. The number of individuals ranges between 1444 and 1794. The smallest sample comes from France, the country with the largest population. First birth rates vary between 75 and 84 per cent. Mean age at first conception is about 22 in the former socialist countries, while it is about 25 in Austria and France. An average individual is observed for 8.2 to 12.1 years.

#### TABLE 3 ABOUT HERE

Table 3 presents the percentage distribution of the key explanatory variables in the personmonth dataset. Double status positions are prevalent in Austria. This is not surprising because

<sup>&</sup>lt;sup>2</sup> During the analyses, we also estimated models in which partnership status was included. However, the inclusion of partnership status does not affect our conclusions. However, the inclusion of partnership status immediately raises the concern of endogeneity.

of the presence of a dual education system. The relative frequency of double status positons is about 10 percent in France, 6.6 percent in Hungary, and only 3.5 percent in Georgia.

#### **3.2 Analytical strategy**

We test our hypothesis using discrete-time event history analysis, that is, by estimating logistic regression models of first conceptions using the person-period dataset. We estimate two models for each country. The first model includes the status categories of substantive interest, as well as birth cohort, highest level of education, age, age-squared and period. The second model adds interactions among the status categories and birth cohort categories to the model, in order to examine whether the hypothesized status effects are conditional on cohort. We adjust the standard errors for clustering by estimating the cluster-adjusted robust standard errors, which is a standard feature of the statistical package Stata.

We adjust the estimates for panel attrition using country-specific weights. The weights are the inverse propensity scores of participating in the second wave. The propensity scores are calculated from logistic regressions of panel continuation on selected first wave variables including sex, age categories, highest educational level (lower secondary or lower, upper secondary, tertiary), activity status (enroled, employed, unemployed, stays or works home, retired, other), partnership status (married, cohabiting, single/divorced/widowed), presence of a coresident child, and present of a coresident relative (beyond partner and children).

# **4** Empirical results

We first estimate the discrete-time model of first conception on the status categories of substantive interest, birth cohort, highest level of education, age, age-squared and period. Since in our hypotheses the fertility effect of double status positions are compared to both that of enrolment only and that that of employment, we chose double status positions as reference category to enable that multiple comparisons. The results appear in Table 4.

#### TABLE 4 ABOUT HERE

In all countries, employment has a statistically significant positive coefficient. This means that first birth rates are significantly larger among women who are employed (but not enrolled) than among those who study and work at the same time. Compared to double status positions, participation in education has a negative effect on the transition to motherhood in France and in Hungary, but we do not find a significant enrolment effect in Austria and Georgia. Note that there is no evidence that net first birth rates would be the lowest in double status positions.

These findings suggest that the conflict between participation in education and motherhood is mitigated in double status positions. The findings are clearly inconsistent with the multiple role conflict hypothesis.

#### TABLE 5 ABOUT HERE

Table 5 displays the estimates of the second model which includes interaction terms between the status variables and birth cohort categories. The main effect of employment is significant in Austria and Georgia. Enrolment has a significant negative effect in Hungary only. The vast majority of interaction terms lack statistical significance, but several terms are significant in

Georgia. The lack of statistical significance suggests that cohort membership does not affect status differences.

#### FIGURE 1 ABOUT HERE

To understand the dependence of first birth rates on status and cohort, Figure 1 displays predicted differences in the monthly number of first births among 1000 women between double status positions, on the one hand, and pure enrolment and pure employment positions. The predictions are calculated using the parameter estimates presented in Table 5. The predictions are sample averages of observation-specific predicted probabilities. When calculating the observation-specific probabilities, the cohort and employment–enrolment status dummy variables are set at appropriate values while other covariates are left as they are in the dataset.

Panel A) of the figure compares the predicted first birth rates in double status positions to that in pure enrolment positions. The hazard of first conception is substantially larger in double status positions than in pure enrolment positions in Hungary, but the positive fertility effect is smaller in younger cohorts than in older ones. There is a small positive fertility effect in France which is relatively stable across cohorts. In Georgia, the predict fertility difference is very volatile. The pattern in France, Georgia and Hungary is consistent with the mitigated role conflict hypothesis. In contrast, the Austrian pattern is closer to the multiple role conflict hypothesis because first birth rates in double status positions are somewhat lower than first birth rates among the enrolled. Overall, the results reject the idea that double status positions are in a sharp conflict with childbearing.

Panel B) of the figure compares the predicted first birth rates in double status positions to that in pure employment positions. The country-specific results are similar: first birth rates are

lower in double status positions than in pure employment positions. This finding provides further support for the mitigated role conflict hypothesis.

Overall, the results reject the idea that double status positions are in a sharp conflict with childbearing.

# **5** Conclusions

Studies of fertility often assume that there is an incompatibility between education and motherhood in modern societies. However, previous research did not pay much attention to part-time forms of participation in education and the presence of double status positions (Wolbers 2003, Róbert and Saar 2012). The central claim of our paper is that the presence of double status positions calls for a re-assessment of the assumption that participation in education is incompatible with motherhood. On the one hand, the conflict between the roles of being a student and being a mother might be even more pronounced if one is also employed at the same time since allocating sufficient time to studies, employment and childcare is too demanding and conflicting. On the other hand, due to the presence of wage income and, more importantly, the absence of normative expectations regarding the sequencing of life-course events, employment status might mitigate the conflict between the seemingly contradictory social roles of being a student and being a student and being a mother at the same time.

In the present paper, we examine the relationship between double statuses and the transition to motherhood in four countries: Austria, France, Georgia and Hungary. Relying on the normative and economic approaches, we identify the mechanisms that shape fertility behaviour among students who are also employed at the same time. We formulate competing hypotheses on the relationship between double status positions and the transition to motherhood. We also formulate hypotheses on how the hypothesized effects depend on birth cohort. We examine our hypotheses using event-history data from the Hungarian Gender and Generations Survey. This dataset enabled us to identify women who are enrolled and employed at the same time and to compare the behaviour of older and younger cohorts who were exposed to the different societal conditions when making choices on motherhood.

Our first findings are as follows. (1) First birth rates are significantly larger among women who are employed (but not enrolled) than among those who study and work at the same time. (2) Compared to double status positions, participation in education has a negative effect on the transition to motherhood in France and in Hungary, but we do not find a significant enrolment effect in Austria and Georgia. (3) There is no evidence that net first birth rates would be the lowest in double status positions. Our findings suggest that the conflict between participation in education and motherhood is mitigated in double status positions. As a consequence, the fertility effect of educational expansion is overstated if only the classic thesis of incompatibility between enrolment and motherhood is considered.

Our results stand in contrast to the assumption that it is very difficult to be a student, an employee and a mother at the same time. More precisely, only the Austrian data provide some evidence for that difficulty, where first birth rates are the lowest among women who work and study at the same time. DISCUSSION OF COUNTRY DIFFERENCES SHOULD APPEAR HERE.

Double-status positions are present and may be on the increase in other post-communist countries as well as in Western societies (Wolbers 2003, Darmody and Smyth 2008, Beerkens *et al.* 2011, Róbert and Saar 2012). Further research needs to examine the effect of institutional factors on the relationship between double-status positions and fertility in different societal contexts. Ní Bhrolcháin and Beaujouan (2012) demonstrated that

educational expansion was one – if not the most important – driving force of the postponement of births in Britain and France. Although our research was motivated by the potential effect of educational expansion on fertility at the macro level, we did not make any attempt to test the extent to which educational expansion is responsible for the postponement of and decline in fertility in Hungary during the post-communist transition. We merely showed that first birth rates were higher among women in double-status positions (who were mostly part-time students) than among those who were enrolled but not employed at the same time and were predominantly enrolled in full-time programmes. We also showed that the difference in predicted birth rates between double-status and pure-enrolment positions decreased as we moved towards younger cohorts. Future research should examine the implications of double-status positions on the relationship between educational expansion and fertility postponement.

# References

- Aassve, A. F.C. Billari and Zs. Spéder, 2006. Societal Transition, Policy Changes and Family Formation: Evidence from Hungary, *European Journal of Population* 22:127–152
- Adsera, A., 2004) Changing fertility rates in developed countries. The Impact of Labour Market Institutions. *Journal of Population Economics*, 17: 17-43.
- Andersson, G., 2000 .The impact of labour-force participation on childbearing behaviour: Pro-cyclical fertility in Sweden during the 1980s and the 1990s. *European Journal of Population* 16(4): 293-333.
- Balbo, N., Billari, F. C. and M. Mills, 2013. Fertility in advanced societies: A review of research. *European Journal of Population* 29: 1-38.
- Beerkens, M., Mägli, E., and L. Lill, 2011. University studies as a side job: causes and consequences of massive student employment in Estonia. *Higher Education*, Vol. 61., p. 679-692.
- Blossfeld, H. P. 1995. Changes in the process of family formation and women's growing economic independence: A comparison of nine countries, in H. P. Blossfeld (ed), *The New Role of Women: Family Formation in Modern Societies*. Westview, Boulder, CO, 3–23.
- Blossfeld, H-P. and J. Huinink, 1991. Human capital investment or norms of role transition? How women's schooling and career affect the process of family formation. *American Journal of Sociology*, 97, 143-168.
- Brunello, G. Crivellaro, E. and Rocco, L., 2010. "Lost in Transition? The Returns to Education Acquired under Communism 15 Years after the Fall of the Berlin Wall," *IZA Discussion Papers* 5409, Institute for the Study of Labour (IZA).

- Darmody, M., Smith, E. 2008. Full-time students? The growth of employment among higher education students in Ireland. *Journal of Education and Work*, vol. 21., p. 349-362.
- Elder, Jr. G. 1974. Children of the Great Depression: Social change in life experience. Westview Press
- Frejka, T. 2008. Determinants of family formation and childbearing during the societal transition in Central and Eastern Europe. Overview Chapter 5: *Demograhic Research* Vol. 19. Art.7. p. 139-170.
- Goode, W.J., 1960. A Theory of Role Strain. American Sociological Review, Vol. 25. no. 4. pp. 483-496.
- Gustafsson, S., 2001. Optimal age at motherhood. Theoretical and empirical considerations of postponement of maternity in Europe. *Journal of Population Economics*. Vol. 14:225-247.
- Hoem, J., 1986. The impact of education on modern family-union initiation. *European Journal of Population*, vol. 2. p.113-133.
- Huinink, J., 1995. Warum noch Familie? Zur Attraktivität von Partnerschaft und Elternschaft in unserer Gesellschaft. Frankfurt am Main, Camus Verlag
- Inglehart, R. 1977. *The Silent Revolution. Changing Values and Political Styles Among Western Publics.* Princeton University.
- Kantorová, V., 2004. Education and entry into motherhood: The Czech Republic during state socialism and the transition period (1970-1997). *Demographic Research Special Collection* 3: 245-274.
- Kohler, H.-P., Billari, F. C., and J. A. Ortega, 2002. The emergence of lowest-low fertility in Europe during the 1990s. *Population and Development Review*, 28(4), 641–680.
- Korintus, M., 2010. Hungary. In: Moss, P. (ed.). *International review of leave policies and related research* 2010.London: Department for Business, Innovation and Skills: 115-141
- Lalive, R. and J. Zweimüller (2009). How does parental leave affect fertility and return to work? Evidence from two natural experimnts. *The Quarterly Journal of Economics*, August, 1363-1402.
- Lappegard, T. and M. Ronsen, 2005. The Multifaceted Impact of Education on Entry into Motherhood. *European Journal of Population*, vol. 21. p. 31-49.
- Liefbroer, A.C. and F.C. Billari, 2010. Bringing norms back. A theoretical and empirical discussion of their importance for understanding demographic behaviour. *Population, Space and Place*, 16(4), 287–305.
- Liefbroer, A. and M. Corijn, 1999. Who, What, Where and When? Specifying the Impact of Educational Attainment and Labour Force Participation on Family Formation. *European Journal of Population*, vol. 15. p.45-75.
- Lucas, S. R., P. N. Fucella and M. Berends (2011): A neo-classical education transitions approach: A corrected tale for three cohorts *Research in Social Stratification and Mobility* 29: 263–285.
- Luci-Greulich, A. and O. Théveon, 2013. The Impact of Family Policies on Fertility Trends in Developed Countries. *European Journal of Population* 29: 387-416
- Makay, Zs. and Zs. Blaskó, 2012. Family support system childraising employment. In: Öri, P., Spéder, Zs. (eds.): *Demographic Portrait of Hungary 2012*. Demographic Research Institute, Budapest. 45-56. Online: http://demografia.hu/en/publicationsonline/index.php/demographicportrait/article/view/817/274
- Martin-Garcia, C. and P. Baizan, 2006. The Impact of the Type of Education and of Educational Enrolment on First Births. *European Sociological Review*, Vol. 22, No. 3, pp. 259–275.
- Matyisak, A. and D. Vignoli, 2008. Fertility and women's employment: a meta-analysis. *European Journal of Population* 24: 363–384
- Ní Bhrolcháin, M.N. and E. Beaujouan, 2012. Fertility Postponement is largely due to rising educational enrolment. *Population Studies* Vol. 66., No.3. p. 311-327.
- Rindfuss, R.R. and K.L. Brewster, 1996. Childrearing and Fertility. *Population and Developmnt Review*, Vol. 22. Supplement: Fertility in the United states: New Patterns, New Theories, pp. 258-289.
- Ryder, N.B., 1965. The Cohort as a Concept in the Study of Social Change. *American Sociological Review*, Vol. 30, No. 6., pp. 843-861

- Róbert, P. and E. Saar. 2012. Learning and Working: The Impact of the `Double Status Position' on the Labour Market Entry Process of Graduates in CEE Countries. *European Sociological Review*, 28 (6), 742-754.Ryder, N. B. 1965. The Cohort as a Concept in the Study of Social Change. *American Sociological Review* 30:843-61.
- Sobotka, T. 2002. Ten years of rapid fertility changes in the European post-communist countries. Evidence and interpretation. University of Groningen, Population Research Centre, Working Paper Series 02-1, p. 53.
- Sobotka, T. 2011. Fertility in Central and Eastern Europe after 1989: Collapse and Gradual Recovery. *Historical Social Research / Historische Sozialforschung* Vol. 36, No. 2 (136), pp. 246-296
- Spéder, Zs., Kapitány, B. and L. Neumann, 2010. Life-course transitions and the Hungarian employment model before and after the societal transformation. In: Anxo, D., Bosch, G., Rubery, J. (eds.): *The Welfare State and Life Transitions*. Edward Elgar p. 287-327.
- Szeleva, D. and M. P. Polakowski, 2008. Who cares? Changing patterns of childcare in Central Eastern Europe. *Journal of European Social Policy*, 18, 115–131.
- Thornton, A., and Philipov, D., 2009. Sweeping changes in marriage, cohabitation and childbearing in Central and Eastern Europe: New insights from the developmental idealism framework. *European Journal of Population*, 25(2), 123–156.
- Thornton, A., W.G. Axinn and J.D. Teachman, 1995. The Influence of School Enrollment and Accumulation on Cohabitation and Marriage in EarlyAdulthood. American Sociological Review 60: 762-774.
- UNECE (United Nations Economic Commission for Europe) (2005) Generations & Gender Programme: Survey Instruments. New York and Geneva: United Nations;
- Vikat, A., Spéder, Zs., Beets, G., Billari, F.C., Bühler, Ch., Désesquelles, A., Fokkema, T., Hoem, J.M., MacDonald, A., Neyer, G., Pailhé, A., Pinnelli, A., Solaz, A.: 2007. Generation and Gender Survey (GGS): Towards a Better Understanding of Relationships and Processes in the Life Course. *Demographic Research*, Volume 17. no.14. pp. 389-440.
- Wolbers, M. H. J. 2003. Learning and Working: Double Statuses in Youth Transitions. In Müller, W. and Gangl, M. (eds.). *Transitions from Education to Work in Europe*. Oxford University Press. 131-155.

### Table 1.

# Strength of deterring effects of normative and economic mechanisms in enrolment, employment and double-status positions

Mechanism	Enrolled	Employed		Doubles status	
			Multiple role conflict (H2a)	Mitigated role conflict (H2a)	Job dominance (H2c)
Sequencing norms	++	0	++	0	0
Role incompatibility	+	+	++	++	+
Direct expenditures	++	+	++	+	+
Opportunity costs	0	+	+	+	+
Wage penalty	++	+	++	++	+

Note: 0 signifies no effect. + and ++ signify moderate and strong effect, respectively

# Table 2 Main features of the sample

	FR	AT	HU	GE
Persons	1444	1672	2133	1794
Conceptions	1142	1258	1680	1509
First Birth Rate	79.1	75.2	78.8	84.1
Person-Months	213944	251252	241148	186054
Average exposure	11.9	12.1	9	8.2
Mean age at first birth	25.6	25.4	22.7	21.9

Note: Unweighted estimates using the person-month dataset. . See text for description.

# Table 3 Percentage distribution of the explanatory variables

	FR	AT	HU	GE
Status				
double status	9.7	27.4	6.6	3.5
employed only	52.7	65.9	53.8	35.0
enrolled only	27.0	3.2	28.4	32.6
inactive	10.6	3.5	11.2	28.9
Educational attainment				
lower secondary or lower	54.3	35.6	46.1	40.9
upper secondary	25.9	53.7	40.8	18.5
higher	19.8	10.7	13.1	40.6
Age				
16-20	38.6	37.3	46.6	47.2
21-25	31.5	29.8	29.1	25.2
26-30	16.6	18.1	15.5	14.1
31-49	13.3	14.8	8.8	13.5
Cohort				
1961-65	30.96	20.94	17.78	34.47
1966-70	27.22	32.74	21.93	26.00
1971-75	24.58	26.07	28.20	19.34
1976-80	17.24	20.25	32.08	20.20

Note: Weighted estimates using the person-month dataset. . See text for description.

## Table 4

Logistic regression estimates of the discrete-time hazard models of first conception. Model with main effects only

	FR	AT	HU	GE
Enrolment-employment status				
double status	0	0	0	0
employed only	0.755***	1.084***	0.458***	0.405*
	(0.000)	(0.000)	(0.000)	(0.015)
enrolled only	-0.700***	0.192	-1.158***	-0.203
	(0.000)	(0.499)	(0.000)	(0.249)
inactive	0.902***	1.100***	0.258*	0.887***
	(0.000)	(0.000)	(0.046)	(0.000)
Cohort				
1961-65	0	0	0	0
1966-70	0.129	0.243*	-0.063	0.078
	(0.328)	(0.039)	(0.590)	(0.503)
1971-75	-0.112	0.181	-0.133	0.137
	(0.613)	(0.352)	(0.484)	(0.487)
1976-80	-0.443	0.043	-0.288	-0.155
	(0.176)	(0.882)	(0.282)	(0.589)
Highest level of education				
lower secondary or lower	0.012	0.195*	0.249***	-0.125
	(0.891)	(0.015)	(0.000)	(0.141)
upper secondary	0	0	0	0
higher	-0.085	-0.047	0.158*	-0.134
	(0.254)	(0.550)	(0.026)	(0.064)
Age-25	0.060**	0.059**	0.008	-0.057**
-	(0.008)	(0.006)	(0.657)	(0.003)
Age-25 squared	-0.016***	-0.013***	-0.013***	-0.008***
•	(0.000)	(0.000)	(0.000)	(0.000)
Year-1980	0.034	0.018	-0.039*	0.001
	(0.112)	(0.377)	(0.024)	(0.966)
Constant	-5.371***	-6.074***	-4.571***	-5.003***
	(0.000)	(0)	(0)	(0.000)

Notes: Numbers in parentheses are p value. Underlying standard errors are adjusted for clustering on persons. . \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

# Table 5

Logistic regression estimates of the discrete-time hazard models of first conception. Model with interaction effects

	FR	AT	HU	GE
Enrolment-employment status				
double status	0	0	0	0
employed only	0.462	0.948***	0.280	1.207**
	(0.091)	(0.001)	(0.167)	(0.002)
enrolled only	-0.607	0.779	-1.219***	0.259
	(0.125)	(0.230)	(0.000)	(0.530)
inactive	0.791*	0.816	-0.007	1.817***
	(0.011)	(0.096)	(0.980)	(0.000)
Cohort		()		()
1961-65	0	0	0	0
1966-70	-0.067	0.235	-0.241	1.080*
	(0.856)	(0.446)	(0.402)	(0.021)
1971-75	-0.626	0.123	-0.447	0.877
1911 10	(0.176)	(0.731)	(0.156)	(0.136)
1976-80	-0.967	-0.438	-0.493	1 262*
1970 00	(0.111)	(0.317)	(0.195)	(0.034)
	(0.111)	0	0	(0.054)
Cohort X enrolment-employment status	0	0	0	0
1966-70 X employed only	0.217	0.009	0.145	-1.122*
1 5 5	(0.550)	(0.977)	(0.621)	(0.016)
1966-70 X enrolled only	-0.029	-0.757	0.354	-0.832
, and the second s	(0.955)	(0.356)	(0.333)	(0.091)
1966-70 X inactive	0.146	0.156	0.357	-0.996*
	(0.727)	(0.786)	(0.343)	(0.036)
1971-75 X employed only	0.634	0.061	0.319	-0.615
is i i comproside only	(0.134)	(0.851)	(0.259)	(0.275)
1971-75 X enrolled only	-0.389	-0.819	0.250	-0.200
1971 75 Remoned only	(0.517)	(0.362)	(0.500)	(0.731)
1971-75 X inactive	0.223	0.262	0.383	-1.007
1971 75 It mudite	(0.645)	(0.666)	(0.306)	(0.077)
1976-80 X employed only	0.592	0.531	0.242	-1 387*
1970 00 A employed only	(0.263)	(0.135)	(0.242)	(0.012)
1976-80 X enrolled only	0.336	-0.422	-0.465	-0.877
1970 00 A childred only	(0.609)	(0.618)	(0.252)	(0.114)
1976-80 X inactive	0.208	0.709	0.302	-1 645**
1970 00 X inderive	(0.714)	(0.251)	(0.414)	(0.002)
Highest level of education	(0.714)	(0.231)	(0.414)	(0.002)
lower secondary or lower	0.020	0.108*	0 247***	0.101
lower secondary of lower	(0.810)	(0.014)	(0.000)	-0.101
upper secondary	(0.819)	(0.014)	(0.000)	(0.239)
hisher	0 100	0 044	0 152*	0 125
nigher	-0.100	-0.044	(0.022)	-0.123
A	(0.183)	(0.370)	(0.052)	(0.085)
Age	0.059***	0.059**	0.007	-0.055***
$A \rightarrow X A \rightarrow$	(0.009)	(0.000)	(0.092)	(0.004)
Age X Age	-0.016***	-0.013***	-0.013***	-0.009***
V 1000	(0.000)	(0.000)	(0.000)	(0.000)
Year-1980	0.035	0.018	-0.057*	-0.001
	(0.100)	(0.377)	(0.028)	(0.942)
Constant	-5.130***	-5.951***	-4.397***	-5.788***
	(0.000)	(0.000)	(0.000)	(0.000)

Notes: Numbers in parentheses are p value. Underlying standard errors are adjusted for clustering on persons. . \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

Figure 1

Predicted difference in the monthly number of first births among 1000 women between double status positions and ...

A) enrolled positions by cohort



B) employed positons by cohort

