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DEMOGRÁFIA

ENGLISH EDITION





MTA KFB¹

DEMOGRÁFIA

ENGLISH EDITION

VOLUME 61, NO. 5

Budapest
2018

MTA KÖNYVTÁR 
INFORMÁCIÓS KÖZPONT 

The Quarterly of the Demographic Committee
of the Hungarian Academy of Sciences
and the Hungarian Demographic Research Institute, English Edition
Founded in 1958

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Published by the Hungarian Demographic Research Institute
Publisher: Zsolt Spéder director

Copy editor: Lukács Hayes
Design: Anagraphic
Layout: Gabriella Simonné Horváth
HU ISSN 1787-940X (Print)
HU ISSN 1787-9566 (Online)

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englishedition@demografia.hu

www.demografia.hu/en/publicationsonline/index.php/demografiaenglishedition/index

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EDUCATIONAL HYPOGAMY AND SECOND BIRTHS IN HUNGARY

Tamás Bartus

ABSTRACT

Recently, a growing body of literature examined the implications of the reversal of the gender gap in education for family formation. This line of research mainly focuses on how educational hypogamy, that is, womens' partnership with men who have lower levels of education, shapes the characteristics of marriages and cohabiting unions in terms of income, gender equity and union stability. Less is known about the effect of educational hypogamy on second birth rates. In the present paper, we examine the effect of educational hypogamy on second birth rates in Hungary. Drawing on the economic theory of fertility and the bargaining perspective, we hypothesize that (1) educational hypogamy has a negative effect on second birth rates, and (2) the magnitude of that effect decreases with female education. The hypotheses are tested by using event history data from the first four waves of the Hungarian *Generations and Gender Survey*. The analyses are restricted to women born between 1951–1980 who were partnered at the time of first birth. We find that educational hypogamy decreases second birth rates among women born between 1971 and 1980. However, we do not find evidence that would support the second hypothesis. Nevertheless, second birth rates are relatively high in hypergamous partnerships among women with secondary education born between 1971 and 1980.

Keywords: educational hypogamy, second birth rate, economic theory of fertility, marriage and union stability, hypergamous and homogamous partnerships

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INTRODUCTION

Educational expansion is often viewed as one of the causes of low fertility since the prolonged participation in education goes hand-in-hand with the postponement of family formation (Blossfeld and Huinink, 1991; Neels and de Wachter, 2010; Ni Bhrolcháin and Beaujouan, 2012; Beaujouan, Brzozowska and Zeman, 2016). Another mechanism which may explain the fertility effects of educational expansion relates to educational hypogamy, that is, partnerships in which She has more education than He does. Educational expansion is not a gender-neutral phenomenon: the share of women exceeds that of men among college graduates in several European countries, and the advantage of women seems to increase over time (Vincent-Lancrin, 2008; van Bavel, 2012). As the available pool of highly educated male partners becomes more and more limited, a growing share of educated women face the risk of “marrying down”. Recently, several studies examined the implications of the reversal of gender gap in education as well as that of educational hypogamy (Esteve et al., 2016; Klesment and van Bavel, 2017; de Hauw, Grow and van Bavel, 2017). This line of research mainly focuses on how educational hypogamy shapes the characteristics of unions in terms of income, gender equity and union stability. Surprisingly, less effort was made to examine the effect of hypogamy on fertility, in general, and on second birth rates in particular. Although research on the partner effect hypothesis (Kreyenfeld, 2002; Gerster et al., 2007; Klesment and Puur, 2010; Bartus et al., 2013) might provide some indirect evidence on the fertility effects of hypogamy, studies explicitly addressing the effect of educational hypogamy are rare (Nitsche et al., 2018).

The objective of the present paper is to fill in this gap by examining the effect of educational hypogamy on second birth rates in Hungary. The Hungarian case is interesting for two reasons. First, the number of women exceeds that of men among people aged 25–29 years old with a degree in tertiary education since about 1980, and ever since the difference is monotonically increasing (van Bavel, 2012, *Figure 7*). As we will show later, educational hypogamy is widespread among women with both secondary and tertiary education. Second, previous research found a U-shaped relationship between education and both fertility and second birth rates (Bartus et al., 2013; Husz, 2006; Bartus, 2017), which is rare in international

comparison (Wood, Neels and Kil, 2014). This pattern cannot be explained simply with the help of the partner effect hypothesis because the U-shaped pattern persists even if the partner's education is taken into account (Bartus et al., 2013; Bartus, 2017). Educational hypogamy may turn a positive or negative educational gradient into a U-shaped one if hypogamy has a negative effect on second birth rates, this effect being the strongest (or the share of hypogamous partnerships is the highest) among women with secondary education.

Previous analyses of educational hypogamy relied on various theoretical ideas including New Home Economics, resource pooling, gender ideology and the bargaining perspective (van Bavel, 2012; Nitsche et al., 2018). The present paper assumes that education is a proxy for expected lifecycle earnings and makes use of the economic perspective to turn various ideas into empirically testable hypotheses. Economic analyses of fertility establish the link between education (and other socio-economic factors) and fertility using the concepts of income effect and price effect. We believe that the economic approach fits naturally within the Hungarian context in general, and Hungarian family policy in particular. The main objective of the Hungarian family support system especially since the 1980s is to provide generous cash benefits for women to compensate for foregone wage incomes during maternity and parental leave, and to provide additional financial support for families. During the last decades, more and more emphases were placed on cash transfers. However, investments into childcare arrangements and the promotion of flexible and part-time work opportunities were neglected. The availability of nurseries is very limited, and the vast majority of women exhaust the three-year period of paid leave (Blaskó, 2010). As a consequence, financial resources should play a vital role when making the decision on having a second child and how to combine family and work.

The paper is structured as follows. In the next section, we formulate two hypotheses on the fertility effect of educational hypogamy. Drawing on the economic analysis of fertility as well as the bargaining perspective, we hypothesize that parity progression rates should be higher in hypogamous partnerships, and that this effect decreases with female education. The first hypothesis is not a new one; it is suggested by previous work on educational hypogamy, and it can also be derived from the influential quality-quantity model of fertility. The second hypothesis however can be treated as an original one, even when some of the hypotheses formulated in Nitsche et al. (2018) suggest that the hypogamy effect is pronounced in some educational groups. Next, we describe the data and methods we use to examine the hypotheses. After presenting our results, we provide concluding remarks.

HYPOTHESES ON THE FERTILITY EFFECT OF EDUCATIONAL HYPOGAMY

Van Bavel (2012) provides a detailed analysis of the causes and consequences of educational hypogamy. The ultimate macro-level cause is the expansion of higher education and the increase in the share of women in higher education. The decrease in the ratio of young men to young women among the college educated limits the opportunities of women to marry men with similar age and education to their own. Several alternatives are open to women to solve the problem: searching more intensively for educated men, even at the price of abandoning age homogamy; searching for educated partners in distant marriage markets; giving up those efforts and "marrying down"; and finally, refraining from marriage. There is evidence that educational hypogamy increases with the reversal of the gender gap in education (Esteve et al., 2016). Taken together, reversal of the gender gap in education is hypothesized to increase the share of hypogamous marriages.

The increase in hypogamous marriages have implications for union instability and dissolution. First, investment in and the creation of common values and lifestyles is more difficult for partners who have different levels of education (Esping-Andersen, 2009; van Bavel, 2012; Esteve et al., 2016). Educated people tend to prefer a managerial approach to the organization of leisure time and raising children, while people with lower educational levels tend to prefer a *laissez-faire* approach, meaning that spending leisure time should give the feeling of being free from self-constraints (Streib, 2015). Childraising for educated couples means that leisure time should be packed with organized cultural activities, including the consumption of high culture (Lareau, 2003). Hence, partners with different educational levels have conflicting views on how leisure time should be spent together with their (prospective) children.

Second, educational hypogamy may hinder women in achieving/realizing gender equity. Gender-role expectations are shaped by education: highly educated partners opt for gender-equity, while couples with low education are likely to stick to a traditional division of household tasks (Esping-Andersen, 2009). In educationally hypogamous partnerships, the contribution of women to household income may reach or even exceed the contribution of the partner. Becker's (1981) specialization argument suggests that in this case, women should specialize in the role of the breadwinner, and the role of housekeeping should be performed by the male partner. Achieving the reversal of traditional division in household tasks is possible in theory since women have a good bargaining po-

sition, given their high potential for better wage income. However, there is some evidence that highly educated women fail to enforce the gender-equal division of roles. For instance, Esping-Andersen (2009) finds that educational hypogamy increases, rather than decreases the amount of daily housework among highly educated Spanish women.¹ Relying on qualitative interviews with American families, Streib (2015) found that regardless of education, women are responsible for housework; the only difference that education makes is that educated women feel resentful and argue about the unequal division of labor with their partners. In short, "marrying down" increases the likelihood of conflicts related to the division of household tasks. These conflicts may even contribute to the emergence of a low self-esteem, besides the fact that a partner with a lower level of education can have a negative effect on the perception of one's own status (Byrne and Barling, 2017).

If conflicts related to lifestyle and the division of housework are more pronounced in hypogamous partnerships than in homogamous ones, it is likely that women marrying down tend to be less satisfied with their partnership and are more likely to break up the relationship. Being married to a person with a relatively low educational level, and the pessimistic expectations concerning the duration of the union immediately imply that the expected life-cycle income among hypogamous couples should be lower than among homogamous ones.²

The implications of expected life-cycle income on fertility are elaborated within the economic theory of fertility. Jones, Schoonbroodt and Tertilt (2011) examine the influential quantity-quality model (Becker and Lewis, 1973), and show that the desired number of children is proportional to the ratio of the full lifecycle family income to lifecycle female wages. For analytical simplicity, we assume that women do all childcare work. This assumption is realistic in the Hungarian context, and there is also some evidence that division of domestic work becomes more traditional after the transition to parenthood in Germany as well (Nitsche and Grunow, 2016). We also assume that educational level is a proxy for lifecycle income.

¹ See Table 1.4, column "Wife's time". The effect of hypogamy among highly educated women is the sum of the main effect of hypogamy and the interaction term between higher education and hypogamy. This sum is about half an hour per day.

² This proposition does not assume that separated women will never repartner. Rather, the assumption is that educational hypogamy has no systematic effect on the expected hazard of repartnering and on the expected income of the new partner.

Consider a partnership where both She and He have the same levels of education E . The desired number of children in this homogamous partnership is proportional to the ratio

$$\frac{W_E^M + W_E^F}{W_E^F} \quad (1)$$

where W_E^F is her full lifecycle wage income, and W_E^M is his full lifecycle wage income.³ The full lifecycle income is the (hypothetical) life-cycle income provided that He or She devotes all available time to work. Note that partnership instability can be modeled in terms of full income. In the presence of the risk of divorce, the full income is a sum of elementary incomes in different partnership states, weighted by the relative duration of each of those states.

Consider now a partnership where a woman with level of education E is partnered to a man with educational level $(E - 1)$. The desired number of children in this hypogamous partnership should be proportional to the ratio

$$\frac{W_{E-1}^M + W_E^F}{W_E^F} \quad (2)$$

The effect of hypogamy on the demand of children is revealed by the difference between the ratios presented in (1) and (2), which is:

$$\frac{W_E^M + W_{E-1}^M}{W_E^F} \quad (3)$$

Given the positive educational gradient in both male and female wages, the difference in (3) is positive, that is, more children are desired in homogamous partnerships than in hypogamous ones. Hence, our first hypothesis reads as follows:

H1: *Birth rates in educationally hypogamous partnerships are lower than those in educationally homogamous or hypergamous partnerships.*

Hypothesis H1 does not explore all implications of economic theory. Equation (3) suggests that the magnitude of the negative fertility effect of educational hypogamy depends on a *relative* difference in male wages, which is defined as the *absolute* difference in wages between men with different levels of education, divided by female wages. Neither the absolute difference in male wages, nor the

³ Throughout the paper, superscripts M and F identify males and females, respectively.

magnitude of female wages are constant across educational groups. Consider a society where there are only three educational levels: low ($E = 1$), middle ($E = 2$) and high ($E = 3$). The hypogamy effect among women with a high level of education depends on the relative income difference

$$\frac{W_3^M + W_2^M}{W_3^M}$$

and the effect among women with a middle level of education is proportional to the relative income difference

$$\frac{W_2^M + W_1^M}{W_2^F}$$

These two relative income differences do not need to be the same. Hence, the magnitude of the hypogamy effect is likely to be conditional on her level of education. In short, there should be an interaction effect between educational hypogamy and her level of education.

In the literature, a specific interaction effect was suggested by Nitsche et al. (2018). Drawing upon the bargaining perspective of families (Blood and Wolf, 1960) and recent empirical research on the outsourcing of domestic work (de Ruijter, Treas and Cohen, 2005; Treas and de Ruijter, 2008; Schneider and Hastings, 2017), they argue that highly educated women have sufficient bargaining power to ease their involvement in domestic work. Although outsourcing domestic work decreases disposable income, it should have a positive effect on fertility intentions since outsourcing enables the combination of work and children better.⁴ Since outsourcing can be observed among highly educated women, it is reasonable to assume that educational hypogamy does not affect the bargaining power of highly educated women, but it does undermine the bargaining power of women with less education. The bargaining perspective leads us to the following hypothesis:

H2: The magnitude of the effect of hypogamy on second birth rates decreases with educational level.

⁴ A formal argument runs as follows. Suppose that the couple decides to outsource $100t$ percent of the time that must be spent on raising children. One unit of time can be outsourced at price P . Thus, if t unit of domestic or childcare work is outsourced, full life-cycle family income decreases by Pt . However, outsourcing also implies that the time cost of raising children drops from W to $W(1-t)$, where W is her full wage income. Within the economic theory of fertility, fertility intentions are proportional to the ratio of the full income to the time cost. It can easily be shown that outsourcing increases this ratio provided that P is smaller than the full income of the couple.

DATA AND METHODS

We use the first four waves of the Hungarian *Turning Points of the Life Course* panel survey, collected in 2001, 2004, 2008 and 2012 by the the Hungarian Demographic Research Institute. The second and third waves correspond to the first and second waves of the *Generations and Gender Survey* (GGS), respectively. Using the four waves, a person-period dataset was created which contains time-varying information on births, partnerships and educational level.

In order to analyse the effect of educational hypogamy we need to construct educational histories for partners. This is a nontrivial task because respondents were not asked to provide details on their partners' educational histories. The only information available is the current partner's educational level at the time of the interview. To construct educational histories for partners, we matched the reported current educational levels to all person-months of the partnership spell, which included the time of the interviews.

Our method of constructing the partner's educational histories has two important implications. First, partners' educational levels are missing at an increasing rate as we move back in time. Note that partners' education remains unknown for partnership spells that started after an interview took place and ended before the subsequent interview. In the context of the present paper, the rate of missing information on educational pairing is substantially higher at the time of first conception than at the time of higher-order conceptions. This is one of the reasons why we chose to focus on second births in the present paper.

Second, our method of imputing partners' educational histories does not work for unstable partnerships. Consider a woman who marries somewhere between the first and second waves of the longitudinal survey. If the marriage survives and she participates also in the second wave, she can report her husband's education level and the reported educational level can be assigned to the full marriage history. But if her marriage breaks down before the second wave interview takes place, none of the information she provides on her current partnership can be used to reconstruct the education of the previous husband. Therefore, our procedure of measuring the partners' education introduces a bias: the event histories of women living in unstable partnerships are underrepresented in our analysis sample, which will be described below. The bias is substantial; our analysis sample includes only 55 out of the 186 spells which have ended in separation. The under-representation of unstable partnerships, together with the fact that partnership stability has an effect on birth rates, implies that our

sample is selective, and our results can only be generalized to the population of mothers living in stable partnerships.

The analysis sample is restricted to women who (1) are born between 1951 and 1980 ($N = 4,911$), (2) are mothers of one child and were partnered at the time of first birth ($N = 1,661$). After the exclusion of missing values, the analysis sample includes 1,657 women. The number of second conceptions is 1,188, and the (unweighted) number of person-months is 103,034. The average length of the risk period is around 62 months. The risk period comprises the period between 1970 and 2013.

In the event-history datafile used for analyses, the observation period starts immediately after the first child is delivered. The end of the observation period is marked by any of the following events: (1) second conception; (2) union dissolution; or (3) partner's death. Events of type (2) and (3) are treated as censored observations. Conceptions are identified by using the dates of second births; the dates of the second conceptions are defined as the birth date of the second child minus nine months.

The dependent variable is a dummy identifying the conception leading to the second birth. The key explanatory variables are female education, partnership type identifying hypogamous, homogamous and hypergamous partnerships and educational pairing. Female education is a time-constrained variable measuring the level of education at the time of first birth. The variable has three categories: vocational education (lower secondary education), secondary education (upper secondary education completed with the Matura exam), and tertiary education (college or university degree). The partnership type variable classifies partnerships into hypogamous, homogamous and hypergamous partnerships in terms of the above educational categories at the time of first birth. The categories of the educational pairing variable are the combinations of female education and partnership type. It has eight categories since women with tertiary education cannot marry upwards.

We will use four age-related variables to capture duration dependence: age since first birth, age at first birth, the log of the age at first birth, and the ratio of age since first birth to age at first birth. This specification is motivated by the fact that observed birth rates and predicted birth hazards are typically bell-shaped functions of age. The bell-shaped pattern can be modeled using two log-age variables: $\log(49 - \text{age})$ and $\log(\text{age} - 14)$ (Blossfeld and Huinink, 1991). The bell-shaped pattern remains if we replace $\log(49 - \text{age})$ with the linear age variable $(\text{age} - 15)$. When modeling second birth rates, the analysis time is age since first birth rather than absolute age. To model duration dependence in terms of age

since first birth in a way which respects the bell-shaped distribution of birth rates, absolute age is replaced by the sum of age since first birth and age at first birth. The presence of the linear age variable justifies the use of age since first birth and age at first birth. The model specification is completed by approximating $\log(\text{age} - 14)$ with two nonlinear terms: log age at first birth and the ratio of age since first birth to age at first birth.⁵

We test our hypotheses using discrete-time event-history analysis, that is, by estimating logistic regression models of second conceptions using the person-period dataset. Admittedly, multinomial logistic regression models of the competing risks of second conceptions and separations would be more appropriate, since educational hypogamy is supposed to increase the risk of union dissolution as well. However, the competing-risk approach is not feasible with the data at hand because of the low number of separations. We made an attempt to estimate all models reported in this paper by using multinomial logistic regressions, but most of the estimates turned out to be numerically unreliable, and some of the models even failed to converge. This is the reason why the separation outcome is neglected in this paper and regression modeling makes use of the simple binary logistic regression.

The models are estimated by using the full sample, as well as for three birth cohorts (1951–1960, 1961–1970, 1971–1980) separately. The characteristics of these samples are described in *Table A-1* in the Appendix. During estimation, we use a weight which reflects both the selectivity of panel continuation as well as differences in the relative frequencies of completed fertility and education between the sample and the population (Bartus, 2015). Because the person-months nested within persons cannot be considered as independent observations, we adjust the standard errors for clustering by estimating the Huber-White sandwich estimator, which is a standard feature of the statistical software, Stata.

Educational hypogamy might be an endogenous variable because “marrying down” is likely to be chosen by women who did not manage to find educated partners but do not wish to remain single (van Bavel, 2012). The unobserved factors shaping the position in the education-specific marriage squeeze might in fact overlap with unobserved factors influencing fertility intentions. A careful causal analysis should account for endogeneity, as well as for the selective nature of the sample. In the present paper, no attempt is made to use sophisticated statistical methods which have the potential to minimize these problems. The

⁵ The idea is to use a first-order Taylor-series expansion to approximate $\log(a) = \log(b + c)$ as $\log(b) + c/b$, where a denotes age, b denotes age at first birth, and c denotes age since first birth.

reason for this is that the dataset does not include a variable which would be a good candidate for the role of an excluded instrument. Because the findings reported here are reflecting the influences of selection effects, statements about causal effects should be understood as statements about *ceteris paribus* relationships, and not as statements about treatment effects.

RESULTS

Descriptives

Table 1 shows the share of hypogamous and hypergamous partnerships across educational levels and cohorts. Educational hypogamy is the most pronounced among women with secondary education, especially among those who were born between 1961 and 1980. A similar pattern applies to college educated women, but the share of hypogamous partnerships is about 4 percentage points lower, compared to that of women with secondary education. Among women with vocational education, educational hypogamy is relatively rare and has been declining over time. Finally, note that the share of hypergamous partnerships dropped from 33 to 21% among women with secondary education. These findings suggest that the reversal of the gender gap in (higher) education affects not only college graduate women but also women who hold a secondary school certificate (Matura).

Table 1: The share of hypogamous and hypergamous partnerships across educational levels and cohorts, %

	Cohort 1951-1960	Cohort 1961-1970	Cohort 1971-1980
Hypogamous partnerships			
vocational	11.0	3.2	6.6
secondary	29.3	37.1	35.8
tertiary	25.4	31.7	31.4
N	553	528	576
Hypergamous partnerships			
vocational	32.4	29.8	27.2
secondary	32.7	22.8	20.6
N	553	528	576

Source: Waves 1-4 of the *Turning Points of the Life Course* panel survey (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

Table 2 shows monthly second birth intensities per 1000 person-months. Second birth rate intensities range between 9 and 12 conceptions per 1000 person-months. The relationship between second birth rates and educational hypogamy varies across cohorts. In the youngest and the oldest birth cohorts there are no substantial differences in second birth rates across partnership statuses. In contrast, a clear pattern emerges in the 1961–1970 cohort: second birth rates increase as we move from hypogamous partnerships to hypergamous ones. The relationship between second births and education follows a U-shaped pattern in the two oldest cohorts, while a positive educational gradient emerges in the youngest birth cohort. The relationship between second birth intensities and educational pairings exhibit a U-shaped pattern. In the two oldest cohorts, the lowest birth rate characterizes the hypogamous partnerships of women with secondary education. In the youngest cohort however, hypergamous partnerships of women with vocational education exhibit the lowest rates of second births.

Table 2: Distribution of conceptions per 1000 person-months across explanatory variables by birth cohorts, %

	Cohort 1951–1960	Cohort 1961–1970	Cohort 1971–1980
Overall mean	9.69	12.54	11.26
Partnership type			
hypogamy	9.74	10.31	10.21
homogamy	10.16	12.37	11.66
hypergamy	8.83	16.82	11.53
Education			
vocational	11.19	14.37	9.49
secondary	7.90	11.00	10.72
tertiary	14.18	12.82	17.26
Educational pairing			
She vocational – He lower	12.89	14.70	10.47
She vocational – He vocational	12.17	12.55	10.18
She vocational – He higher	9.40	20.57	7.74
She secondary – He lower	8.34	9.97	8.71
She secondary – He secondary	7.19	10.79	9.51
She secondary – He higher	8.42	13.56	18.22
She tertiary – He lower	14.12	10.21	13.94
She tertiary – He tertiary	14.21	14.53	19.53

Source: Waves 1–4 of the *Turning Points of the Life Course* panel survey (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

Our second hypothesis implies that the magnitude of the hypogamy effect should increase with female education. We find this pattern in the 1961–1970 and the 1971–1980 birth cohorts. Among college graduates, second birth rates are lower in hypogamous partnerships. However, there is no similar pattern among women with secondary and vocational education. Finally, second birth rates are higher among women who have secondary education but their partner holds a college/university degree. The difference is substantial among women born in 1971–1980.

Testing hypothesis H1

Hypothesis H1 claims that educational hypogamy has a negative effect on second births. To test the hypothesis, we estimate a discrete-time logistic regression of second births on hypogamy, educational level, four age-related variables, educational enrolment and birth cohort. Parameter estimates of the event history model are presented in *Table 3*. Within the full sample, the hypogamy dummy has a negative, statistically significant coefficient. The hypogamy coefficient is negative within all three cohorts, but it is significant in the youngest cohort only. These findings suggest that educational hypogamy and second birth rates are negatively related, but this relationship is driven by the behavior of the youngest cohort. The coefficient of the hypergamy dummy lacks statistical significance, thus we cannot draw any conclusions regarding the effect of educational hypergamy.

The coefficient on hypogamy in the 1971–1980 cohort (-0.2918) suggests that second birth intensities in hypogamous partnerships are about $100 - 100 \exp(-0.2918) = 26\%$ smaller compared to homogamous ones. We computed adjusted average predicted hazards by partnership type and we found that within the 1971–1980 cohort, monthly second birth intensities in hypogamous partnerships were about 9.3 births per 1000 persons. In homogamous and hypergamous partnerships, these rates are 12.2 and 12.9, respectively. The figures also show that the ratio of birth intensities in hypogamous partnerships to that in homogamous partnerships is about 3:4. A similar ratio should approximately characterize the ratios of the predicted probabilities of second births within any specific time interval.⁶ Hence, all

⁶ The reason is that the probability of second births within a T month period can be approximated as the sum of the monthly hazards within this period, and the ratio of the hazard in hypogamous partnerships to that in homogamous partnerships is approximately $\exp(b)$, where b is the coefficient on hypogamy.

things being equal the parity progression rate in hypogamous partnerships is about 75% of the rate which characterizes homogamous partnerships.

Table 3: Testing hypothesis H1: Parameter estimates of discrete-time logistic regressions of second births

Variables	All cohorts	Cohort 1951-1960	Cohort 1961-1970	Cohort 1971-1980
Partnership type				
hypogamous	-0.1443* (1.999)	-0.0720 (0.606)	-0.1565 (1.295)	+0.2918* (2.155)
homogamous	0	0	0	0
hypergamous	0.0570 (0.782)	0.0097 (0.084)	0.1279 (1.075)	0.0389 (0.263)
Education				
vocational	0.0219 (0.299)	0.1774 (1.538)	0.0521 (0.417)	-0.3213* (2.195)
secondary	0	0	0	0
tertiary	0.5003*** (6.568)	0.5470*** (4.331)	0.1858 (1.508)	0.7845*** (5.360)
Age at first birth - 15	-0.2213*** (6.496)	-0.2432*** (3.951)	-0.2811*** (5.238)	-0.1243 (1.930)
Log(age at first birth - 14)	1.6141*** (5.109)	1.8396*** (3.380)	2.3654*** (4.676)	0.3444 (0.550)
Age since first birth	-0.2963*** (12.177)	-0.3289*** (8.820)	-0.3034*** (6.799)	-0.1628** (3.172)
Age since first birth / age at first birth	0.8995*** (5.152)	1.0421*** (3.967)	0.9306** (2.974)	0.3406 (0.936)
Birth cohort: 1951-1960	-0.0068 (0.100)	-	-	-
Birth cohort: 1971-1980	-0.2346** (3.222)	-	-	-
Currently in school	-0.0944 (0.614)	-0.1404 (0.622)	0.2148 (0.889)	-0.4046 (1.207)
Constant	-5.3659*** (12.464)	-5.7001*** (7.949)	-6.4260*** (9.287)	-3.7115*** (4.217)
Number of persons	1,657	553	528	576
Number of person-periods	18,985	7,654	5,749	5,582

Notes: Numbers in parentheses are *t* statistics. Standard errors are adjusted for clustering using the Hubert-Whyte sandwich estimator. * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

Source: Waves 1-4 of the *Turning Points of the Life Course* panel survey (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

Regarding the effect of female education, only the tertiary education variable has a significant coefficient in all cohorts. These coefficients are positive. This means that second birth rates among highly educated women are higher than among women with secondary education. Since the coefficients on the other education variables are not significant, we cannot decide whether the educational gradient in second births is positive or U-shaped.

We repeated the analyses with a specification which also includes interactions among the educational level dummies and the age variables. The inclusion of interaction terms relaxes the assumption that the effect of education on second birth schedules consist in shifting a common distribution or schedule towards older or younger age intervals. In the presence of age-education interaction terms, different educational groups can have different distributions characterizing the second birth schedules. Results are not reported here because the qualitative conclusions are the same as before: educational hypogamy is negatively related to second birth rates, but this evidence is significant only in the youngest birth cohort. This relationship is strong enough to generate a statistically significant negative relationship within the full sample.

Testing hypothesis H2

Hypothesis H2 claims that the magnitude of the hypogamy effect decreases with female education. To test the hypothesis, we modify the previously estimated specification and we replace the partnership status and female education variables with the educational pairing variables. The estimates are presented in *Table 4*. The reference category is the partnership of men and women both with secondary education. The category indicating educational hypogamy among women with secondary education has a negative but statistically insignificant coefficient. In contrast, the coefficient on the pairing "She secondary - He higher" is positive and statistically significant in the full sample, as well as in the 1971-1980 birth cohort. These estimates suggest that the hypothesized hypogamy effect arises only if we compare hypogamous partnerships to non-hypogamous ones. But this effect is due to the positive effect of educational hypergamy in the 1971-1980 birth cohort.

Table 4: Testing hypothesis H2: Parameter estimates of discrete-time logistic regressions of second births

Variables	All cohorts	Cohort 1951-1960	Cohort 1961-1970	Cohort 1971-1980
Educational pairing				
She vocational – He lower	0.0776 (0.411)	0.2589 (0.837)	0.0897 (0.252)	-0.3082 (0.916)
She vocational – He vocational	0.0562 (0.561)	0.2267 (1.424)	-0.0158 (0.090)	-0.0871 (0.459)
She vocational – He higher	0.0699 (0.600)	0.1753 (0.914)	0.2327 (1.295)	-0.3981 (1.669)
She secondary – He lower	-0.1043 (1.047)	-0.0214 (0.137)	-0.1694 (0.997)	-0.1424 (0.701)
She secondary – He secondary	0	0	0	0
She secondary – He higher	0.2144* (1.960)	0.1811 (1.135)	0.0701 (0.367)	0.6006* (2.534)
She tertiary – He lower	0.3692** (2.725)	0.5350* (2.269)	-0.0220 (0.100)	0.6094* (2.354)
She tertiary – He tertiary	0.6190*** (6.031)	0.7417*** (4.591)	0.2656 (1.533)	0.9504*** (4.456)
Age at first birth – 15	-0.2329*** (6.766)	-0.2630*** (4.076)	-0.2822*** (5.237)	-0.1285 (1.959)
Log(age at first birth – 14)	1.6770*** (5.299)	1.9344*** (3.433)	2.3384*** (4.580)	0.3831 (0.600)
Age since first birth	-0.2927*** (12.268)	-0.3229*** (9.012)	-0.3025*** (6.860)	-0.1578** (3.069)
Age since first child / age at first birth	0.8908*** (5.193)	1.0275*** (4.073)	0.9330** (3.032)	0.3442 (0.947)
Birth cohort: 1951-1960	-0.0082 (0.120)	-	-	-
Birth cohort: 1971-1980	-0.2307** (3.160)	-	-	-
Currently in school	-0.1020 (0.655)	-0.1105 (0.479)	0.2177 (0.902)	-0.5766 (1.545)
Constant	-5.4532*** (12.570)	-5.8141*** (7.813)	-6.3509*** (8.924)	-3.9137*** (4.330)
Number of persons	1,657	553	528	576
Number of person-periods	18,988	7,654	5,749	5,585

Notes: Numbers in parentheses are *t* statistics. Standard errors are adjusted for clustering using the Hubert-Whyte sandwich estimator. * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

Source: Waves 1-4 of the *Turning Points of the Life Course* panel survey (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

As we move to women with tertiary education, we can see that the coefficients on both "She tertiary - He lower" and "She tertiary - He tertiary" are positive. The coefficients are significant in the youngest and the oldest cohorts, as well as in the full sample. Furthermore, the coefficient on "She tertiary - He lower" is smaller than that on "She tertiary - He tertiary", which seems to be consistent with Hypothesis H2. However, the coefficients in themselves do not help us to assess Hypothesis H2, which states that the hypogamy effect is smaller among women with secondary education than that among college graduates. Formally, the hypothesis implies the inequality

$$(b_{TT} - b_{TL}) - (b_{SS} - b_{SL}) > 0$$

where the b s are the estimated regression coefficients, and the subscripts TT , TL , SS and SL refer to the respective educational pairings "She tertiary - He tertiary", "She tertiary - He lower", "She secondary - He secondary", and "She secondary - He lower". In our model, "She secondary - He secondary" is the reference category. Hence, $b_{SS} = 0$ and the inequality becomes

$$(b_{TT} - b_{TL}) + b_{SL} > 0$$

We therefore calculated the quantities $(b_{TT} - b_{TL})$ and b_{SL} , as well as the difference between those quantities. The results are presented in *Table 5*. The hypogamy effect among women with higher education is negative but lacking statistical significance in all cohorts. Similarly, we do not find a statistically significant hypogamy effect among women with secondary education. Finally, the difference of those effects lack statistical significance in the full sample, as well as in all birth cohorts. Hence, the evidence at hand is not strong enough to support (or reject) our hypothesis regarding the hypogamy-education interaction. However, as we noted earlier, we could observe a statistically significant hypogamy effect among women with secondary education if we would compare hypogamous partnerships to non-hypogamous ones. An effect that is driven by the fact that educational hypergamy has a positive effect among women with secondary education.

Comparisons of the predicted second birth intensities, summarized in *Table 6*, lead to the same conclusion. The second birth intensities are by far the highest among highly educated homogamous couples. In the 1971-1980 cohort, the predicted monthly birth intensity is 26.8 ± 7.4 birth per 1000 women. If a college graduated woman marries downwards, the predicted birth intensity drops to about 20 ± 7.6 births per 1000 women. Thus, the confidence intervals overlap and we cannot be sure that educational hypogamy decreases second birth intensities among

women with tertiary education. If we move to women with secondary education, hypergamous couples stand out with a predicted rate of 19.5 ± 6.7 , and the birth intensities of homogamous and hypogamous couples are very close to each other.

Table 5: Estimated hypogamy effects among women with secondary and tertiary education in Hungary

Age and education	All cohorts	Cohort 1951-1960	Cohort 1961-1970	Cohort 1971-1980
tertiary	-0.2497 (1.9135)	-0.2066 (0.8959)	-0.2877 (1.3543)	-0.3410 (1.4238)
secondary	-0.1043 (1.0479)	-0.0214 (0.1377)	-0.1694 (0.9971)	-0.1424 (0.7015)
difference	-0.1454 (0.8884)	-0.1852 (0.6664)	-0.1183 (0.4365)	-0.1986 (0.6315)

Notes: Linear combinations of coefficients from *Table 4*. Numbers in parentheses are t statistics.

Source: Waves 1-4 of the *Turning Points of the Life Course panel survey* (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

Table 6: Predicted second birth hazards

Educational pairing	All cohorts	Cohort 1951-1960	Cohort 1961-1970	Cohort 1971-1980
She vocational - He lower	11.048 (3.666)	12.017 (6.234)	16.079 (9.206)	8.798 (4.644)
She vocational - He vocational	10.341 (1.627)	10.382 (2.864)	12.382 (3.313)	9.580 (2.255)
She vocational - He higher	10.544 (2.013)	10.035 (3.277)	15.847 (4.428)	7.316 (2.592)
She secondary - He lower	8.822 (1.351)	8.120 (2.187)	10.571 (2.546)	9.146 (2.437)
She secondary - He secondary	9.791 (1.584)	8.288 (2.217)	12.605 (3.475)	10.600 (3.066)
She secondary - He higher	12.117 (2.128)	9.904 (2.649)	13.591 (4.038)	19.480 (6.678)
She tertiary - He lower	14.261 (3.276)	14.731 (5.964)	12.689 (4.537)	19.962 (7.620)
She tertiary - He tertiary	17.929 (2.771)	17.037 (4.287)	16.265 (4.193)	26.778 (7.418)

Notes: Average adjusted predictions calculated from the coefficients reported in *Table 4*. Numbers in parentheses are 95% confidence intervals around the predictions. When calculating the predictions, educational pairing is changed to the requested category, but all other variables are left at their actual level.

Source: Waves 1-4 of the *Turning Points of the Life Course panel survey* (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

DISCUSSION

The present paper examines the effect of educational hypogamy on second birth rates in Hungary. Our empirical study is motivated by two hypotheses. Previous work on educational hypogamy argued that “partnering down” has a negative effect on birth rates. This argument easily fits into the economic theory of fertility. Our first hypothesis is that hypogamy has a negative effect on second birth rates. However, this hypothesis does not exploit all implications of the economic theory. Drawing on the bargaining perspective, we also hypothesize that the magnitude of the negative effect of hypogamy decreases with levels of education.

The hypotheses are examined by using the first four waves of the Hungarian GGS survey. We found that among women with the same educational levels, age and educational enrolment, hypogamy is indeed associated with lower second birth intensities within the 1971–1980 cohort. In contrast, we do not find convincing evidence regarding the hypothesis claiming that the magnitude of the hypogamy effect would decrease with education. The evidence at hand suggests that among women with secondary education, there is a statistically significant difference between hypergamous and homogamous partnerships, but no statistically significant difference between hypogamous and homogamous ones. These differences imply however that second birth intensities are lower in hypogamous couples than in non-hypogamous ones.

Our hypotheses involve four effects: Hypothesis H1 is about an overall hypogamy effect, while Hypothesis H2 considers two conditional effects and makes a claim about the difference of those effects. All of those four effects were examined in three birth cohorts. Out of the twelve cohort-specific effects, only one turned out to be statistically significant: the overall effect of educational hypogamy in the youngest birth cohort. An obvious explanation of this failure is sample size: depending on birth cohort, the number of persons ranges between 553 and 576. Another explanation may be the increase in the true effect size over time. The economic perspective suggests that the magnitude of the hypogamy effect is proportional to the loss in life-cycle income which is caused by marrying downwards. The true effect is likely to be larger in the 1971–1980 cohort because members of this cohort were exposed to second births during the second half of the 1990s, when wage inequalities dramatically increased (see the Appendix in Bartus et al., 2013). In contrast, wage inequalities were moderate before 1990, the historical period where most of the women born between 1951–1960 delivered their second child. The nonsignificant findings in the older birth cohorts may

reflect the fact that the wage loss from educational hypogamy was relatively moderate in socialist Hungary. Finally, note that our sample is highly selective: as elaborated in the Data and Methods section, the sample excludes unstable partnerships. Hence, unobserved factors which contribute to partnership stability should be overrepresented in the sample of the analysis.

When examining the implications of educational hypogamy for second birth rates, we relied on findings on the differences between white-collar and blue-collar class cultures and class-based conflicts within families (Lareau, 2003; Streib, 2015). If the hypogamy effects observed in the present paper are results of conflicts of this kind, then we should assume that the culture of people with secondary education is more similar to that of the college graduates than to the culture of people with secondary education. Under this assumption, the level of cultural conflict arising from “marrying down” should be the highest among women with secondary education. Hence, the extent of the negative hypogamy effect on fertility would be larger for women with secondary education than that of women with tertiary education. Unfortunately, we were not able to identify independent data sources or stylized facts which would justify this assumption regarding the relationship between education and class cultures. This is the reason why we do not formulate an alternative hypothesis on the hypogamy-education interaction. Further research should examine the extent to which “marrying down” causes family conflicts among women with different levels of education.

Previous research documented a U-shaped relationship between female education and second birth rates. (Husz, 2006; Spéder, 2006; Bartus et al., 2013; Bartus, 2017). In an international comparison, this is a rather unique pattern since the educational gradient in second births is either negative or positive in most of the other European countries (Kreyenfeld, 2002; Gerster et al., 2007; Beaujouan and Solaz, 2008; Klesment and Puur, 2010; Mureşan and Hoem, 2010; Billingsley, 2011; Wood, Neels and Kil, 2014). The results of the present paper suggest that the U-shaped pattern is a real phenomenon: if the relative education of the partner is kept at a constant level, college educated women have higher second birth intensities than that of women with secondary education. As a consequence, further research is needed to understand more comprehensively the U-shaped educational gradient in second birth rates.

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APPENDIX

Table A-1: Descriptive statistics in the estimation sample

Panel A: Dataset of person-months

Variables	Cohort 1951-1960 (N = 7,654)	Cohort 1961-1970 (N = 5,749)	Cohort 1971-1980 (N = 5,585)
Second conception / 1000 person-month	9.69	12.54	11.26
Partnership type			
hypogamous	23.99	26.71	26.05
homogamous	48.13	57.04	54.20
hypergamous	27.87	16.23	19.73
Education			
vocational	30.41	35.19	43.44
secondary	56.99	45.32	40.20
tertiary	12.59	19.48	16.35
Educational pairing			
She vocational – He lower	2.73	1.54	2.51
She vocational – He vocational	16.18	26.09	28.33
She vocational – He higher	11.48	7.55	12.59
She secondary – He lower	17.60	17.47	16.90
She secondary – He secondary	23.00	19.16	16.14
She secondary – He higher	16.38	8.68	7.14
She tertiary – He lower	3.65	7.70	6.63
She tertiary – He tertiary	8.93	11.78	9.72
Age at first birth – 15	9.07	8.50	9.15
Log(age at first birth – 14)	2.22	2.16	2.23
Age since first birth	8.69	6.38	3.86
Age since first birth / age at first birth	1.00	0.82	0.47
Currently in school	1.86	1.40	3.14

Source: Waves 1-4 of the *Turning Points of the Life Course panel survey* (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

Panel B: Dataset of persons

Variables	Cohort 1951-1960 (N = 553)	Cohort 1961-1970 (N = 528)	Cohort 1971-1980 (N = 576)
Second conceptions	0.47	0.56	0.20
Partnership type			
hypogamous	22.43	22.76	24.09
homogamous	50.22	56.15	58.02
hypergamous	27.33	21.07	17.88
Education			
vocational	34.38	39.30	36.48
secondary	49.37	40.85	38.44
tertiary	16.23	19.83	25.07
Educational pairing			
She vocational – He lower	3.79	1.29	2.41
She vocational – He vocational	19.43	26.29	24.13
She vocational – He higher	11.15	11.71	9.93
She secondary – He lower	14.50	15.17	13.79
She secondary – He secondary	18.69	16.32	16.70
She secondary – He higher	16.17	9.35	7.94
She tertiary – He lower	4.13	6.30	7.88
She tertiary – He tertiary	12.09	13.53	17.18
Age at first birth – 15	8.51	8.66	9.78

Note: with the exception of age variables, figures are percentages.

Source: Waves 1-4 of the *Turning Points of the Life Course panel survey* (2001, 2004, 2008 and 2012), Hungarian Demographic Research Institute.

REGIONAL CONTEXT AND REALIZATION OF FERTILITY INTENTIONS: ARE CAPITALS DIFFERENT? THE EXAMPLES OF AUSTRIA AND HUNGARY*

Bernhard Riederer – Isabella Buber-Ennser

ABSTRACT

Despite regional variation in fertility, within-country differences have hardly been addressed in the realm of realizing fertility intentions. We address this shortcoming by analyzing the realization of short-term fertility intentions in Austria and Hungary, comparing data from the capitals (Vienna and Budapest) to the remaining regions. Results demonstrate that realization is lower in Hungary than in Austria and lower in Vienna than in the remaining parts of Austria, whereas in Hungary, behavior tends to be similar in the capital and other regions. Apart from individual characteristics (e.g. age), housing turned out to matter for realization of short-term fertility intentions in both countries. Decomposition analyses reveal that population composition plays a role in differences concerning the realization between countries and at the regional level. Compositional effects refer to partner context, parity and economic situation at the country level, and to age structure, partner context and attitudes towards parenthood at the regional level. In both countries, housing conditions also contribute to differences in realization rates between capitals and other regions.

Keywords: fertility intentions, within-country differences, Austria, Hungary, Generations and Gender Survey, decomposition analysis, housing, Budapest, Vienna

* This research was supported by the City of Vienna and the Austrian Science Fund (FWF28071).

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INTRODUCTION

Studies on fertility intentions gained importance in demography during the last decades (e.g. Billari et al., 2009; Liefbroer, 2009; Sobotka, 2009; Hagewen and Morgan, 2005). Recently, panel data from the Generations and Gender Survey (GGS) has initiated research on short-term intentions and their realization in several European countries (Régnier-Loilier and Vignoli, 2011; Spéder and Kapitány, 2009; Toulemon and Testa, 2005). Despite the observation that capitals and large cities show lower fertility rates than rural areas (e.g. de Beer and Deerenberg, 2007; Hank, 2002; Kulu and Washbrook, 2014), the regional context has been hardly considered as an explanatory factor in analyses on fertility intentions and their realization (an exception is Mencarini et al., 2015).

The aim of the present study is threefold. Firstly, we contribute to the literature on the realization of fertility intentions by differentiation between a country's capital and the remaining areas. A variety of individual characteristics (e.g. age, marriage, parity, education) turned out to affect the realization of short-term fertility intentions (e.g. Kapitány and Spéder, 2012; Morgan and Rackin, 2010; Régnier-Loilier and Vignoli, 2011). Mencarini et al. (2015) included municipality size as an independent variable to explain the realization of fertility intentions in Italy, distinguishing between big, medium, and small communities. In addition, Riederer and Buber-Ennsler (2019) recently studied urban-rural differences at an aggregate level in eleven European countries. A detailed analysis of within-country differences, as well as housing conditions in Austria and Hungary provides further insights on the realization of family plans within the European context.

Secondly, we further extend knowledge on the realization of fertility intentions in Europe by comparing Austria and Hungary. Both countries are interesting cases, as they are both characterized by rather low fertility rates (*Table 1*).¹ Although existing studies reveal substantial variation across countries (e.g. Régnier-Loilier and Vignoli, 2011; Kapitány and Spéder, 2012), cross-country comparisons of realization of fertility intentions are still sparse. Additionally, prior research on fertility variation between urban and rural areas was almost entirely restricted to Nordic countries (Kulu and Washbrook, 2014).

Thirdly, comparing similar countries that also display remarkable differences is a recommended strategy in identifying relevant country specific factors (Neyer and Andersson, 2008; Matysiak and Vignoli, 2010). We compare two Central European countries that have much in common regarding urban-rural differences. In both countries, for instance, only the capital can be accounted for as an internationally important metropolis, with more than one million inhabitants.² Also, in both countries, fertility is traditionally lower in their capitals than the country average (*Table 1*). At the same time Austria and Hungary show remarkable differences at the national and regional levels in terms of contextual and compositional factors (see details described below). The two countries have had a common history and share many cultural values. For decades however, the neighboring countries found themselves placed at different sides of the Iron Curtain, and developments of (family) policy and fertility varied accordingly. By studying Vienna and Budapest as opposed to other regions of Austria and Hungary, we investigate the realization of short-term fertility intentions in urban and rural areas under different country-specific and regional circumstances.

Table 1: Mean number of children per woman in Austria and Hungary, 1965–2015

	1965	1975	1985	1995	2005	2015
Austria	2.70	1.83	1.47	1.42	1.40	1.49
Vienna	1.82	1.40	1.33	1.33	1.38	1.42
Hungary	1.82	2.34	1.85	1.57	1.30	1.44
Budapest	n.a.	n.a.	1.47	1.22	1.12	1.16

Source: Eurostat (2016), Statistics Austria (2015, 2016), HCSO (2016).

¹ Hungary witnessed lowest total fertility rate in 2011 (1.23), Austria in 2001 (1.33; Eurostat, 2016).

² Vienna is by far the largest city in Austria with 1,766,746 inhabitants in 2014, followed by Graz with 269,997 inhabitants (Statistics Austria, 2015). Budapest counted 1,759,407 inhabitants in 2015, followed by Debrecen with 203,059 inhabitants (HCSO, 2016).

REGIONAL FAMILY CONTEXT AND DIFFERENCES IN THE REALIZATION OF FERTILITY INTENTIONS

The literature on fertility discusses several explanations for differences in fertility rates between rural and urban regions. In particular, (a) regional opportunity structures, (b) local patterns of social interactions/cultural norms, (c) housing conditions, and (d) the distribution of individual characteristics are assumed to be crucial factors (Hank, 2002; Kulu and Washbrook, 2014; Trovato and Grindstaff, 1980).

(a) *Opportunity structures* affect the ability to provide an appropriate environment, seen as a prerequisite for parenthood. Regarding opportunity structures that are important for the realization of childbearing intentions, family policy is highly relevant (Németh, 2017; Oláh, 2003; Matysiak and Węziak-Białowska, 2016). In the past Austria had been characterized by general family support, while Hungarian family policy offered a high level of support for working mothers (Ferrarini, 2006; Korpi, 2000). Over the last decades Austria, in addition, established policies aimed at fostering work-family reconciliation – in particular by investing in childcare facilities for (preschool) children (Blum et al., 2014). In Hungary, principles of support changed profoundly after 1989–1990, leading to high uncertainty for families (Spéder and Kamarás, 2008), but there are longer term continuities and since the 2010s new forms of family support have been introduced. At present, family support in Hungary is very generous when cash benefits are concerned, but falls behind regarding the availability of childcare services (Bartus et al., 2013). Provision of formal childcare, especially for children below the age of three, is however key for childbearing. In both countries, availability of childcare facilities is higher in capitals than in other regions. Nevertheless, the overall availability of childcare facilities is remarkably higher in Austria than in Hungary, and the differences between the capitals and other regions are more pronounced (2016: 14% in Hungary, 23% in Budapest; 25% in Austria; 44% in Vienna) (HCSO, 2017; Statistics Austria, 2017).

Educational and labor market opportunities are also relevant to the realization of childbearing intentions. Career intentions and corresponding opportunities may compete with fertility intentions, thus may contribute to postponement or abandonment of fertility intentions. In fact, the share of persons in the labor force who are tertiary educated and/or employed in science and technology³

³ Strictly speaking, the share of persons in the labor force who are tertiary educated and/or are employed in science and technology refers to the composition of the labor force. It, however, also perfectly indicates educational and labor market opportunities.

is higher in both capitals than in the other regions of the concerned countries. Despite this commonality, this proportion is remarkably higher in Austria than in Hungary (2018: 36% in Hungary, 59% in Budapest; 49% in Austria; 56% in Vienna) (Eurostat, 2019a).

(b) Regarding *norms and values*, Austria and Hungary share, together with most European countries, the two-child-family ideal (Sobotka and Beaujouan, 2014). Regarding gender norms however, results are mixed. While some authors find that culture-related conditions for maternal employment are “somewhat better” in Hungary than in Austria (e.g. Matysiak and Węziak-Białowska, 2016), others report that Hungarians hold more conservative attitudes than Austrians do in this respect (Panova and Buber-Ennser, 2016). Moreover, in the GGS, Hungarian participants largely agreed that children are needed in order to have a fulfilling life, whereas agreement was much lower in Austria. Within both countries, agreement was lower in the capitals than in other parts. As traditional family views are stronger in rural, as they are in urban areas, parenthood might be more relevant for individuals in rural settings, which might entail an increase in the realization of fertility plans.

(c) As an appropriate living environment for a child is seen as a prerequisite for parenthood, *housing conditions* are also related to family formation and enlargement (Vignoli et al., 2013; Clark, 2012; Mulder, 2006; Mulder and Billari, 2010; Mulder and Wagner, 2001; Ström, 2010). As Hungarian policies favor ownership, nine out of ten Hungarians own the house or apartment they are living in (Pittini et al., 2015), and cohabiting with parents is common (Hegedüs and Teller, 2007; Murinkó, 2019). Renting is usually not regarded as a long-term arrangement, private renting is concentrated in cities where the rent is expensive (Murinkó, 2019). In Austria, only one out of two private households are owner-occupied, around 43% are rented dwellings. Social housing provided by municipalities and cooperative housing account for more than half among rented dwellings (Statistics Austria, 2018b). Regional variation is large: in Vienna, only two out of ten dwellings are owner-occupied whereas renting is prevailing (77%, consisting of 43% social housing and 34% private renting) (Statistics Austria, 2018b). In both countries, housing costs of rented dwellings are above the country-average in the capitals (Statistics Austria, 2018b; Eurostat, 2019b).

(d) Turning to *population characteristics*, we utilize three aspects, namely, the incidence of economic hardship, the age structure of inhabitants, and the proportion of one-person-households. Assuming that economic hardship, lower fecundity at older ages, and living alone (being single) may impede successful

realization. Regional differences in these characteristics will contribute to regional differences in realization.⁴

The share of persons perceiving financial constraints is higher in Hungary than it is in Austria: According to GGS data (Vikat et al., 2007), 16% of Hungarian women and men aged between 21 and 45 years had difficulties in making ends meet, but only 9% among their Austrian peers had similar issues (own computation). Within the countries, economic constraints were perceived less often in Budapest than in other regions of Hungary (12% versus 17%), but more often in Vienna than in other Austrian regions (14% versus 8%).

Age structures are similar in both countries, in the capitals as well as in other parts (Eurostat, 2019b; Statistics Austria, 2018a). Nevertheless, the crucial aspect is not the general age structure, rather the age of those who want (additional) children. Among those who intend a(nother) child, the share of persons aged 35 to 45 years is lower in Hungary than in Austria (Appendix, *Tables A1* and *A2*). Remarkably, the share of persons intending to have a child among people aged 35–45 is particularly high in Vienna (36%), thus arguing in favor of lower levels of realization in the Austrian capital.

Finally, living alone is common in both countries, especially in metropolitan areas. This living arrangement is prevalent in young adulthood (after leaving the parental home) and at older ages (due to widowhood or separation/divorce). Overall, one-person households are more frequent in Austria than in Hungary, and in both countries, the proportions of one-person households are higher in the capital as compared to the whole country (Austria: 37%, Hungary 30%; Vienna: 45%; Budapest: 40%; numbers refer to 2014 for Austria and to 2016 for Hungary) (Eurostat, 2019b). Although a proportion of men and women living alone are not single, and have non-co-resident partners, this living arrangement is unfavorable for family formation.

Overall, we hypothesize that the realization of childbearing intentions is lower in cities than in other areas. This should hold for Vienna and Budapest as compared to the respective other regions of Austria and Hungary. Most of the discussed city characteristics support our hypothesis (educational and labor market opportunities, values, housing). Only availability of formal childcare questions our assumption. Both capitals are attractive places, offering alternatives that might compete with childbearing and child rearing.

⁴ We want to add that the above mentioned different educational distribution of inhabitants is also crucial with regard to the composition of the population. Those highly educated who intend to have a child may have more abilities and resources to realize their intentions. This may counteract the contextual effects of the indicated opportunity structures.

In terms of contextual differences at the country level, our comparison showed that Austria and Hungary have much in common (low total fertility rates, values etc.). Nevertheless, differences in economic hardship indicate better conditions to realize fertility intentions in Austria. In addition, research suggests that post-communist societies have lower realization rates due to the character and the pace of social change after 1989–1990; discontinuity of political support, and resulting instances of feelings of anomie (Spéder and Kapitány, 2014; Kapitány and Spéder, 2012). We thus hypothesize realization to be higher in Austria than in Hungary.

DATA, VARIABLES, AND ANALYTIC STRATEGY

The current study is based on the Generations and Gender Survey (GGS), a panel study with detailed data on family formation and fertility. The first and second waves of the study were carried out in 2004 and 2008 in Hungary and in 2009 and 2013 in Austria. Analyses are restricted to the overlapping age range in the two countries (between 21 and 45 years in wave 1).

In the first part, we provide a general overview of fertility intentions in both countries according to the distinction between the capital cities versus other parts of the relevant countries, based on the first wave of the GGS, including the responses of 10,270 men and women. Among them, 876 were living in Vienna, 3,601 in other parts of Austria, 743 in Budapest, and 5,050 in other parts of Hungary. We excluded persons expecting a child, men whose female partners were 50 years old or above, as well as persons with same-sex partners, due to insufficient information on short-term fertility intentions.

In the second part, we study the realization of short-term fertility intentions. The sample of analysis includes 2,159 panel respondents who intended to have a child within three years in wave 1.⁵ Among them, 183 respondents were residing in Vienna and 170 in Budapest, whereas 760 and 1,046 were living in other regions of Austria and Hungary, respectively.

Our main variable of interest is the intention to have a child within three years. The exact wording of the questions on fertility intentions differ between the two countries. In Austria, respondents were asked: “Do you intend to have a/another child during the next three years?”, with answer options: “definitely not”,

⁵ About 1% of respondents in Hungary and less than 1% of respondents in Austria who did not have a(nother) new-born between wave 1 and wave 2 were pregnant at wave 2. We excluded them from our analyses because we cannot be sure whether these pregnancies result in life births or not.

“probably not”, “probably yes” and “definitely yes”. Thereafter, respondents were asked: “Supposing you do not have a(another) child during the next three years, do you intend to have any (more) children at all?”, with answer options: “definitely not”, “probably not”, “probably yes” and “definitely yes”. Combining these two questions allows to distinguish between individuals (1) intending to have a child within three years, (2) intending to have a child later, or (3) intending to have no (further) child/children.

In Hungary, respondents were asked: “Would you like to have any more children?” If answering affirmative, respondents were asked: “At what age would you like your (next) baby to be born?” (Respondents had to give a specific age in years, though some did not give a figure, or answered with “don’t know”). For the standardized international dataset, dichotomous variables for “intending to have a child within the next three years” and for “intending to have a child later” were generated by the Hungarian GGS team. These Hungarian variables are widely used for comparative research on fertility intentions and their realization (e.g. Kapitány and Spéder, 2012).

We study the realization of short-term fertility intentions by analyzing whether those who wanted a(nother) child within three years in the first wave have realized their intentions by the time the second wave or not. Binomial logistic regression models are carried out to estimate average marginal effects. They represent the average effect of a variable on the probability of realization and are comparable across different groups (e.g. models for different countries) (Best and Wolf, 2012). Positive coefficients indicate a higher probability of realization, negative coefficients indicate a lower probability.

The main explanatory variable is regional context: “capital” versus “remaining part of the country”. Various socio-demographic and economic characteristics are considered as control variables: (a) gender; (b) age group (21–24, 25–34, 35–45 years); (c) partnership status (married, cohabiting, living apart together (LAT), no partner)⁶; (d) parity (childless, one child, two children, three or more children); (e) educational level (primary or secondary education, tertiary education); (f) financial situation (difficult, ok, good); (g) attitudes towards parenthood (agreement regarding the necessity of children). Existing literature has repeatedly shown that these variables affect the realization of fertility intentions (Spéder and Kapitány, 2009; Spéder and Kapitány, 2014; Régnier-Loilier and Vignoli, 2011). In addition, we include the following aspects of housing: (1) type of

⁶ We do not exclude persons without a partner at wave 1, as a non-negligible share of respondents living in the two capitals reported no partner and (nevertheless) wanted to have a child in the near future.

housing (owner, tenant or subtenant and paying rent, accommodation is provided rent-free, other), (2) the question whether childbearing depends on housing conditions or not⁷ (not at all, a little, quite a lot, or a great deal), and (3) the intention to move in the near future⁸ (yes, no).⁹ Measures refer to wave 1. Detailed sample characteristics are shown in the Appendix (*Tables A1 and A2*).

Our analytical strategy is as follows: First, we describe fertility intentions as reported in wave 1 and compare them across countries and capitals. Thereby, we discuss the mean number of already born and further intended children, as well as short-term and long-term fertility intentions. Second, realization of short-term intentions (by wave 2) is analyzed. In multiple regression analysis, we follow a stepwise hierarchical model build-up: a basic model (M1) only includes our two main explanatory variables (capital vs. remaining part; country), whereas the multivariate model (M2) includes the control variables and aspects of housing as mentioned above. Logistic regressions are carried out on the pooled sample, as well as for Austria and Hungary separately, to find out an overall effect of regions, and possible differences by countries. Using the method suggested by Hoetker (2007), we test whether coefficients for socio-demographic characteristics differ between countries.

Finally, decomposition analyses are applied to assess the relative impact of compositional factors (incl. housing characteristics). The distribution of individual characteristics refers to the composition of rural and urban populations. We employ methods proposed by Fairlie (2005) and Jann (2006) to examine whether the difference in realization rates between (a) countries, and (b) capitals and other regions is due to population composition, or due to other reasons (e.g. regional differences concerning socio-demographic characteristics).

⁷ The exact wording of the question was: "How much would the decision on whether to have or not to have a/another child [AT: during the next three years] depend on your housing conditions?" (1) Not at all, (2) a little, (3) quite a lot, (4) a great deal.

⁸ We generated a dichotomous variable for the intention to move, based on the following questions. Austria: "Do you intend to move within the next three years?" Possible answers: (1) definitely not, (2) probably not, (3) probably yes, (4) definitely yes. Hungary: "Are you planning to change your housing conditions in the near future?" Possible answers: (1) Yes, within one to two years, (2) yes, within 3-5 years, (3) not yet, but would like to later, (4) does not want to move or change, (9) don't know.

⁹ Other aspects of housing, like the number of rooms or the size of the dwelling could not be included in the analyses as these variables were included either only in Austria, or only in Hungary, but not in both countries. Satisfaction with the dwelling (measured on a scale from 0 to 10) was initially included in our analyses but was dropped, as it was not associated with the realization of fertility intentions.

RESULTS

Fertility intentions in Austria, 2009 and Hungary, 2004

In Austria, individuals living in the capital, Vienna, had less children as compared to those in the remaining parts of the country (*Figure 1*). When adding the (further) intended number of children, Vienna is also well behind the remaining parts of Austria. A similar difference between the capital and other parts of the country is observable also among men in Hungary, but not among Hungarian women. It has to be taken into consideration, however, that the intended total number of children reflects already realized intentions plus the number of (further) intended future children. Looking at intentions for future children alone, we see that these regional differences disappear. Intentions alone are comparable between capitals and other regions and are even slightly higher in the capital cities. The number of children already born is higher in Hungary than it is in Austria. A distinction between two broad age groups, 21–34 and 35–45 years, reveals that the interviewed persons in Hungary had started family formation earlier. In the older reproductive age groups (35–45), Austrian women, as well as women living in Budapest, intended to have (further) children more often than women living in the remaining parts of Hungary.

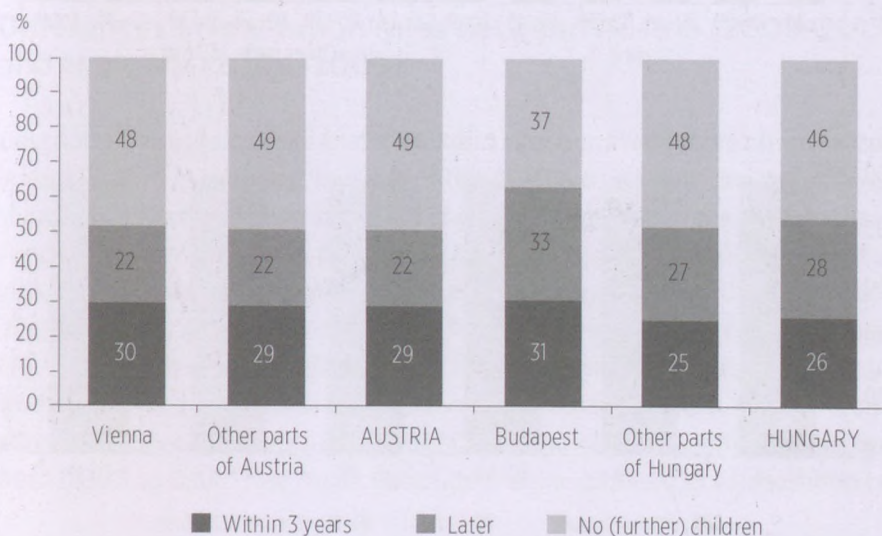
We now turn to the temporal dimension of fertility intentions, differentiating between intending a child within the next three years, wanting a child later, or intending no further family extension. Results are quite similar for both Austria and Hungary (*Figure 2*). Three out of ten women and men intended to have a child in the near future, about one out of four wanted a child or children later on, and one out of two did not want to have any (further) children. In Hungary, fewer interviewed persons had stated to have completed family formation than in Austria (46% versus 49%). Childbearing intentions for the coming three years were stated by 26% of respondents in Hungary and by 29% of respondents in Austria. A differentiation by age (*Figure 3*) reveals that in both countries persons in their late twenties most frequently wanted to have a child within the next three years (Austria: 50%; Hungary: 42%). Women and men in their early thirties also frequently indicated to intend to have a child in the near future in Austria (44%), while the indication of this intention happened less often in Hungary (35%). Similarly to what we could observe regarding the number of (further) intended children, capitals do not differ much from other country regions concerning three-year intentions. In Hungary, short-term intentions were indicated even more often in Budapest than in the remaining part of the country.

Figure 1: Mean number of born and further intended children in Hungary 2004 and Austria 2009 by region, sex and age



Note: "O. p. of AT" stands for "Other parts of Austria"; "O. p. of HU" for "Other parts of Hungary".
 Source: Generations and Gender Survey wave 1, N = 10,002.

Figure 2: Temporal dimensions of fertility intentions by regions in Hungary 2004 and Austria 2009



Source: Generations and Gender Survey wave 1; N = 10,270.

Figure 3: Temporal dimension of fertility intentions by regions and age of respondent in Hungary 2004 and Austria 2009

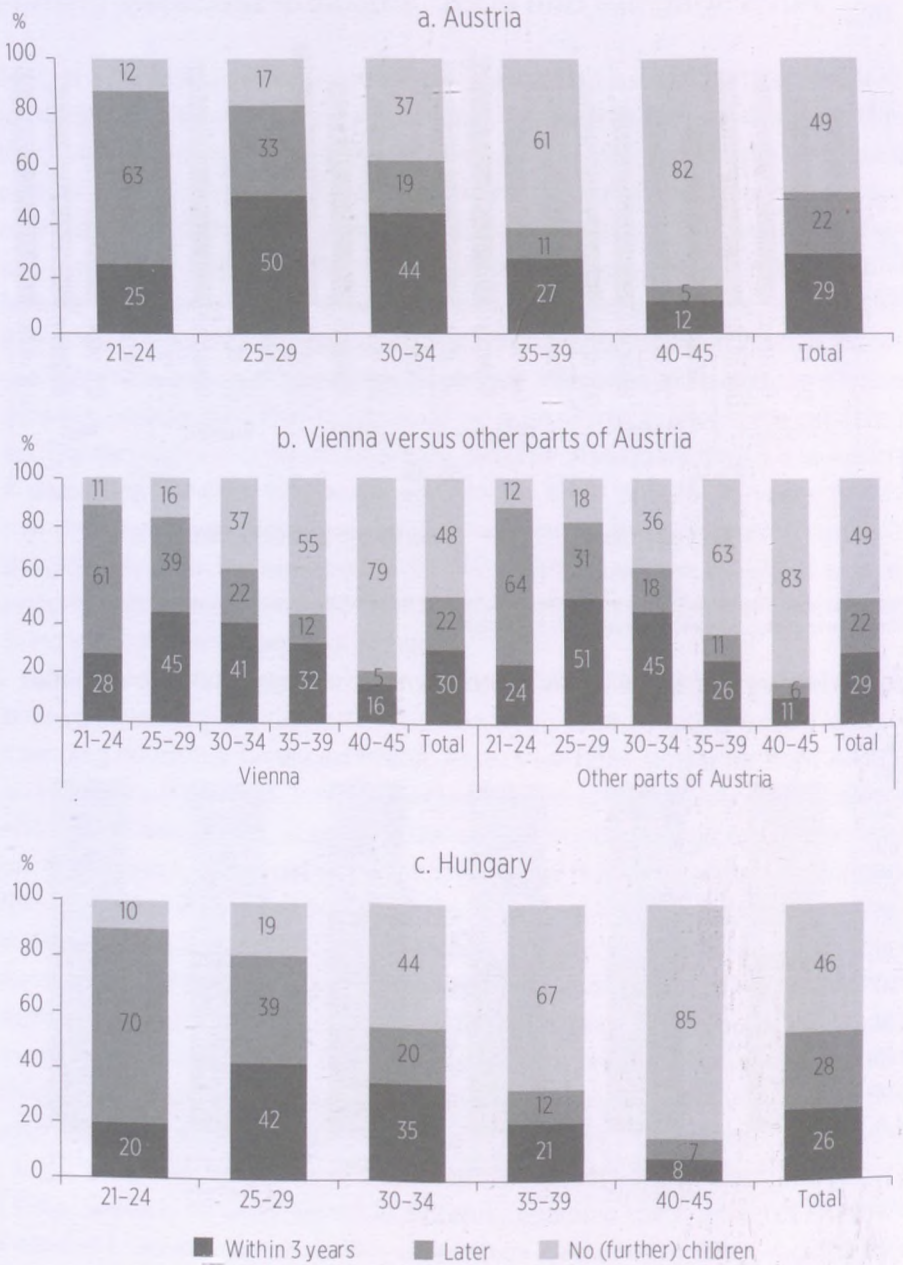
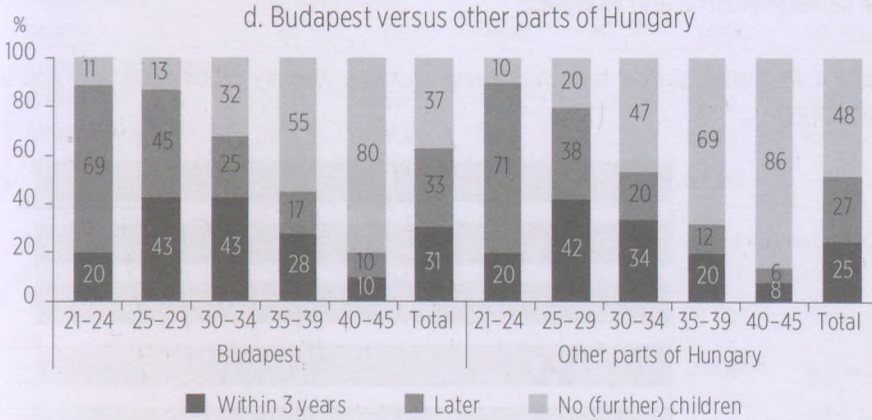


Figure 3: Temporal dimension of fertility intentions by regions and age of respondent in Hungary 2004 and Austria 2009 (continued)



Source: Generations and Gender Survey wave 1 (own calculations with weighted data); N = 10,270, among them 876 in Vienna, 3,601 in other parts of Austria, 743 in Budapest, and 5,050 in other parts of Hungary.

After this brief overview of fertility intentions based on the first wave of the Austrian and Hungarian GGS, we study in detail the realization of short-term intentions in the coming section.

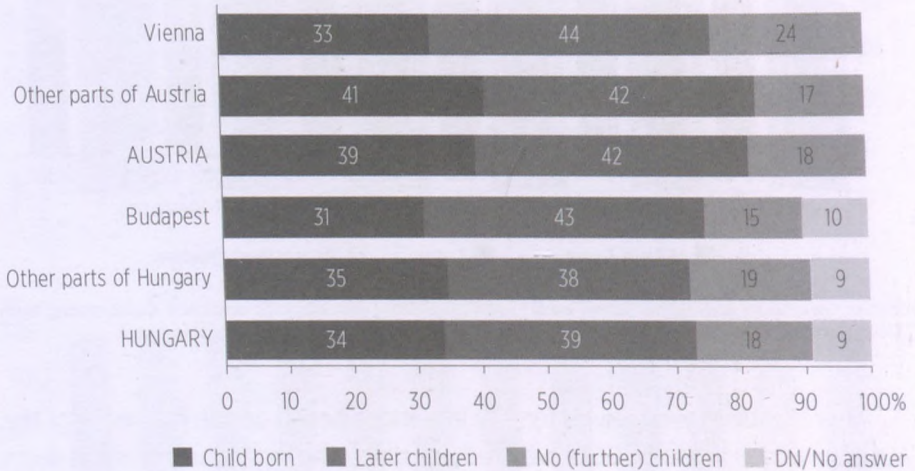
Differences in realization rates between Austria (2009–2013) and Hungary (2004–2008)

Descriptive findings indicate that short-term intentions were more often realized in Austria than in Hungary: four out of ten Austrians, yet only one out of three Hungarians were intending to have a child within the next three years in wave 1 and had a new-born child by wave 2 (Figure 4).¹⁰ In line with descriptive findings, multivariate results based on the pooled sample confirm that short-term intentions were more often realized in Austria than in Hungary (Table 2, Model M1). The difference between Austria and Hungary remains statistically significant when controlling for various socio-demographic characteristics, economic situation, and aspects of housing (Model M2). As the country coefficient changes from 0.06** to 0.10***, we might conclude that the differences in realization be-

¹⁰ In Hungary, one in ten answered with “don’t know” when asked about their childbearing plans, while in Austria the same answer was given by less than 1%.

tween the two countries would be even larger if socio-economic characteristics, economic situation, attitudes towards parenthood, and housing conditions were the same in Austria and Hungary.

Figure 4: Realization of short-term childbearing intentions, Hungary (2004–2008) and Austria (2009–2013)



Source: Generations and Gender Survey wave 1 and wave 2; N = 2,159 panel respondents intending a child within three years in wave 1.

Differences in realization rates between capitals and regions in Austria (2009–2013) and Hungary (2004–2008)

Short-term fertility intentions were less often realized in the capitals, Vienna and Budapest, than in other regions of Austria and Hungary (Figure 4). The difference between capitals and other regions is larger in Austria (33% vs. 41%) than in Hungary (31% vs. 35%).¹¹ Our basic regression model also reveals lower rate of realization in capitals than in other regions of the countries (Table 2, Model M1), but this regional difference is no longer statistically significant in the multivariate model (Model M2).

¹¹ A further differentiation between realization, postponement, and abandonment shows that in Austria, individuals abandoned their plans and did not plan to have any (further) children more often in Vienna than in other regions of Austria (24% vs. 17%). In Hungary, childbearing has more frequently been postponed until later years in life in Budapest than in other regions of Hungary (43% vs. 38%).

Table 2: Regression analyses on realization of childbearing intentions (average marginal effects)

Sample/country Model	Pooled sample		Austria		Hungary	
	M1	M2	M1-AT	M2-AT	M1-HU	M2-HU
Realization (dichotomous)						
Capital	-0.06*	-0.04	-0.08 (*)	-0.06	-0.04	-0.02
Other regions	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)	(ref.)
Austria	0.06**	0.10***	---	---	---	---
Hungary	(ref.)	(ref.)	---	---	---	---
Sex						
Male	---	(ref.)	---	(ref.)	---	(ref.)
Female	---	0.00	---	0.03	---	-0.04
Age						
21-24 years	---	0.07*	---	0.01 ^a	---	0.12**
25-34 years	---	(ref.)	---	(ref.)	---	(ref.)
35-45 years	---	-0.23***	---	-0.27***	---	-0.18***
Partnership status						
Married	---	(ref.)	---	(ref.)	---	(ref.)
Cohabiting	---	-0.05 (*)	---	-0.03	---	-0.07 (*)
LAT	---	-0.23***	---	-0.23***	---	-0.22***
No partner	---	-0.33***	---	-0.30***	---	-0.35***
Parenthood/parity						
Childless	---	(ref.)	---	(ref.)	---	(ref.)
1 child	---	0.06 (*)	---	0.08 ^a	---	-0.22*
2 children	---	-0.02	---	0.00	---	-0.03
3 or more children	---	-0.10**	---	-0.06	---	-0.13**
Education						
Primary or secondary	---	(ref.)	---	(ref.)	---	(ref.)
Tertiary education	---	0.06*	---	0.06	---	0.07 (*)
Unknown	---	0.04	---	0.01	---	0.05
Economic situation						
(Very) difficult	---	(ref.)	---	(ref.)	---	(ref.)
OK	---	0.04 (*)	---	0.09*	---	0.02
(Very) good	---	0.09**	---	0.14***	---	0.02
Attitudes towards parenthood						
Child(ren) necessary for a fulfilling life	---	0.09**	---	0.09*	---	0.11**
Neither/nor	---	(ref.)	---	(ref.)	---	(ref.)
Child(ren) not necessary	---	0.01	---	-0.01	---	0.04

Table 2: Regression analyses on realization of childbearing intentions (average marginal effects) (continued)

Sample/country Model	Pooled sample		Austria		Hungary	
	M1	M2	M1-AT	M2-AT	M1-HU	M2-HU
Type of housing						
Own accommodation	---	(ref.)	---	(ref.)	---	(ref.)
Tenant or subtenant, paying rent	---	-0.01	---	0.03	---	-0.09*
Rent-free accommodation	---	0.04	---	0.01	---	0.05
Other	---	-0.06	---	-0.07	---	-0.07
Childbearing depending on housing conditions						
Not at all	---	(ref.)	---	(ref.)	---	(ref.)
A little	---	-0.03	---	-0.06	---	-0.01
Quite a lot or a great deal	---	-0.03	---	-0.09 ^a	---	0.01
Intention to move						
No	---	(ref.)	---	(ref.)	---	(ref.)
Yes	---	0.07**	---	0.04 ^a	---	0.10***
Cragg-Uhler R ²	0.01	0.20	0.01	0.24	0.00	0.19
N	2,127	2,127	916	1,916	1,211	1,211

Notes: (*) $p \leq 0.1$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$. Model M2-AT versus model M2-HU: LR $\chi^2(20) = 31.33$, $p = 0.05$. Likelihood-ratio or Wald tests indicating differences in coefficients between models M2-AT and M2-HU: ^a $p \leq 0.05$.

Source: Generations and Gender Survey wave 1 and wave 2; panel respondents intending a child within three years in wave 1.

Separate models for Austria and Hungary testify that lower realization of fertility intentions in capitals is mainly due to results for Austria: in models with region included as a single explanatory variable, we find a significant difference between Vienna and the other regions of Austria (*Table 2, Model M1-AT*). When controlling for socio-demographic and economic characteristics, as well as housing, persons living in Vienna do not significantly differ from their compatriots from other regions in terms of realization versus non-realization (*Table 2, Model M2-AT*) as the estimated coefficient becomes smaller in size, and loses statistical significance in the multiple regression model. It seems as though the observed lower probability of realizing fertility intentions in Vienna (as compared to other regions of Austria) is partly due to a different composition between these regions in terms of socio-demographic characteristics, economic situation, attitudes and housing.

Although non-realization is slightly higher in Budapest (*Figure 4 and Table 2, Model M1-HU*), we find no significant regional variation in Hungary. Consequently, behavior proves to be similar in the capital and other regions.

Effect of socio-demographic characteristics and housing on realization rates in Austria (2009–2013) and Hungary (2004–2008)

We now turn to our control variables. As expected, age, partnership status, and parity are all crucial for realizing short-term fertility intentions (*Table 2, Models M2-AT and M2-HU*). Especially at an older reproductive age, childbearing intentions are significantly less often realized. In addition, in Hungary, persons in their early twenties realized their intentions to a higher extent, the same however, is not true for Austria.

As expected, partnership situation is crucial. Living apart together with the partner is a less favorable context for realizing fertility intentions. In addition, persons that are not in partnerships also rarely realized their previously stated short-term intentions. Regarding marital status, married persons realized their short-term fertility intentions more often than those cohabiting. In Austria, however, this difference is not statistically significant. Parity also matters for realization. On average, Austrians already having one child realize their intentions more often than childless respondents. Contrarily, Hungarians already having one child realized their intentions less often than childless compatriots. In addition, parents with two or more children also realized their further childbearing plans less often. The estimated coefficient is, however, only statistically significant in Hungary.

Education is related to realizing short-term fertility intentions in the sense that highly educated persons tend to be more successful in realizing their plans. Although the effect is statistically significant only in Hungary, the respective coefficient is similar in Austria. Regarding financial constraints, a good economic situation is associated with realization of short-term intentions in Austria, whereas economic constraints seem to have no influence on the realization of previously stated childbearing intentions in Hungary. Moreover, attitudes towards the relevance of having children are related to the realization of intentions in both countries. If children are regarded to be necessary for a fulfilling life, short-term fertility intentions are realized more frequently (*Table 2*).

Finally, our analyses reveal that housing is linked to the realization of childbearing plans. In Hungary, tenants realized their plans less often than home-owners, and persons intending to move in the near future had higher realization rates. In Austria, respondents who made their childbearing dependent on housing conditions realized their plans less often.

Factors behind regional differences in realization: on compositional and contextual effects

How relevant are the population compositions of Austria and Hungary for the difference observable between the two countries? We use decomposition analysis that allows us to answer this question. Before discussing the results, we want to underline that these decompositions refer to persons intending to have a child within the next three years, and do not refer to the general population.

Results suggest that differences in composition explain about one third of the observed *difference in realization between Austria and Hungary*. Results shown in *Table 3* indicate that (1) a lower share of singles, (2) a larger share of parents with one child, and (3) a higher share of households in a good economic situation in Austria, as compared to Hungary, contribute to the higher realization rate in Austria.¹² According to our findings stated above, realization probabilities turned out to be substantially lower for respondents without a partner, and to be higher among Austrian one-child-parents and among Austrian households in good economic situations.

Next, we approach the question of how far *differences in realization between capitals and other regions* can be attributed to the composition of populations in the respective regions. Results indicate that different compositions explain a substantial part of these regional differences (35% to 53%) (*Table 3*). Various compositional effects can be identified within the pooled sample. Namely, (1) a lower share of people below 25 and a larger share of people above 34 years, (2) larger shares of LAT relationships and singles, and (3) lower shares of people thinking that children are necessary for a fulfilling life, contribute to the observed lower realization in capitals.¹³

In Austria, the larger share of persons in advanced reproductive age (i.e. 35-45 years), the lower share of households in good economic living conditions, and the higher proportion of persons for whom the housing conditions are crucial for childbearing intentions in Vienna (compared to the remaining part of Austria) result in lower realization rates.

¹² There are, however, also compositional effects that are not relevant in explaining the observed higher realization in Austria. Nevertheless, these effects are interesting with respect to our theoretical considerations. The following compositional effects would rather contribute to higher realization in Hungary: (1) the observed age structure among people with childbearing intentions, (2) the lower share of cohabiting couples and LAT relationships, (3) the higher share of tertiary educated persons, (4) the higher share of people thinking that children are necessary for a fulfilling life, and (5) the higher share of men and women intending to move in the near future.

¹³ Larger shares of people with tertiary education, larger share of households in a good economic situation, and the larger share of individuals intending to move in the near future could potentially contribute to a higher share of realization in capitals.

Budapest and the other parts of Hungary turned out to have rather similar rates of realization. Nevertheless, interesting insights regarding composition are gained: larger shares of young people (below 25), singles, and persons in LAT relationships, a lower share of people regarding children as necessary, as well as a larger share of tenants contribute to Budapest's (slightly) lower realization rate (Table 3).¹⁴

Table 3: Realization of childbearing intentions in Austria (2009–2013) and Hungary (2004–2008) (decomposition analyses, binomial logistic regressions)

Country/region	Austria – Hungary		Capital – other parts of the country	
Sample	Pooled sample	Pooled sample	Austria	Hungary
Difference in realization probability	0.057	-0.051	-0.078	-0.037
.. explained by composition, %	0.019 (34%)	-0.018 (35%)	-0.031 (39%)	-0.019 (53%)
Region				
Capital	-0.002	---	---	---
Other regions	(ref.)	---	---	---
Austria	---	0.008 **	---	---
Hungary	---	(ref.)	---	---
Sex				
Male	(ref.)	(ref.)	(ref.)	(ref.)
Female	0.000	0.000	-0.001	-0.003
Age				
21–24 years	-0.002*	-0.002 (*)	0.000	-0.005*
25–34 years	(ref.)	(ref.)	(ref.)	(ref.)
35–45 years	-0.021***	-0.009***	-0.014***	-0.002
Partnership status				
Married	(ref.)	(ref.)	(ref.)	(ref.)
Cohabiting	-0.003 (*)	0.000	0.000	0.001
LAT	-0.015 ***	-0.006 ***	0.003	-0.012 ***
No partner	0.021***	-0.009***	-0.004	-0.018***
Parenthood/parity				
Childless	(ref.)	(ref.)	(ref.)	(ref.)
1 child	0.022**	0.001	-0.001	0.000
2 or more children	0.010	0.004	0.001	0.006

¹⁴ The larger shares of people with tertiary education and of individuals intending to move in the near future would potentially contribute to a higher share of realization in Budapest than in other parts of Hungary.

Table 3: Realization of childbearing intentions in Austria (2009–2013) and Hungary (2004–2008) (decomposition analyses, binomial logistic regressions) (continued)

Country/region Sample	Austria – Hungary		Capital – other parts of the country	
	Pooled sample	Pooled sample	Austria	Hungary
Education				
Primary or secondary	(ref.)	(ref.)	(ref.)	(ref.)
Tertiary education	-0.002 (*)	0.009*	0.006	0.018 (*),
Unknown	-0.004	-0.001	0.000	-0.001
Economic situation				
(Very) difficult	(ref.)	(ref.)	(ref.)	(ref.)
OK	-0.006*	0.000	-0.002	0.001
(Very) good	0.047***	0.002*	-0.008**	0.001
Attitudes towards parenthood				
Child(ren) necessary for fulfilling life	-0.036*	-0.008**	-0.004	-0.005 (*)
Neither/nor	(ref.)	(ref.)	(ref.)	(ref.)
Child(ren) not necessary	0.009	0.001	0.000	0.001
Type of housing				
Own accommodation	(ref.)	(ref.)	(ref.)	(ref.)
Tenant or subtenant, paying rent	0.007	-0.006	0.008	-0.009 (*)
Rent-free accommodation	-0.001	-0.003	-0.001	-0.003
Other	0.004	0.001	0.004	0.001
Childbearing depending on housing conditions				
Not at all	(ref.)	(ref.)	(ref.)	(ref.)
A little	-0.001	-0.002	-0.007	0.000
Quite a lot or a great deal	0.003	-0.004	-0.008*	0.001
Intention to move				
No	(ref.)	(ref.)	(ref.)	(ref.)
Yes	-0.011**	0.006**	0.004	0.011**
N total (n smaller group)	2,127 (916)	2,127 (345)	916 (176)	1,211 (169)

Notes: These results were obtained after 1,000 replications per analysis with the tool provided by Jann (2006) following the method suggested by Fairlie (2005). The order of variables entering the analyses was randomly decided. The base model used for decomposition refers to the respective total sample (i.e. the pooled sample, the Austrian sample, or the Hungarian sample). (*) $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Source: Generations and Gender Survey wave 1 and wave 2; panel respondents intending a child within three years in wave 1.

DISCUSSION

The present paper analyzed the role of regional context for the realization of short-term fertility intentions in Austria and Hungary, focusing on differences between capitals (Vienna and Budapest) and other regions of Austria and Hungary. Although research has repeatedly demonstrated regional variation and rural-urban differences in fertility, this issue has been rarely addressed before in the realm of realizing these fertility intentions (Mencarini et al., 2015; Riederer and Buber-Ennsner, 2019). Taken together, our findings demonstrate the relevance of capitals in this respect.

Firstly, realization was lower in capitals than in other regions of the countries – in particular in Austria, where findings were also clearly confirmed in regression models. Secondly, differences in socio-demographic and economic characteristics between capitals and other regions partly explain differences in realization. For instance, decomposition analyses revealed that the share of singles and persons in LAT relationships, or the share of households in good economic situations affect the realization of childbearing intentions. This is in line with proposed theoretical arguments linked to the differential population composition of cities (Kravdal, 1996; Kulu and Vikat, 2007). On the other hand, our analyses suggest that population composition alone cannot explain regional differences in realization probabilities. Other factors also matter. This refers particularly to the revealed differences in effects of socio-demographic variables, but also to unobserved factors (e.g. characteristics of the regional context).

In addition to our findings on the role of capitals and the composition of the population of those intending to have a child, several other results prove to be relevant. Thirdly, our finding that Hungarians realized their short-term intentions less often than Austrians adds to empirical evidence showing that post-communist societies have lower realization rates than Western countries (Spéder and Kapitány, 2014). Fourthly, our study confirms previous insights on the role of individual characteristics, like age, partnership status, parity or education on the realization of short-term fertility intentions (e.g. Kapitány and Spéder, 2012; Morgan and Rackin, 2010; Régnier-Loilier and Vignoli, 2011; Szalma and Takács, 2015). In addition, we showed that strong attitudes about parenthood differ between the two neighboring countries (Panova and Buber-Ennsner, 2016). These prove not only to be crucial for fertility intentions but also for their realization.

Finally, apart from various socio-economic characteristics, housing matters for the realization of short-term fertility intentions. Our findings support the relevance of home ownership (Hegedüs and Teller, 2007; Murinkó, 2019) and its importance in family formation in Hungary, where tenants realized their plans less often than home-owners. Furthermore, housing conditions contributed to lower realization rates in capitals than in other regions, referring to a higher share of tenants in Budapest than in other Hungarian regions, as well as to a larger share of those reporting housing conditions to restrict childbearing in Vienna than in other parts of Austria. In sum, our hypotheses on regional differences have been largely confirmed.

Our study extended prior research in important ways, but had a number of limitations as well. Firstly, certain aspects which might also affect the realization of fertility intentions could not be included due to the unavailability of data and/or an operationalization not suitable for our purpose in the GGS. In particular, data do not include further fertility-relevant information on housing conditions (e.g. costs of housing, size of dwelling), and do also not allow to identify changes of residence between waves. Secondly, small sample sizes restricted possibilities for analysis. For instance, we could neither conduct separate estimations for persons with and without a partner or by parity, nor could we further differentiate between suburbs as residential contexts (Kulu and Boyle, 2009). Data unavailability and small sample sizes also impeded analysis considering formal and informal childcare (Vignoli et al., 2013; Aassve et al., 2012), changes in partnership status, or moves from capital to rural areas and vice versa.

Thirdly, although the GGS is an international program, pre-filters and response categories varied between the participating countries. It has been shown that these issues can affect cross-country comparability, for instance, regarding the intended family size (Beaujouan, 2013). The questions regarding fertility intentions were not identical in the Hungarian and the Austrian GGS, a limitation of the present paper that we are aware of. In addition, we are not able to take into account certainty and uncertainty of fertility intentions (Ní Bhrolcháin and Beaujouan, 2011), as the degree of intention was not specified in Hungary. Finally, data for Austria and Hungary were collected in different calendar years, possibly implying period effects.¹⁵

¹⁵ Readers may be particularly concerned of the economic turmoil of 2008, as economic insecurity may have affected childbearing intentions. However, data collection in Hungary was finished in 2008. It is thus unlikely that the economic recession affected realization between 2004 and 2008. In Austria, on the other hand, data collection started after 2008. Effects of the financial crisis may primarily have reduced reported short-term intentions in 2009 rather than their realization until 2013.

Future studies with richer data are needed to extend the analysis of regional differences. Nevertheless, our study revealed valuable insights on the realization of short-term fertility intentions with regards to differences between and within countries. We conclude that (a) men and women planning to have a child in the near future realized their plans more often in Austria than in Hungary, that (b) living in the capital or in other areas matters for the realization of fertility intentions, and that (c) regional aspects like population composition or housing conditions deserve keen attention in the research on fertility differentials.

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APPENDIX

Table A1: Sample characteristics of respondents intending a child at wave 1 at the country level, Austria 2009, Hungary 2004, %

	Austria	Hungary	Pooled sample
Region			
Capital	19	14	16
Other regions	81	86	84
Country			
Austria	100		44
Hungary		100	56
Sex			
Male	45	48	47
Female	55	52	53
Age			
21–24 years	10	13	12
25–34 years	60	67	64
35–45 years	30	20	24
Partnership status			
Married	36	42	39
Cohabiting	30	24	27
LAT	18	10	13
No partner	16	24	21
Parenthood/parity			
Childless	57	60	58
1 child	27	2	13
2 children	11	26	19
3 or more children	5	13	9
Education			
Primary or secondary	75	47	59
Tertiary education	21	25	23
Unknown	4	28	17
Economic situation			
(Very) difficult	23	49	37
OK	34	46	41
(Very) good	43	5	22

Table A1: Sample characteristics of respondents intending a child at wave 1 at the country level, Austria 2009, Hungary 2004, % (continued)

	Austria	Hungary	Pooled sample
Attitudes towards parenthood			
Child(ren) necessary for a fulfilling life	28	84	60
Neither/nor	25	11	17
Child(ren) not necessary	47	6	24
Type of housing			
Own accommodation	49	75	64
Tenant or subtenant, paying rent	43	8	23
Rent-free accommodation	7	10	9
Other	1	7	4
Childbearing depending on housing conditions			
Not at all	48	42	45
A little	26	22	24
Quite a lot or a great deal	26	36	31
Intention to move			
No	64	43	52
Yes	36	57	48
Total (N)	943	1,216	2,159

Source: Generations and Gender Survey wave 1; panel respondents intending a child within three years in wave 1.

Table A2: Sample characteristics of respondents intending a child at wave 1 at the regional level, Austria 2009, Hungary 2004, %

	Vienna	Other regions of Austria	Budapest	Other regions of Hungary
Sex				
Male	46	44	42	49
Female	54	56	58	51
Age				
21-24 years	9	10	9	13
25-34 years	55	61	70	67
35-45 years	36	29	21	20
Partnership status				
Married	33	36	33	43
Cohabiting	32	30	24	24
LAT	18	18	15	9
No partner	17	16	28	23

Table A2: Sample characteristics of respondents intending a child at wave 1 at the regional level, Austria 2009, Hungary 2004, % (continued)

	Vienna	Other regions of Austria	Budapest	Other regions of Hungary
Parenthood/parity				
Childless	64	55	69	58
1 child	27	28	2	2
2 children	6	12	19	27
3 or more children	3	5	11	13
Education				
Primary or secondary	66	78	24	50
Tertiary education	29	19	49	22
Unknown	5	3	26	28
Economic situation				
(Very) difficult	29	21	42	50
OK	32	34	49	45
(Very) good	39	45	8	5
Attitudes towards parenthood				
Child(ren) necessary for a fulfilling life	24	29	82	84
Neither/nor	23	28	12	10
Child(ren) not necessary	53	46	6	6
Type of housing				
Own accommodation	21	56	74	75
Tenant or subtenant, paying rent	77	35	16	7
Rent-free accommodation	1	9	4	10
Other	1	1	6	7
Childbearing depending on housing conditions				
Not at all	32	52	29	44
A little	35	23	24	22
Quite a lot or a great deal	33	24	46	34
Intention to move				
No	53	67	34	45
Yes	47	33	66	55
Total (N)	183	760	170	1,046

Source: Generations and Gender Survey wave 1; panel respondents intending a child within three years in wave 1.

PATHWAYS, BACKGROUND AND OUTCOMES OF THE TRANSITION TO ADULTHOOD IN THE EARLY 2000S IN HUNGARY*

Lívia Murinkó

ABSTRACT

In the present paper, we analyze the process of the transition to adulthood in contemporary Hungary. We identify typical pathways, describe them in terms of role transitions, as well as regarding their socio-economic and family background and various outcomes. In order to do so, we regard the transition to adulthood as a multi-dimensional and dynamic process. Using longitudinal data from four waves of the Hungarian Generations and Gender Survey (2001–2012), we apply the method of two-step latent class analysis to study the 1981–1983 birth cohort between ages 18–20 and 29–31.

Our results indicate that the transitory period between adolescence and adulthood can be characterized by quite different role configurations. Four different pathways were identified. The most common one is characterized by prolonged education and delayed family formation (51%). Every fourth young person become employed early and form their own family late (24%), while 17% belongs to the early family formation group. Interestingly, the pathway that resembles a standard, linear model of transition to adulthood the most (rapid family formation after prolonged education) is the least frequent (9%). The four different pathways differ regarding their background and outcomes. Our results suggest that both becoming independent “too early” and “being stuck” in the postadolescent life phase may be associated with social disadvantage and

* This paper is a slightly revised version of the following Hungarian article: Murinkó L. (2019). A felnőtté válás életúttípusai, előzményei és kimenetei a 2000-es években Magyarországon. *Demográfia*, 62(2–3), 153–198.

they contribute to the transmission of social disadvantage across generations. Contrastingly, following the pathway of rapid family formation after prolonged education is a kind of “social privilege” and often leads to the most advantageous socio-economic status and wellbeing at around age 30.

Keywords: transition to adulthood, life course analysis, latent class analysis, Generations and Gender Survey, Hungary

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INTRODUCTION

In past decades, the process of transitioning to adulthood have transformed. Life events traditionally associated with adulthood have been delayed in many cases and have even not occurred in some. The transition to adulthood has become extended in time, while life courses have become more divergent and irregular, in effect transforming the way youth become of age (e.g. Billari and Liefbroer, 2010; Furstenberg et al., 2003, 2004; Liefbroer, 1999; Settersten, 2006; Shanahan, 2000; Somlai, 2007, 2010; Wallace and Kovatcheva, 1998).

Corresponding to these changes, there has been increased scholarly interest concerning the process of the transition to adulthood since the millennium, and larger number of researchers have been studying the phenomenon by using quantitative methods and the life course perspective, exploring and analyzing the multidimensional nature of it. There are two commonly used holistic methods to identify and characterize typical pathways: sequence analysis (Billari, 2001) and latent class analysis (Macmillan and Eliason, 2003). The extensive use of these methods has been made possible by the appearance of more sophisticated statistical softwares and follow-up or retrospective surveys on the multidimensional characteristics of young adults.

Recent studies applying sequence analysis have often made comparisons between youth in different countries and/or different cohorts. Examples being the works of Elzinga and Liefbroer (2007), who compared nineteen, mostly European countries; Lesnard, Cousteaux, Chanvriil and Le Hay (2016), who compared twenty; and Schwanitz (2017), who compared eight European countries.

Hungary was included in all three of these studies. However, on the one hand, these studies looked at older cohorts who were born in the decades after the Second World War, and did not provide much information on what happened in the new millennium. On the other hand, they did not look at national specificities in the transition to adulthood; thus, they provided little insight for those who are interested in country-specific patterns. At the same time, the other frequently used multidimensional method to analyze transition to adulthood from a life course perspective, the latent class analysis, has almost exclusively been applied to construe data collected in the US (e.g. Amato et al., 2008; Macmillan and Billari, 2012; Macmillan and Copher, 2005; Macmillan and Eliason, 2003; Manzoni, 2016; Oesterle et al., 2010; Osgood et al., 2005), with one exception from Norway (Skogbrott Birkeland et al., 2014).

Extensive research has also been done on young adults in Hungary in light of the transformation in how new generations come of age. Numerous studies had focused on the living conditions, desires, aspirations of youth becoming of age, while some studies looked at different key life events connected to this phase.¹ However, as far as we are concerned there has not been any research that grasped the multidimensional and dynamic nature of the transition to adulthood in Hungary.²

This study will enrich and complement literature on the transition to adulthood by observing dynamic changes, centering around the transition to adulthood of Hungarian youth in the early 2000s. An additional novelty in the approach of this study is that it will also focus on the background and consequences of pathways. Childhood family context and socio-economic background affect the transition to adulthood; and they are also, directly and indirectly, affecting educational and professional careers, household and family formation. In the process of transition to adulthood, some significant decisions (or the absence of decisions) can have an impact on someone's life for decades to come (Lui et al., 2014). Contrary to the importance of this issue, research that connects and identifies pathways with precursors and outcomes is scarce. This is likely due to the limited availability of suitable follow-up surveys. Such inquiries have been done for example on data from Finland (Räikkönen et al., 2012; Salmela-Aro et al., 2014), Norway (Skogbrott

¹ See for example the "Youth" large-sample survey series conducted every fourth years and analyses based on the these data (Bauer and Szabó, 2005; Szabó and Bauer, 2009; Szabó et al., 2002; Székely, 2013; Székely and Szabó, 2016; Kabai et al. 2018).

² Bognár (2007) tried something similar: using retrospective data from the first wave of the Turning Points of the Life Course survey, she looked for signs of de-standardization in the changes in the transition to adulthood of Hungarian youth in past decades. By applying cluster analysis, she identified typical life situations at ages of 25 and 30 of consecutive cohorts, but she did not link age-specific transitions to trajectories.

Birkeland et al., 2014) and the US (Amato et al., 2008; Lui et al., 2014; Mortimer, 2012; Oesterle et al., 2010; Osgood et al., 2005).

The present analysis aims to identify the typical pathways between the ages of 18 and 31, with regards to schooling, work, living with parents, partnerships and parenthood. We characterize different pathways by looking at role transitions, then we look at the background of 18–20-year-olds and compare them to their 29–31-year-old selves based on different variables: demographic situation, socio-economic status, health, wellbeing, values and intentions. The scope of our study enables us to look at the transition to adulthood as a dynamic, multidimensional process and allows us to consider youth to have different life courses. We conduct our analysis on the longitudinal data gathered through the Hungarian Generations and Gender Survey. We follow the life course of the 1981–1983 birth cohort between ages 18 to 31, applying the method of two-step latent class analysis.

THEORETICAL FRAMEWORK

Prolonged transition to adulthood and the life course

Due to structural and ideational changes of past decades, the process of the transition to adulthood has transformed (e.g. Billari and Liefbroer, 2010; Furstenberg et al., 2003, 2004; Liefbroer, 1999; Settersten, 2006; Shanahan, 2000; Somlai, 2007, 2010; Wallace and Kovatcheva, 1998). The age of reaching adult status has generally increased, and adult status itself has become more challenging to define. Young people reach certain steps of adulthood at different ages (if they do so at all): entering adulthood is not a single step but a gradual and multidimensional transition. The different milestones during this process are reversible, except for entering parenthood. As a result, instead of the emergence of a new standard life course, the heterogeneity of experiences has increased. The timing and the ordering of important life course events during the transition to adulthood show great individual variation (Brückner and Mayer, 2004; Liefbroer, 1999).

The most commonly used theoretical framework for studying the process of transition to adulthood is the life course approach. It states that the mutual interaction of different social roles and their unfolding trajectories over time pave the way of the transition to adulthood (or for the whole life course for that matter). Personal life choices and the immediate environment determine what roles youth take on, but the broader social, economic and cultural contexts also influence this process. They all affect the sequencing of these roles, and how

youth enter into, pass through and emerge from certain social institutions. Thus, we can view the life course as a sequence of social role configurations and the transitions between them, which evolve in several interconnected dimensions of life (Elder, 1985; Macmillan and Copher, 2005).

According to more traditional sociological and demographic approaches, adolescents become adults through assuming certain roles during life course transitions (George, 1993; Hogan and Astone, 1986; Modell et al., 1976). After finishing their studies and entering the labor market, they turn from dependent students to socially and financially independent employees. After leaving the parental home, they establish residential independence. After forming a stable relationship, starting a cohabiting union and/or getting married, formerly single people become partners or spouses. Moreover, childbearing makes childless people parents. Most demographic literature on the transition to adulthood study the timing and the ordering, sometimes also the determinants and the consequences of these life course events. However, they often look at the different transitions separately or use cross-sectional data to analyze the connection between them.

Some criticize the transition-based approach to the transition to adulthood (e.g. Arnett, 2000; Manzoni, 2016; Robette, 2010). The main points of criticism being that it does not take into account that some of these transitions are reversible, not all life events are experienced by everyone, and that transitions are often gradual. For example, leaving the family household, transitioning from education to employment and moving in with a partner for the first time can all be complex and lengthy processes in themselves, in which most go through transient phases of partial independence. Analysis shows, however, that conventional markers of adulthood remain essential for individuals to see themselves as adults (Shanahan et al., 2005).³

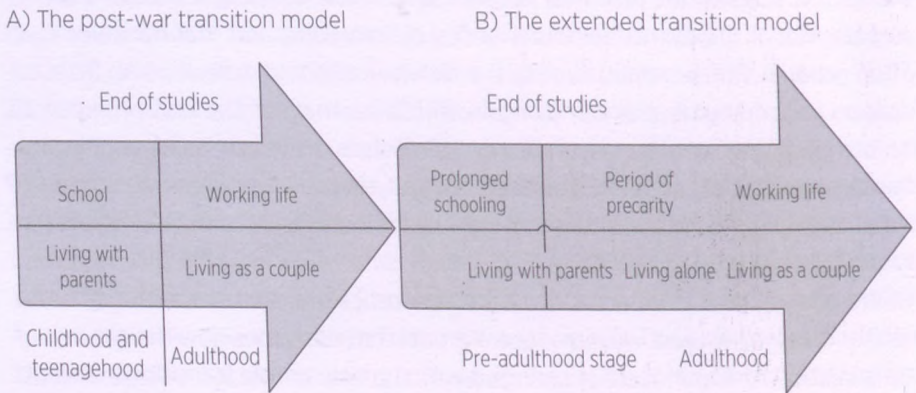
We cannot give a full account of the theoretical models of the transition to adulthood here. Instead, we introduce a model that describes how the process of the transition to adulthood has changed with the help of role transitions. Galland (2004) has developed two models for the patterns of transitions experienced by young people in most advanced societies (Western Europe) in the 1950s–1960s and afterwards (*Figure 1*). These models are based on the typical life course of men. In the “post-war transition model” (A), there was a clear separation be-

³ Apart from the role-based approach of the transition to adulthood, further criteria may be necessary in determining whether someone has become of age in one's perspective and in the eyes of society. For example, self-definition and psychological aspects also have to be considered (e.g. Arnett, 2000; Vaskovics, 2000; also see a summary in Murinkó, 2010).

tween the public and the private spheres and between childhood/teenagehood and adulthood. In the public sphere, young people finished compulsory schooling, then they entered the labor market and became financially independent. The developments in the domestic sphere were synchronous to changes in the public domain. After the end of their studies, young people could leave their parental home, get married and start a family. Transition to adulthood was a linear process; events were timed and ordered according to a standard pattern.

Contrastingly, this pattern has changed during the past decades (“extended transition model”, B, *Figure 1*). The period of the transition to adulthood has been prolonged and especially its endpoint has become hard to define. The relationship between events related to education, work, partnership and family has weakened. Young people study longer, often in tertiary education. Many of them go through a period of precarity (unemployment, part-time jobs or fixed-term contracts) before they find a stable job. The difficulty of becoming financially independent also inhibits residential independence and family formation. Young people often live alone for some time before moving in together with a partner or spouse.

Figure 1: Two theoretical models of the transition to adulthood



Source: Galland, 2004, p. 137., 151.

Some authors claim that the prolonged transitory period between adolescence and (young)-adulthood had been institutionalized and can be regarded as a separate phase of the life course (Arnett, 2000; Côté, 2000; Furstenberg et al., 2004; Keniston, 1968; Klein, 1990). During this phase, young people are already of full age but have not entered all the statuses that are habitually associated

with being adult: they delay family formation, especially parenthood, they stay in school, they continue to live in (or return to) the parental household, and/or they do not have stable full-time jobs. Various terms are used for this transitory period, such as postadolescence (Kenniston, 1968), youth (Klein, 1990), emerging adulthood (Arnett, 2000), or youthhood (Côté, 2000).

There are two opposing discourses about the prolonged transition to adulthood. The first one claims that young people have become reluctant to “grow up”; they avoid responsibility and postpone important life course transitions in order to take advantage of the comfort of the parental household (they live in the “Hotel Mama”, see Herms-Bohnhoff, 1993) and use the parental resources as long as possible (Arnett, 2000). The second discourse emphasizes that the prolonged and transformed process of the transition to adulthood is a coping strategy, a rational reaction to the changing opportunities, precarious conditions and economic difficulties that young people face nowadays (Côté and Bynner, 2008). The multiplication of life course options has opened up many opportunities; however, the short- and long-term consequences of decisions are unpredictable (Mills and Blossfeld, 2003). It increases feelings of insecurity and doubt, and it may deepen the identity crisis – the so-called quarter life crisis – that characterizes some young adults in their twenties and early thirties (Robbins and Wilner, 2001).

Social differences, background and outcomes

As individual pathways have become more heterogeneous, youth with different socio-economic and family background follow divergent paths to adulthood, and the length of postadolescence also shows significant individual differences. Differential pathways are results of the combined effect of family background and individual decisions, that are in turn shaped by socialization, personal preferences, different opportunities and constraints stemming from the immediate and broader context. Thus, the transition to adulthood is a critical life stage (also in this respect), because advantages and disadvantages are accumulated along the way and determine one's prospects, resources, health and wellbeing at later stages of their lives (Arnett, 2000; Furstenberg, 2008; Lui et al., 2014; Mortimer, 2012; Billari et al. 2019).

The amount of transfers received from parents play a prominent role during the transition to adulthood. Parental support is indispensable in certain life stages, for instance when youth are still in education or starting up enterprises. More-

over, the assistance provided by parents through financial, housing or emotional means also remains crucial later on in life, for example, in crises like losing a job or going through a divorce. This is especially true in the case of singles because they cannot rely on the support of their partner (Mortimer, 2012)

It is an essential question, therefore, is what we know about social differences in the transition to adulthood. Regarding the effect of parental background, young people in their late teens and on the verge of becoming adults hold very different resources, opportunities and skills (Furstenberg, 2008). According to international theoretical literature, postadolescence may be longer for those who receive financial support from their parents, who have a stronger safety net, allowing them to devote more time to learning, personal development and experimentation before deciding on what adult roles they want to choose for themselves (Arnett, 2000; Schoon, 2014; Billari et al., 2019). More disadvantaged youth, however, need to “grow up faster” because they are forced to leave school in order to get employment, while they also on average have children at a younger age (Furstenberg et al., 2004). However, the opposite is also conceivable: young people may not make a conscious decision, regardless of their circumstances, in postponing to take up specific adult roles, instead they may not hold the sufficient resources to be able to enter those roles due to their disadvantaged background (Côtè and Bynner, 2008).

According to Elder (1975), there is an “ideal” age for taking up adult roles, that is, those who assume these roles too early or too late are less successful in integrating into adult society. Who become adults too early may lack psycho-social and socio-economic resources and may also be less prepared for adult responsibilities. While those who become adults late spend too much time in a semi-independent, transitional phase, making it more difficult for themselves to adapt to adult roles. In itself, it can be disadvantageous for youth to experience life events at an age other than the majority does – possibly even considered deviant – because they do not coincide with their other role transitions or expectations created by institutional structures. It can also affect youth negatively if they do not go through role transitions in the usual order, and as a consequence, they may be less able to deal with differential expectations associated with each role (Elder, 1975).

Thus too early and too late transitions can both have negative consequences, although the process of transitioning to adulthood has become greatly de-standardized and age norms have weakened. According to empirical research, those who have followed the “normative” pathway to adulthood are in the most favorable position (Mortimer, 2012). Early adoption of adult roles (early parent-

hood, leaving schooling early on to secure employment) is often linked to relatively low social status later on, while late role transitions (mainly due to the spill-over effect of prolonged education) are linked to higher social status (Lui et al., 2014; Mortimer, 2012).

TRANSITION TO ADULthood IN HUNGARY

Family formation, transition from education to employment and housing

In Hungary, young people on the doorstep of adulthood faced completely different socio-economic circumstances after 1989–1990 than previously due to the deep political, social and economic transformation (Domonkos, 2010; Macura and Mochizuki-Sternberg, 1999). The economic crisis and the resulting financial and employment insecurities have also had demographic consequences. They have contributed to a drastic fertility decline, postponement of family formation, increasing number of extramarital births, decreasing popularity of marriage and increasing popularity of nonmarital unions. The economic recession, employment precarity, unemployment and the financial insecurity of youth and their parents have also affected the possibility to establish independent households, delaying the attainment of financial and residential independence (Beck and Beck-Gernsheim, 2002).

In the two decades following 1990, family formation was postponed, cohabitation became more widespread – especially among young people –, and fertility rates declined (Spéder, 2007). The mean age at marriage among women increased from 22 to 28.7 years, and for men from 24.7 to 31.4 years between 1990 and 2010, while more and more people choose not to marry altogether. For women, the mean age at first birth was 23 in 1990 and 28.2 years twenty years later. The share of extra-marital births increased from 13.1% to 40.8% during the same period (Központi Statisztikai Hivatal [KSH], 2016).

(Youth) unemployment appeared in the 1990s and has become permanent for some groups, especially for people with low education. Entering the (primary) labor market has become more difficult or even impossible for some. First jobs are often precarious and poorly paid. As a response to this situation, young people may prolong their education, and the expansion of higher education has made it possible (Bukodi and Róbert, 2005; Laki 2006). As a result of the steady expansion of higher education in the 1990s, the proportion of students quadru-

pled between 1990 and 2008, out of which the rate of part-time students (students of correspondent, distance and evening courses) grew the most (Kozma, 2010). The expected length of schooling has been extended from 13.8 to 17.8 years since 1990; in other words, a child who starts school at age seven is expected to finish it at age 25, instead of 21 (Organisation for Economic Co-operation and Development, 2000, 2010). The expansion of higher education has come to an end after 2008 (Híves and Kozma, 2014), while more and more people take part in other forms of education (secondary or higher vocational training, other courses, etc.) (Széll and Nagy, 2018). Despite the expansion, socio-economic background has an increasing impact on the educational pathway of young people, and the children of lower-educated fathers have a low and decreasing chance to continue education at higher levels (Széll and Nagy, 2018).

The transitional period between leaving the educational system and integrating into the labor market has been extended since the 1990s (Vincze, 2012). What used to be a linear, predictable school-to-work pathway has become fragmented and heterogeneous. Training at successive educational levels and the transition from school to the labor market is no longer necessarily linear; instead, they are characterized by longer or shorter intermissions, various trainings, concurrent studying and labor, migration experience, sometimes appearing alternately or parallel to each other in life courses of youth (Nyüsti, 2013; Széll and Nagy, 2018). A significant proportion of young people are unemployed for some time after leaving education, in particular those with lower education (Bene et al., 2018).

After the regime change in 1989, previously existing problems and tensions around the access to housing for young people have not been resolved; furthermore, new issues have arisen. As a result of an almost complete privatization, social housing has become very limited and favors families. The private rental market is expensive and considered only a temporary solution by both tenants and landlords. Ownership is the most common and usually the only way of obtaining an own flat or house. Lacking individual or family resources, young people postpone or forgo leaving the parental home (Murinkó, 2009; Spéder et al., 2009). After the regime change, the public and the banking sectors practically withdrew from housing financing and only reappeared after about ten years. The expansion of home mortgage loans played a significant role in improving home acquisition opportunities for young people between 2000 and 2008 (KSH, 2012). After 1999, housing investment and lending started increasing rapidly (KSH, 2005), then declined again after 2009 due to the financial crisis (KSH, 2012).

In the 2000s, the median age for moving out of the parental household was 25 for women and 27 for men, and by the age of 35, 81% of women and 77% of

men had left their parents' home (though some returned later) (Murinkó, 2009). Compared to adult children in their twenties, those in their thirties (or older) living with their parents are more typically adapting to financial or housing difficulties (Ahmed and Emigh, 2005; de Jong Gierveld et al., 2002), or resort to the "safety net" of their parents as they go through life crises (e.g. divorce, unemployment) (Monostori and Murinkó, 2019).

The economic recession that started in 2009 harmed the economic conditions of young people (and the whole society) not only from the perspective of housing. Youth unemployment substantially increased, and more people lived with their parents (Medgyesi and Nagy, 2014). During the years of recession, young people were hit harder by unemployment than other age groups, finding a job was more difficult and took more time for them, and also their personal expectations about their labor market prospects became more pessimistic (Gazsó, 2013). The ratio of housing maintenance expenditure to household income increased between 2000 and 2009 among all age groups and household types but remained the lowest among parent(s) with adult children and the highest among young and middle-aged single adults (KSH, 2012).

Pathways of transition to adulthood in Hungary

As mentioned earlier, no quantitative analysis explicitly focusing on youth in Hungary has been conducted to analyze the complex process of transition to adulthood using retrospective or follow-up panel data. However, some international comparative studies were made that included Hungarian data.

Lesnard et al. (2016) identified fourteen pathways to adulthood based on a study that looked at people born between 1905 and 1971, and their pathways from the ages of 18 to 35, in twenty European countries. In Hungary the most common pathway to adulthood was the early category (35% of the 1945–1959 cohort and 31% of those born in the 1960s belonged to this category), where young people started working at the relatively early age of 18–20, left their parents' household, moved in with a partner, got married and had their first child shortly afterwards. These life events were experienced in a relatively short period, and youth in those cohorts took on adult roles rather soon. The late start of employment was also typical (13–16% per cohort): their first job was acquired at a median age of 21 years, the establishment of independent households followed relatively quickly, but they only started their own families in their late twenties. For those who left their parents' home late (12–20% of the 1945–1959 cohort, 14% of the 1960–1969 cohort) or

very late (4–8%), early employment was followed by late home-leaving and late partnership formation. One-quarter of the very late movers still lived with their parents at the end of the observation period, and about one-third of the group did not start their own family. Approximately one-third of the sample made up the remaining ten types of pathways to adulthood, each with a shallow frequency.

Sequence analysis of Schwanitz (2017) on a pooled sample of eight European countries identified seven pathways to adulthood in studying life events between the ages of 18 and 34 of those who were born between 1951 and 1978. The largest group within Hungary was comprised of youth who left their parents' household late (25%): they completed their studies relatively early, were mostly single, while a small proportion of them started their own family living in the parents' home. A similar proportion made up the "modern and independent" type (23%): young adults in this category started working early, and soon afterwards established their own households, but only formed partnerships later on. All life events were timed relatively late by members of the "studying with a cohabiting partner" group (13%). A more traditional pattern was followed by 13%, who quickly went from school into work, got married, and had a child. The group of "working cohabiters" (10%) entered the labor market and typically formed a partnership early on. The group of people with late transitions and late independence (10%) started their own families especially late. The smallest group was made up of people of "slow transitions with inactivity" (7%): they finished their studies early on, but started to work at a lower rate and rather late. Low-educated youth were overrepresented among those who followed the more traditional path, those who left their parent's household later and among the late and inactive group. At the same time, university graduates were overrepresented in the modern and independent, the late transitioners with independence, and the studying with cohabiting partner groups.

Results regarding the role of parental resources in the prolonged transition to adulthood in Hungary are non-conclusive. Some authors found that the lengthening of the transitory period between adolescence and adulthood comes with the arrival of a new group of consumers and the growing middle class, who can afford to postpone taking adult roles (Gábor, 2000). Results from other studies (Gazsó and Laki, 2004; Kapitány, 2006) suggest that the prolonged transition to adulthood is not a privilege that has spread from the upper social strata downwards but rather a kind of constraint, and postadolescence becomes a persistent condition as a result of disadvantaged social conditions. The contradictory view of the Hungarian situation reflects the double judgement traceable in the international literature (see the debate of Arnett, 2000 and Côté and Bynner, 2008). Ac-

According to this, prolonging the transition to adulthood may be a lifestyle choice for some who do not (at least for a while) want to take on traditional adult roles; but it is inevitable for others, who would choose to do so, yet in vain, cannot “become of age”. In my opinion, the two approaches are not mutually exclusive, but depending on the social situation of the individual one prevails over the other.

Social and demographic factors in the life course patterns of the 1981–1983 cohort

We follow the lives of respondents born between 1981 and 1983 during the analysis.⁴ What characterizes this selected group? Compared to previous years, this is a smaller cohort: for example, in 1975, live births peaked at 185 thousand, while in 1981 only 143 thousand and in 1983 only 127 thousand children were born (KSH, 2015). A relatively small cohort can expect less competition than larger birth groups from nursery school and kindergarten through to university admission and to finding employment (Easterlin, 1978).

Members of the cohort in question were only 6–9 years old at the time of the regime change; thus they may only have childhood memories of state socialism, and the crisis that followed the change of regime only affected them through their parents and families. They completed their primary education in the middle third of the 1990s (if they did so), and they reached the age of 18 around the turn of the millennium. With declining cohort sizes and the increasing number of students enrolled in higher education, it was becoming more accessible to be admitted to college or university, while the proportion of vocational certificate holders was decreasing. By the time this cohort first started working, it was already evident that unemployment and labor market insecurities were part of many people's lives. Compared to previous cohorts, they had broader opportunities in terms of education, occupation, dating, leisure, consuming and traveling. However, in order to be able to take advantage of these opportunities, one needed information and resources that were not equally available to everyone. Members of this cohort were not born into the digital world, yet most of them met with new technologies at a young enough age to be able to use them in an agile fashion. However, about every fifth person aged 20–29 was digitally illiterate in 2008 (Ságvári, 2011). The economic crisis of 2008–2009 hit the 1981–1983 cohort

⁴ They are the “microgeneration” that is wedged between Generation X and Generation Y (“Millennials”) and is called “Xennials” by people of the Internet (see, for example, D’Souza, 2017).

in the second half of their twenties, which likely hindered the establishment of independent households and family formation for those who had not yet gone through these transitions, and also harmed their labor market situation.

RESEARCH QUESTIONS

The analysis aims to identify the pathways in the process of transition to adulthood and to examine the background and outcomes of each pathway among youth in Hungary in the 2000s. With our inquiry, we are looking to answer to two main research questions.

The first question relates to the types of pathways from adolescence to adulthood that can be differentiated in Hungary in the 2000s. This question is based on the assumption that pathways to adulthood have become diverse; therefore, there are not only one, but several different observable pathways in the context of Hungary. These pathways are characterized by the different timing of each life event and also by the rate at which young adults experience transitions by the end of the study period. According to previous results, there are both "early" and "postponing" patterns, so it is likely that there are groups that go through all role transitions relatively early and that go through all of them relatively late. As well as, some are located between these two extremes and are characterized by different combinations and timing of each life event.

The second question concerns the social differences between the different pathways to adulthood. Do the pathways differ in terms of socio-economic background and outcomes? Which groups get stuck in a partly adolescent, partly adult situation, and which groups adopt adult roles swiftly? We hypothesize that both early and prolonged transitions to adulthood are less common among young people with a more favorable socio-economic background, while those from disadvantaged backgrounds are more likely to be stuck in semi-adulthood and are more likely to take on adult roles much earlier than the average. Furthermore, we also assume that "too early" and "too late" transitions to adulthood contribute to the intergenerational transmission of social disadvantages.

And finally, at the end of the paper, we return to Galland's (2004) previously described theoretical model, and – taking our empirical results into account – we discuss the necessary changes to adapt the model to contemporary Hungary.

DATA AND METHODS

Longitudinal data from the Hungarian Generations and Gender Survey

In order to answer the above research questions, we need survey data that follows the life course of young people and provides detailed information on their education, labor market and partnership history, as well as on changes of their socio-economic situation. We use longitudinal data from four waves of the Hungarian Generations and Gender Survey⁵ (for more information on the survey, see Murinkó and Spéder, 2016). The basic characteristics of the survey and the sample are summarized in *Table 1*.

Table 1: Basic characteristics of the four waves of the Turning Points of the Life Course panel survey (the Hungarian Generations and Gender Survey) and the 1981–1983 birth cohort

Survey wave	Years of fieldwork	Total sample		Our working sample: the 1981–1983 birth cohort	
		Age of respondents	N	Age of respondents	n
1	2001/2002	18–75	16 363	18–20	1 000
2	2004/2005	21–78	13 540	21–23	827
3	2008/2009	25–82	10 641	25–27	625
4	2012/2013	29–86	8 103	29–31	428

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, n = 1000, author's calculation.

We follow the life course of the 1981–1983 birth cohort (n = 1 000), i.e. young people who were aged 18–20 at the time of the first wave (in 2001) and became 29–31 years old by the fourth wave (2012). All respondents are included in the analysis who belong to the chosen cohort and participated in wave 1. We know only part of the life course of respondents who dropped out after wave 1, but we also take this information into account during the analysis. We present weighted results.

⁵ The first and the second waves of the Hungarian survey (called Turning Points of the Life Course) correspond to the first wave of the GGS.

Role transitions and typical pathways

For identifying typical pathways, we need a method that handles the transition to adulthood as a multi-dimensional process and that identifies different pathways that young people follow. We have information on respondents from four waves, when they were in different stages of their lives. We do not study one single transition but a sequence of them. These life-course events are timed and ordered differently for each respondent (and some people do not even go through all transitions during the observation period). We use the method of two-step latent class analysis, which is a variant of latent class analysis (LCA) that is specially adapted for life course analysis (Macmillan and Eliason, 2003).⁶ We use the LCA Stata plug-in (version 1.2.1) by Lanza et al. (2018).

LCA sorts respondents into latent groups based on categorical observed variables. The procedure aims to estimate class membership probabilities for each individual. In the present analysis, the observed variables are the objective dimensions of the transition to adulthood. The roles that are usually associated with becoming adult were measured with the same dummy variables in each wave: (1) participation in full-time education, (2) being employed,⁷ (3) living together with one or both (biological) parents, (4) living with a partner or spouse, and (5) being a parent. *Figure 2* shows the proportion of respondents who experienced the five analyzed role transitions by a certain age.⁸

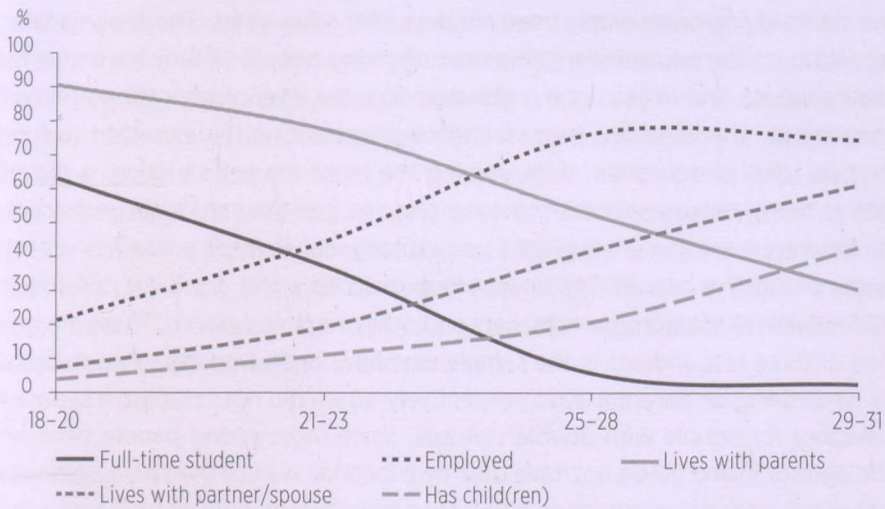
Latent pathways are identified in two steps, with the help of latent class analysis at each step. First, we identify latent role configurations – types of life situations – for each wave of the panel survey separately (cross-sectional analysis). Second, we identify latent pathways based on transitions between latent role configurations in the course of the four subsequent waves (panel analysis). Model statistics for each step – that provide the basis for deciding on the number of classes – are included in *Table A1* in the Appendix.

⁶ For more information on LCA, see Collins and Lanza (2010) and Hagenaars and McCutcheon (2002). Simulation studies showed that LCA identifies pathways more effectively than cluster analysis (Magidson and Vermunt, 2002), and it is just as effective as sequence analysis (Barban and Billari, 2012).

⁷ We regard all respondents as employed who are either employees or self-employed, who work full- or part-time, who have permanent or temporary jobs, and also who work while studying or being on childcare leave. In our working sample, the majority (90–95%) of working respondents have full-time positions as employees or are self-employed.

⁸ However, if young people follow different pathways, averages (such as those presented in *Figure 2*) tell us little about the diverse experience of youth.

Figure 2: The share of respondents who experienced five key role transitions by a certain age in Hungary (2001–2013)



Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, n = 1000, author's calculation.

Examining family and social background and outcomes

In the second part of the analysis, the life circumstances of the youth who are at the beginning of transitioning to adulthood will be described. We measure the precursors of the pathways when members of the cohort were aged between 18 and 20, and some retrospective variables of family background refer to an earlier period up to the age of 16. The following variables measure family background. The parents' educational attainment is based on the educational level of the higher educated parent or on the education of only one parent if information on the other parent is not available. There is a variable showing the composition of the family of origin, which makes a distinction between those who were raised in a two-parent household up to the age of 16, those who lived in a single-parent household (but not with a step parent) for a shorter or longer period, and those who experienced both single- and step-parent spells. Finally, we take into account the number of siblings one grew up with, and those who are of Roma origin.⁹

⁹ We consider people of Roma origin (1) if they identified themselves as being of Roma or Hungarian of Roma origin in their answer to the ethnicity question, or (2) if they were identified as Roma by the interviewer. We could not differentiate any other ethnic groups in our sample because only 1% of the respondents indicated an ethnic origin other than Hungarian or Roma.

The own socio-economic position of young people aged between 18 and 20 can only be measured to a limited extent, as a significant proportion of them are still studying or have only been employed for a few years. The analysis takes into account the educational attainment of young people (if they have finished their studies), and in case one is still studying, the level of education at which they are at. The latter has a good chance of projecting the expected (future) highest level of education. In examining the labor market situation, a distinction is made between (self-)employed persons, full-time students, individuals on parental leave, the unemployed, compulsorily conscripted soldiers and other types of inactive people. The latter group includes a few disability pensioners, widow(er)'s pensioners, homemakers and other inactive persons. There are only two or three respondents in the sample who have been working while studying or while being on parental leave, respectively, so we did not establish a separate category for people with double statuses. Since most young people between the ages of 18 and 20 do not have their own income, we use the self-assessment of households' income situation rather than individual income, as well as the lack of certain household goods that most people would like to possess. We regard respondents as materially deprived if they would like to have but cannot afford at least three of the listed items: (1) an apartment in which everyone has a separate room; (2) toilet and bathroom or shower in the apartment; (3) garden, terrace or balcony overlooking pleasant environment; (4) phone; (5) car; (6) color television; (7) automatic washing machine; (8) dishwasher; (9) video recorder; or (10) home computer. Besides, we also consider the type of settlement of the place of residence (Budapest, city, town or village).

Three variables measured the health status and wellbeing of young people: limitation in their every-day activities by some kind of health problem, illness or disability; loneliness;¹⁰ and satisfaction with the course of their life so far (scale from 0 to 10, where higher values indicate a higher level of satisfaction). Respondents who follow the teachings of the church or religious in their own way are treated as religious, and this variable serves as an indicator of personal values.

Respondents' positions at age 29–31 are measured by marital status, partnership status, number of children, type of household, educational level, labor

¹⁰ "People's general well-being can be influenced by many things. Use card no. 3 and indicate to what extent they apply to you. (1) There is always someone around I can discuss my everyday problems with. (2) I can always rely on someone in case of need. (3) I often feel that no one is interested in what I say. (4) I feel that intimacy and warmth are missing from my life. (5) I often feel lonely." The answer categories were the following: 1 – not at all, 2 – rather not, 3 – partly, 4 – fully applies. The index is computed as the sum of the five values (the first and the second variable are reverse coded), and a higher value indicates higher level of loneliness.

market situation, type of occupation, and financial deprivation. The distinction between household types is based on whether the respondent has a cohabiting partner, whether they live with their parents and whether they have children. We take all those who were employed on fixed-term contracts, as public workers, as interns, or on a seasonal, casual, or alternating basis, as having uncertain employment. Some variables not only reflect the current situation but also refer to life experiences such as unemployment experience, previous long-term relationship or marriage that resulted in breakup or divorce. Because relationship and fertility pathways are not yet concluded at this age, the analysis also includes questions about the intention to have children and to move in with a partner in the future. Besides, we examine young people's religiousness, loneliness, life satisfaction, disability or illness, and smoking.

Limitations

We also need to acknowledge that the study has some limitations. With regards to the criteria of adulthood used in our analysis, the data do not reveal whether responses reflect the results of the respondent's own decision or whether they are the consequence of external socio-economic constraints.¹¹ If prolonging the transition to adulthood is, in fact, a coping mechanism for youth who are facing economic hardship and other insecurities, rather than the result of free choice (Côté and Bynner, 2008), then this aspect must also be taken into account when interpreting the results of our inquiry. However, we cannot evaluate whether respondents chose their situation themselves or whether they were forced into life circumstances despite their differential intentions and plans.

Latent pathways are identified for the whole working sample and not separately for men and women. We present the distribution of men and women by pathways and always introduce gender differences (if there are any) in the description of the background and consequences of the different pathways. However, it is possible that not only different proportions of women and men experience certain pathways but there may be some gender-specific pathways as well. Consequently, further analysis is needed to test if the process of the transition to adulthood is structured differently for women and men. Moreover,

¹¹ This distinction could lead us to look at the role of agency and personal decisions in the life course, in particular in the transition to adulthood, and to what extent it can be measured in a survey. However, the discussion of these ideas would go beyond the scope of the present analysis.

only a small cohort (people born between 1981 and 1983) are analyzed. Their life course and experiences may differ from other cohorts. Consequently, further research should focus on change over time. And finally, studies should go beyond descriptive methods and use regression models on the causes and consequences of different pathways – controlling for potential selection bias – and they should also tackle selective attrition between survey waves.

RESULTS

Role configurations at certain time points

In the first step of the analysis, we identified latent classes for each wave separately. The best solution yielded three classes for the ages of 18–20 and 29–31 and four classes for the ages of 21–23 and 25–28 (see *Table A1* in the Appendix). The number of classes per age group indicates that the life course of young adults shows the greatest variability during their mid-twenties.

Most 18–20-year-olds (63%) have not assumed any of the adult roles: they are often full-time students, not employed, live with their parents and do not yet have a partner, a spouse or children (*Table 2*). At this age, 30% have finished school and started to work; however, they still live in the parental household in “child status”. Only 7% have their own family (mostly a partner/spouse and may-be also children) but their probability of being employed is only 33%.

At the age of 21–23, the proportion of full-time students is only 37%, and the biggest group is employed but still lives with their parents in child status (43%). 10% have their own family – a partner and children – but they are typically not employed. Another 10% lives independently from their parents, are employed, have a cohabiting partner or spouse but no children.

Four years later there is no “full-time student” group any more since most young people have already finished education by the age of 25–27. However, 14% are still “in transition” between school and work, live with their parents and do not have their own family. The “employed, in child status” class is still the most populous group (45%). 20% have their own family, and 22% have assumed all adult roles except parenthood.

Table 2: Conditional probabilities of different roles and latent class probabilities at four time points during the transition to adulthood in Hungary, 2001–2013

Survey wave and year	Age of the 1981–1983 cohort	Name of the latent class	Roles					%
			Full-time student	Employed	Lives with parents	Lives with partner/spouse	Has child-(ren)	
Wave 1 (2001/2)	18–20 years	Full-time student	0.99	0.00	0.96	0.01	0.00	63.2
		Employed, in child status	0.02	0.62	0.97	0.04	0.02	29.6
		Starting own family	0.01	0.33	0.22	0.75	0.38	7.2
Wave 2 (2004/5)	21–23 years	Full-time student	0.97	0.00	0.94	0.02	0.00	37.1
		Employed, in child status	0.00	0.80	0.90	0.02	0.02	43.2
		Starting own family	0.08	0.01	0.23	0.89	0.72	9.9
		Childless adult	0.00	0.99	0.16	0.87	0.04	9.8
Wave 3 (2008/9)	25–27 years	In transition	0.32	0.26	0.92	0.01	0.05	13.5
		Employed, in child status	0.00	0.99	0.80	0.05	0.01	44.9
		Starting own family	0.00	0.43	0.11	0.95	0.96	20.0
		Childless adult	0.04	0.91	0.10	0.94	0.01	21.6
Wave 4 (2012/13)	29–31 years	Employed, in child status	0.01	0.75	0.87	0.07	0.10	32.0
		Starting own family	0.00	0.57	0.05	0.91	0.91	40.8
		Childless adult	0.00	0.99	0.01	0.80	0.09	27.2

Note: Probabilities higher than 0.5 – that are considered when interpreting and naming the latent classes – are shaded with grey.

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, n = 1000, author's calculation.

Only three classes remain at the age of 29–31: 32% are employed but otherwise live in child status, 41% have established their own family, and 27% are childless adults. There are no full-time students any more and the group of young people who are in transition between education and employment has also disappeared. Interestingly, one-third of respondents aged around 30 still live with their parents in child status: they do not have their own family, but they are employed. This group can be considered the “least adult”, as they have assumed only two of the five roles that are usually associated with adulthood. “The most adult” groups include childless adults and young people with their own family.

Members of the former group have assumed all adult roles but parenthood, while members of the latter class are the least likely to be employed (83% of men and 45% of women work in this group, and many women are on maternity or parental leave).

Based on the previous theoretical and empirical literature, we included several other variables in the LCA models that were supposed to distinguish groups. However, we could not identify any latent classes that were associated with temporary, precarious conditions or reversed transitions. We found no groups dominated by unmarried unions, dissolved cohabiting partnerships or divorces, living apart together relationships, temporary or part-time jobs, living alone, living only temporarily away from the parental household or returning to the parental home. These situations are probably present in the lives of many young people for some time, but they involve only one aspect of their lives, they may only apply to certain social groups, or they may emerge at later ages. Nevertheless, “traditional” status variables were still useful for identifying temporary, inconsistent situations and the postponement of becoming an adult.

Latent pathways of becoming adult

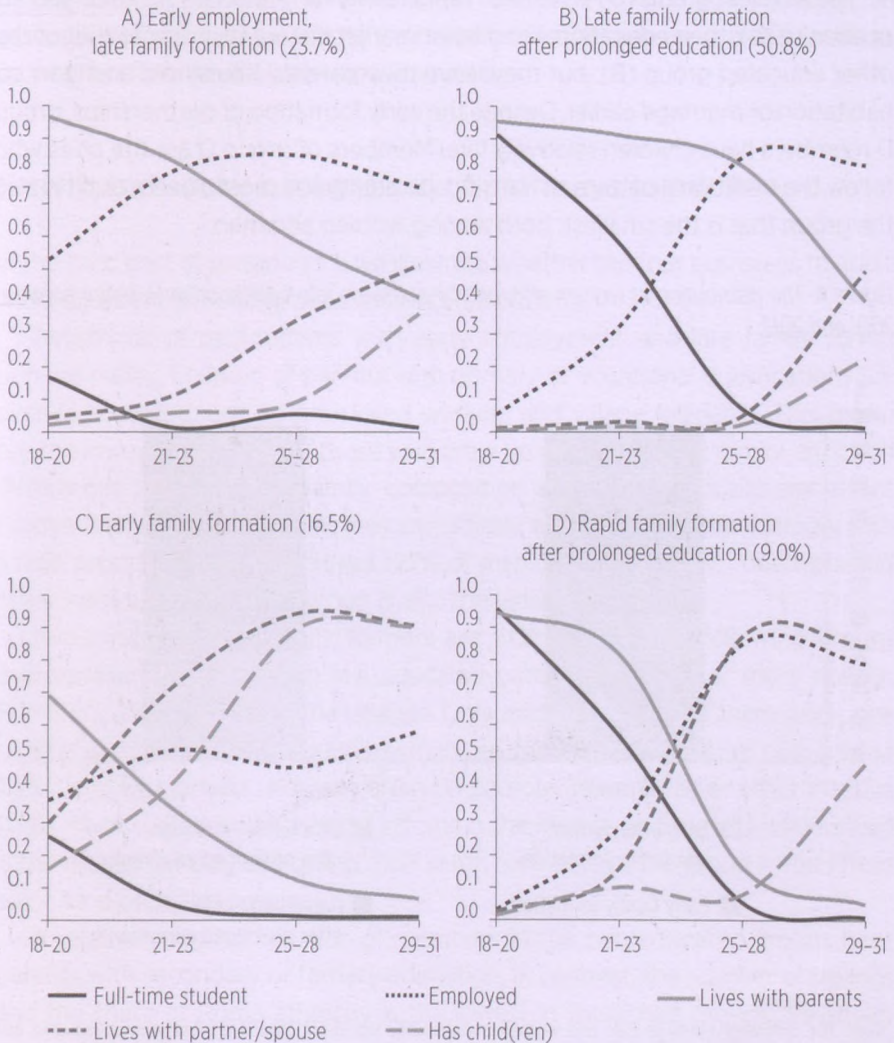
In the second part of the analysis, we analyzed the typical transitions between the role sets formed for the four time periods, and again, LCA was used to form groups. We distinguished four different pathways to adulthood. In other words, there is no single pathway that every young person goes through – there are significant differences in timing, and not everyone goes through all the transitions. *Figure 3* depicts the probability of taking on the five adult roles as a function of age in each pathway. The graphs show the typical age and rate at which young people in the study experienced different life events; however, the order of the events cannot be inferred from them.

Most young people are classified as “late family formation after prolonged education” (51%, B). They leave the education system late, late enough to graduate, and most of them acquire employment. They leave the parental home relatively late (40% of them still live with their parents at around the age of 30), and they form their own families even later. At the age of 29–31, only 20% of them have children.

Every fourth respondent is characterized by early employment but late family formation (24%, A). They study for a shorter period, enter the labor market sooner, move away from their parents and start their own families sooner than

the previous group. Groups A and B reach similar life situations by the age of 29–31 but differ in the timing of important transitions because of their differential pathways in schooling.

Figure 3: Conditional probabilities of different roles by age in the four typical latent pathways into adulthood in Hungary between 2001 and 2013

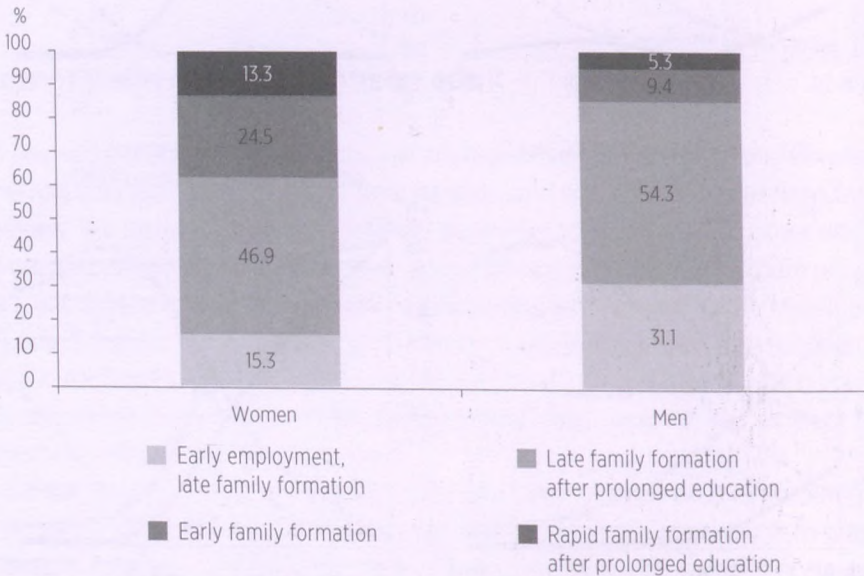


Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author's calculation.

17% of young people are early family formers (C). They finish their studies early and move out of the parents' household, entering the labor market early. However, by the end of the observation period, they are the least likely to have employment (among women, this is partly due to childbearing). They form cohabitations or marry relatively early and at high rates, furthermore, 90% have children by the age of 30.

The smallest group (D) is named "rapid family formation after prolonged education" (9%): their educational and labor market history is similar to that of the other educated group (B), but they leave their parents' household and start cohabitation or marriage earlier. Despite the early formation of partnerships, group D members have children relatively late. Members of group D are the ones who follow the traditional pattern of transition to adulthood most closely, but it is also the group that is the smallest, both among women and men.

Figure 4: The distribution of women and men by pathways into adulthood in Hungary between 2001 and 2013



Note: The difference between men and women is statistically significant (based on Pearson's chi-squared test, $p = 0.000$).

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author's calculation.

There is a difference in the frequency of pathways to adulthood between women and men (*Figure 4*). Women are more likely than men to follow the standard, higher educated pathway, and it is the woman who predominantly from families early. One in two men are characterized by prolonged education and late family formation; this also being the most common pathway among women. Early employment and late family formation is a common pathway as well: every third man and only every seventh women fall under this category. Overall, an essential difference between men and women is that men are about four times more often form families late than women do.

Family and social background of pathways to adulthood

In the third part of the analysis, we illustrate whether the four pathways to adulthood differ in their background factors (*Tables 3-5*).

Two-thirds of respondents with early employment and late family formation are males. Children of parents with primary or vocational qualifications are over-represented, and so are skilled workers and village residents. This group has the lowest proportion of those who grew up in a two-parent family, although differences by childhood family composition are not statistically significant. From a financial point of view, they are slightly worse off than the average, with a high proportion of unemployed (27% of men, 15% of women), conscripts and other inactive groups. This group is also the least religious.

Two-thirds of early family formers are women, with the following groups overrepresented: those with low-educated parents, with two or more siblings, Roma and people living in the villages. Only about one-third of them work, one quarter are still studying, and many men are unemployed (25%) or conscripted (13%), and women are relatively often on parental leave (16%) or other inactive (13%). Their subjective household income is the lowest, and the rate of deprived is the highest among this group. One in ten members of the group suffers from some kind of health problem.

A relatively high proportion of members in the two educated groups have parents with secondary or tertiary education. In contrast, the number of siblings and the share of Roma ethnicity is the lowest in these two groups. Relatively many of them live in cities or towns and have favorable household income. In addition to the similarities, however, there are some essential differences between

the two educated groups. Women are overrepresented in the pathway with rapid family formation after prolonged education, while the proportion of men and women is roughly balanced among members of the educated pathway with late family formation. Two-parent childhood family background is the most common in the educated group with rapid family formation, and this group is also the most religious. In the educated group with late family formation, more people study in secondary or higher vocational education and less in tertiary education than in the educated group with family. Among young people in the two groups with prolonged education, the financial situation of respondents who form their own family quickly after finishing school is also better than that of people who postpone family formation.

Table 3: Sex and family background at age 18–20 by pathways into adulthood in Hungary, 2001/2002 (%)

	Early employment, late family formation	Late family formation after prolonged education	Early family formation	Rapid family formation after prolonged education	Total
Sex***					
Female	30.2	43.2	69.7	69.0	46.8
Male	69.8	56.8	30.3	31.0	53.2
Education of parents (if available)***					
At most eight years of primary school	19.4	5.7	25.6	5.2	12.3
Vocational school	39.5	22.8	42.6	28.5	30.7
Secondary education	33.0	40.9	21.0	39.6	35.5
Tertiary degree	8.1	30.6	10.8	26.8	21.6
Family structure before the age of 16					
Lived with both biological parents the whole time	68.8	74.6	74.2	83.8	74.0
Lived with only one biological parent for some time	16.9	11.9	11.7	3.6	12.3
Lived with only one biological parent and lived with step-parent for some time	14.3	13.5	14.1	12.6	13.7
Number of siblings the respondent grew up with (mean)***	2.4	2.2	3.0	2.2	2.4
Roma ethnicity***	5.7	2.0	16.9	0.9	5.2

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$ (based on Pearson's chi-squared test and ANOVA).

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author's calculation.

Table 4: Socio-economic status at age 18–20 by pathways into adulthood in Hungary, 2001/2002 (%)

	Early employ- ment, late family formation	Late family formation after prolonged education	Early family formation	Rapid family formation after prolonged education	Total
Attended educational institution (if studying)***					
Primary school	3.5	0.7	0.0	0.0	0.7
Vocational school	0.0	10.4	23.0	7.8	10.5
Vocational secondary school	18.9	23.1	17.4	19.8	22.0
General secondary school	39.2	15.3	5.4	12.1	15.3
Higher vocational training school	22.2	18.4	22.2	13.7	18.3
College	16.3	19.6	25.3	24.5	20.5
University	0.0	12.4	6.7	22.1	12.7
Highest level of completed education (if not studying)***					
At most eight years of primary school	19.6	–	38.2	–	25.7
Vocational school	46.1	–	47.0	–	44.2
Vocational secondary school	25.6	–	9.8	–	20.7
General secondary school	8.7	–	5.0	–	9.4
Labor market status***					
(Self-)employed	56.3	2.8	36.1	1.1	20.8
Student	0.8	95.4	24.9	98.2	61.6
On maternity or childcare leave	2.6	0.0	11.7	0.0	2.5
Unemployed	23.7	1.7	13.5	0.0	8.7
Military service	6.9	0.0	4.0	0.0	2.3
Other inactive	9.7	0.1	9.8	0.7	4.0
Material deprivation***	31.8	20.4	40.7	8.0	25.3
Subjective household income**					
Have to go without	4.1	2.8	8.0	1.7	3.9
Financial problems from month to month	19.6	13.0	23.8	6.5	15.7
Can just make ends meet by budgeting carefully	43.8	38.9	38.4	44.1	40.4
Live acceptably	29.8	38.3	27.5	42.5	34.9
Live without problems	2.8	7.0	2.2	5.2	5.1
Place of residence***					
Budapest	20.4	23.8	8.5	16.8	19.9
City	13.0	24.2	20.7	26.8	21.2
Town	28.4	25.9	27.9	29.8	27.2
Village	38.2	26.0	42.9	26.6	31.7

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$ (based on Pearson's chi-squared test and ANOVA).

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author's calculation.

Table 5: Health, wellbeing and values at age 18–20 by pathways into adulthood in Hungary, 2001/2002 (%)

	Early employment, late family formation	Late family formation after prolonged education	Early family formation	Rapid family formation after prolonged education	Total
Limited by health problem*	9.6	6.2	10.0	1.0	7.2
Loneliness (mean)*	7.8	7.3	7.9	7.0	7.5
Life satisfaction (mean, 0–10)***	6.5	7.4	6.5	7.8	7.0
Religious †	49.7	56.1	61.5	68.9	56.7

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$ (based on Pearson's chi-squared test and ANOVA).

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author's calculation.

Outcomes of pathways

After examining background factors, we turn to the question of what characterizes respondents aged 29–31 who followed different pathways to adulthood (Tables 6–8).

Four-fifths of the “early employment, late family formation” group is unmarried. However, many have been cohabiting or living-apart-together, while one-third of them have already broken up a previous relationship or divorced their spouses. About half of the group's single members want to move in with a partner within the next three years. The number of children among group members is relatively low, but 55% want a(n) (additional) child within the next three years. This group has the highest proportion of youth living with parents (53%), and 12% of those who share a household with their parents also have a cohabiting partner or spouse. Although the proportion of singles is relatively high, due to frequent cohabitation with parents, only 9% live in a one-person household, which is no different from the sample average.

The members of the “early employment, late family formation” group have relatively low education compared to members of other groups (e.g. only 6% have a college or university degree). Four-fifths of them work, although two-thirds have been unemployed at least once in their lifetime (the highest rate among the four groups), and 13% are still unemployed. The employment rates of women and men do not differ significantly from each other, and the unemployment rate of 18% for men compares to the proportion of women on parental

leave (also 18%). The highest share of self-employed and skilled workers can be found in this group, while relatively few have non-manual occupations. The share of precarious work and their financial situation can be seen as average. Their health and well-being can also be considered average, but the proportion of smokers in this group is very high (40%).

Table 6: Demographic status at age 29–31 by pathways into adulthood in Hungary, 2012/2013

(%)

	Early employment, late family formation	Late family formation after prolonged education	Early family formation	Rapid family formation after prolonged education	Total
Marital status***					
Never married	79.9	77.4	37.2	42.1	64.3
Married	12.9	20.1	49.8	48.9	29.1
Divorced	7.2	2.5	13.0	8.9	6.6
Partnership status***					
Lives with partner or spouse	42.5	45.8	88.3	95.3	61.2
Has a partner but they do not live together	26.6	20.3	0.9	3.6	15.1
Has no partner	30.9	34.2	10.8	1.1	23.7
Ever experienced partnership dissolution or divorce**	31.8	21.3	44.0	37.7	30.7
Mean number of children (if has children)***	1.23	1.13	2.15	1.18	1.65
Household type***					
Lives alone	9.2	12.9	0.9	4.7	8.4
Single parent	2.0	2.1	10.1	0.0	3.5
Lives with own parent(s) (with no partner or children)	43.1	36.3	0.0	0.0	24.8
Single parent, lives with own parent(s)	3.2	1.5	0.7	0.0	1.5
Couple with no children	18.6	27.2	5.8	48.2	23.9
Couple with child(ren)	17.9	13.5	81.5	45.9	33.6
Couple with parent(s) (with no children)	3.4	2.6	0.0	1.3	2.0
Couple with child(ren) and parent(s)	2.8	2.3	0.9	0.0	1.8
Other	0.0	1.5	0.0	0.0	0.7

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$ (based on Pearson's chi-squared test and ANOVA).

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author's calculation.

The partnership and family situation of the group with late family formation after prolonged education at the age of 29–31 is similar to that of the group with early employment and late family formation, but there are some important dif-

ferences. Members of the former group include slightly more married and single people, while the proportion of those who experienced partnership dissolution or divorce is below average. It is within this group that the share of people living in a one-person household is the highest (13%), 43% live with their parents, out of whom 11% also have coresident partner. Among singles, 72% want to move in with a partner in the near future, and two-thirds of them would like to have a(n) (additional) child within the next three years.

Half of the members of the educated, late family former group have a tertiary degree and 90% have finished at least secondary education. Four-fifths of them are in paid employment (84% of men, 72% of women), they have an average rate of unemployed among them (6% of women, 12% of men), and 21% of women in this group are on parental leave. Most members of this pathway group are subordinate non-manual workers (45%), managers (20%) or skilled workers (21%). Experience with insecure employment and unemployment are less typical among them than the average. Their financial situation is relatively favorable and their level of wellbeing is average.

The vast majority of early family formers live with a spouse or partner and only 11% are single. In contrast, many (44%) have already broken up at least one long-term relationship, with 13% of them divorced and 11% of them being single parents. This group has the highest rate of single parents and the highest mean number of children. However, within the next three years, only 20% would like to have another child; thus, the childbearing phase is over for the majority of the group.

The group of early family formers have the lowest level of education: 23% have completed primary education at most and 41% completed vocational school. At the same time, 37% have secondary or tertiary education, so it cannot be said that there are only low-educated people making up this group. The employment rate is the lowest within this group, mainly due to the relatively high proportion of group members on parental leave (27% of women). 55% of early family formers were at some point already unemployed and 12% are still unemployed (22% of men and 8% of women). Low educational attainment is associated with a high proportion of manual workers and a low proportion of managers or intellectual workers. Job insecurity affects every third employee in the group, thus exceeding the sample average one and a half times. Subjective household income is the lowest in this group, while they have the highest rate of material deprivation: one in three households is deprived, with 44% having regular financial difficulties, or even in need of basic resources. The group is characterized by above-average levels of smoking, loneliness and dissatisfaction with life.

Table 7: Socio-economic status at age 29–31 by pathways into adulthood in Hungary, 2012/2013 (%)

	Early employment, late family formation	Late family formation after prolonged education	Early family formation	Rapid family formation after prolonged education	Total
Education***					
At most eight years of primary school	16.2	0.0	23.0	0.0	8.4
Vocational school	44.8	10.3	40.5	14.6	24.7
Vocational secondary school	16.1	20.1	14.5	14.9	17.3
General secondary school	11.3	9.8	7.5	6.0	9.1
Higher vocational training school	5.3	17.3	3.8	17.3	11.9
College, BA	6.3	22.5	8.7	22.7	16.1
University, MA, PhD	0.0	20.0	2.0	24.5	12.5
Labor market status**					
(Self-)employed	78.6	79.3	61.2	73.8	74.5
Student	0.0	1.0	0.0	0.0	0.4
On maternity or childcare leave	4.9	8.8	20.1	19.3	11.9
Unemployed	12.9	9.6	11.9	5.8	10.3
Other inactive	3.6	1.4	6.9	1.2	3.0
Unemployment experience***					
	69.5	41.5	54.6	33.1	49.0
Type of worker (if works)***					
Self-employed	11.2	4.4	3.3	0.0	5.1
Skilled worker	32.7	20.8	27.6	5.5	22.5
Semi-skilled worker	18.1	8.2	23.1	23.0	15.2
Unskilled worker	9.0	0.7	9.8	0.0	4.1
Manager	5.2	20.0	1.1	6.3	11.4
Subordinate non-manual worker with tertiary degree	5.3	27.5	11.7	45.4	22.3
Subordinate non-manual worker with secondary degree	11.6	15.8	13.3	15.1	14.3
Other non-manual worker	5.4	1.3	3.9	0.0	2.5
Casual manual worker	1.5	1.3	6.2	4.7	2.7
Unstable employment (if works)**					
	22.7	15.9	36.4	11.9	20.5
Material deprivation***					
	12.7	10.6	31.0	17.8	15.1
Subjective household income***					
Have to go without	4.9	4.8	8.1	0.0	4.8
Financial problems from month to month	16.2	9.7	35.4	21.8	18.3
Can just make ends meet by budgeting carefully	46.1	41.7	42.5	30.1	41.1
Live acceptably	31.6	37.1	14.0	35.2	30.7
Live without problems	1.3	6.8	0.0	13.0	5.1

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$ (based on Pearson's chi-squared test).

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author's calculation.

Table 8: Health, wellbeing, intentions and values at age 29–31 by pathways into adulthood in Hungary, 2012/2013

	Early employment, late family formation	Late family formation after prolonged education	Early family formation	Rapid family formation after prolonged education	Total
(%)					
Health, wellbeing					
Limited by health problem	5.6	6.1	7.6	–	5.4
Loneliness (mean)**	7.0	7.1	7.8	6.0	7.1
Life satisfaction (mean, 0–10)*	7.0	7.4	6.7	7.6	7.2
Smoking***	40.2	29.7	38.9	13.7	31.6
Intentions, values					
Intention to start living with a partner within three years (if has no partner or spouse) †	56.4	71.9	57.5	–	66.6
Intention to have children within three years***	54.8	65.7	20.1	72.4	54.6
Religious***	57.1	57.3	66.9	79.2	62.5

Notes: “–”: the cell has low number of cases; *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$ (based on Pearson’s chi-squared test and ANOVA).

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001–2013), birth cohort 1981–1983, $n = 1000$, author’s calculation.

Almost every young people who have followed the “rapid family formation after prolonged education” pathway live with a spouse or a partner (95%). Their mean number of children is just over one and half of the couples are (still) childless. For many, the childbearing period is not over or has not begun, indicated by the fact that 70% of them want a (new) child within the next three years. Those who do not have a cohabiting partner usually live alone; cohabitation with parents is not typical within this group.

86% of the educated group with rapid family formation have completed at least secondary education and 47% are college or university graduates. Two thirds (68% of women and 93% of men) are employed, while a quarter of women are on parental leave. Unemployment rates are low, and they have experienced the lowest rates of unemployment at any point in their life (33%). Two-thirds of them do non-manual work, but the proportion of unskilled workers is also surprisingly high (which may be a random effect due to the small number of people making up this group within the sample). They are less characterized by job insecurity and material deprivation, and subjective household income is the highest in this group. They are also the most religious group, the most satisfied with their lives, the least lonely, and only 14% of group members smoke.

CONCLUSIONS

We analyzed the process of the transition to adulthood, the background and outcomes of different pathways of young people in the early 2000s in Hungary. We used longitudinal data from the Hungarian Generations and Gender Survey on the life course of the 1981–1983 birth cohort between the ages of 18 and 31. We applied the method of two-step latent class analysis.

Our results suggest that the life situation of young people shows great variety during their twenties and also differs by age. The transitory period between adolescence and adulthood – postadolescence – can be characterized by quite different role configurations, and it is not a uniform phase of the life course. The empirical analysis identified four different pathways into adulthood; thus there is no single dominant pathway. The most common type is characterized by prolonged education and delayed family formation (51%). Every fourth young person become employed early and form their own family late; 17% establish a family early. Interestingly, the pathway that resembles the traditional, linear model of transition to adulthood the most (rapid family formation after prolonged education) is the least frequent (9%).

Identified pathways show strong resemblance to results from other countries (e.g. United States, United Kingdom, Finland) from analyses using similar methods (Amato et al., 2008; Osgood et al., 2005; Räikkönen et al., 2012; Schoon, 2014), which is surprising in light of the cultural, social and economic differences between these countries. The pathways identified in international comparisons (which included Hungarian data) are also partially consistent with the groups we have found (Lesnard et al., 2016; Schwanitz, 2017). Each of the cited studies found a relatively populous, educated, childless group, independent from parents, which corresponds to our “late family formation after prolonged education” pathway. The largest group identified by international research is work-oriented, childless and typically holds secondary educational qualifications. Often there is also a similar “belated” group, except that many of its members still live in their parents’ household. These two pathways correspond to the “early employment, late family formation” group in our analysis. There is also a “vulnerable” group in the UK who are low-educated, rarely employed and form families early, which is in line with our “early family formation” pathway.

Those who follow more conventional patterns of family life course, according to international results, have assumed every adult role by the second half of their twenties, and generally have low or secondary education. In the Hungarian context, however, this pathway is more typical of the educated (and those with the

most advantageous family background), and they are the ones who reach the most favorable positions by their early thirties. Thus, it is a Hungarian peculiarity that the most standard – and rarest – pathway to adulthood is a kind of “social privilege”. During a relatively long period of studying, they can take advantage of a prolonged process of the transition to adulthood, improve their human capital while still relying on parental resources. They can gain favorable employment and a good financial position relatively soon after leaving school, and they do not delay (any further) leaving the parental household, starting to live with a partner or getting married.

Thus, the results confirm that not only the journey itself (the timing of certain role transitions in reaching adult status) is different for young people on different pathways to adulthood, but their position at the beginning and, of course, at the end of the journey can also be quite different. However, alongside divergence, pathways remain more or less structurally defined. The time spent in the educational system structures young people’s life course: full-time employment and hence financial independence can only be achieved after completing full-time studies, and family formation is delayed as a result of it due to incompatibilities between student and family roles (Blossfeld and Huinink, 1991; Molnár, 2014; Spéder and Bartus, 2016). Naturally, the difference in pathways for people with lower and higher levels of education is not only due to the fact that they graduate at different ages, but the education they obtain strongly influences other dimensions of their lives, for example, their labor market and family trajectories.

According to our findings on socio-economic differences, the background and the achieved position of the two educated groups are the most favorable. They enter employment after a relatively long educational period at similar ages. They differ most in the timing of family formation and educated people with rapid family formation tend to be more religious. The situation of early employment seekers and late family formers is worse than the average, but their labor market position is better than that of early family formers. They are often characterized by broken relationships, joint households with parents, and unemployment experience. They reach adult status in certain dimensions relatively early and quite late in other aspects.

There are two pathways characterized by late family formation: one with early employment and lower level of education, and one with prolonged education. By the age of 30, just over half of the members of the former group and 72% of the latter group would like to live together with a partner within the next three years. We can find a similar difference in the intention to have a child within the

next three years (55 vs. 66%). This implies that about half of low-educated childless singles in the “early employment, late family formation” group have no relationship or childbearing plans (which may be related to a previous partnership dissolution or they may have abandoned their family formation plans because they are less “marketable” in the relationship market). The more educated most often show a timing effect: after lengthy studies, they have had a shorter time to establish a lasting relationship, and many have not abandoned their childbearing and family plans around the age of 30.

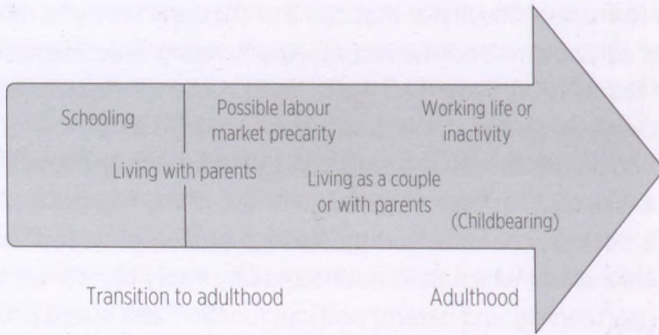
The background and outcomes of the early family formers are the most disadvantaged. The primary way for them to reach adult status is through early partnerships and childbearing, and their labor market integration is rather low. Parental resources are relatively scarce and hard to access, and the socio-economic disadvantages of their parents are often reproduced among them. There are three possible explanations for the relationship between disadvantage and early family formation. The first is that some of the early family formers have no other means available to become respected and recognized members of adult society (see Durst, 2006; Fernández-Kelly, 1995). Although disadvantaged social groups are overrepresented in this group, there are a good number of early family formers who do not share this background. In their case, there might be some kind of value selection at play (e.g. religiousness is the highest in this group). Besides, in a position characterized by feelings of insecurity and limited labor market opportunities – which does not necessarily imply objectively poor living conditions – partnership and parenthood can function as a stable point of reference (theory of the reduction of uncertainty; see Friedman et al., 1994; Bukodi and Róbert, 2005 made similar conclusions).

Concerning the relationship between the length of the postadolescent period and socio-economic status, the results support the finding cited earlier that both premature independence and “stalling” may be associated with social disadvantages (Arnett, 2000; Elder, 1975; Furstenberg, 2008; Furstenberg et al., 2004; Lui et al., 2014; Mortimer 2012). Rapid achievement of independence characterizes the by-now standard pathway of transition to adulthood after a relatively long time spent in education. It is most accessible to those with the most favorable childhood family background and it results in the more favorable outcomes at the age of 30.

Regarding the theoretical considerations that we discussed earlier, the “extended transition” model of Galland (2004: 151) can be modified to fit the contemporary Hungarian situation (*Figure 4*). The distinction between the pre-adult and the adult stage have become more blurred. The role transitions in the private sphere (family) and the public sphere (employment) are less synchronized than

in the original model: the relative timing of the important life course transitions shows considerable variability. After the end of studies, there is a possible period of labor market precarity, followed by working life or inactivity (leaving the labor market). Some young people live with their parents for a long time – they either never leave or return to the parental home –, and this is linked not only to their family trajectory but also to their position in (or out of) the labor market. An additional difference from the original model is that in Hungary, there is no separate phase when young people typically live alone. Childbearing has been added to the model because it can be a means of gaining adult status. For many young people, however, parenthood and transition to adulthood are unrelated – the first child is born late and childlessness increases –, this is why childbearing is in parentheses in the model.

Figure 5: The modified “extended transition” model of transition to adulthood



Note: The model is based on Galland (2004, p. 151) and has been adapted to the Hungarian situation by the author.

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APPENDIX

Table A1: Fit indicators for models with different number of latent classes for each step of the analysis

Number of classes	Log-likelihood	Likelihood ratio	Degrees of freedom	AIC	BIC	The chosen model
Wave 1, cross-sectional data						
1	-1 878.6	868.3	26	878.3	902.9	
2	-1 544.3	199.7	20	221.7	275.7	
3	-1 458.8	28.8	14	62.8	146.2	X
4	-1 449.4	10.0	8	56.0	168.8	
5	-1 445.7	2.5	2	60.5	202.8	
Wave 2, cross-sectional data						
1	-2 238.7	1 167.9	26	1 177.9	1 201.5	
2	-1 876.9	444.3	20	466.3	518.2	
3	-1 688.4	67.2	14	101.2	181.4	
4	-1 667.0	24.5	8	70.5	179.0	X
5	-1 658.3	7.0	2	65.0	201.8	
Wave 3, cross-sectional data						
1	-1 645.5	610.1	26	620.1	642.3	
2	-1 405.1	129.2	20	151.2	200.0	
3	-1 365.2	49.5	14	83.5	159.0	
4	-1 343.2	5.5	8	51.5	153.5	X
5	-1 341.6	2.4	2	60.4	189.0	

Table A1: Fit indicators for models with different number of latent classes for each step of the analysis (continued)

Number of classes	Log-likelihood	Likelihood ratio	Degrees of freedom	AIC	BIC	The chosen model
Wave 4, cross-sectional data						
1	-1 094.1	339.7	26	349.7	370.0	
2	-950.6	52.7	20	74.7	119.3	
3	-928.7	8.9	14	42.9	112.0	X
4	-925.4	2.4	8	48.4	141.7	
5	-924.7	1.0	2	59.0	176.7	
Waves 1-4, longitudinal data						
1	-1 890.6	734.3	133	754.3	794.9	
2	-2 776.8	331.9	122	373.9	477.0	
3	-2 700.7	179.7	111	243.7	400.7	
4	-2 664.6	107.6	100	193.6	404.6	X
5	-2 641.8	61.9	89	169.9	434.9	
6	-2 634.2	46.7	78	176.7	495.7	

Notes: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion. The main criteria for the choice between models were minimizing AIC and BIC and the preference for simpler models (fewer classes). Cross-sectional models with six or more classes are not presented here as their degrees of freedom are negative, indicating identification problems.

Source: Longitudinal data from the Hungarian Generations and Gender Survey (2001-2013), birth cohort 1981-1983, n = 1000, author's calculation.

DEMOGRÁFIA
DEMOGRÁFIA ENGLISH EDITION

Quarterly (three Hungarian issues and an English edition)
Editorial Office: Hungarian Demographic Research Institute
1024 Budapest, Buday László St. 1-3.
Phone: +36 1 345 6573
Email: englishedition@demografia.hu

Responsible publisher: Zsolt Spéder, director

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