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**FACTORS AFFECTING THE
REALISATION OF CHILD-BEARING
INTENTIONS IN FOUR EUROPEAN
COUNTRIES**

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**WORKING PAPERS ON POPULATION,
FAMILY AND WELFARE**

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2011

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Abstract

This study investigates the realisation of time-related positive fertility intentions using a comparative approach. Four European countries of medium size are compared, all with rather different fertility regimes: the Netherlands and Switzerland (Western), and Hungary and Bulgaria (Post-communist). Using four harmonised longitudinal panel surveys, it is possible to construct a typology of fertility intentions and outcomes, and not only to identify common patterns but also different influencing factors in each country. By employing multinomial logistic regressions, we uncover factors influencing postponement, abandonment and realisation of childbearing. In all four countries, age, partnership status and education appear to influence fertility intentions in the same ways. However, the effects of some of these factors do differ in the four countries that we focus on.

Keywords:

Fertility, fertility intention, childbearing intentions, fertility behaviour, fertility dynamics, postponement, Europe, comparison, panel survey

1 Introduction¹

Our investigation is closely linked to research that analyses discrepancies between fertility intentions and actual behaviour (Westoff and Ryder 1977; Monnier 1989; Schoen et al. 1999; Heaton et al. 1999; Quesnel-Vallée and Morgan 2003; Testa and Toulemon 2006; Philipov 2009; Spéder and Kapitány 2009). An increasing number of publications on this subject are being published today, and research is becoming increasingly differentiated. As a consequence, it has become evident that the meaning of ‘fertility intention’ can differ and can be measured in different ways. Naturally, research results are influenced by the varying understandings and operationalisation of intentions. In this study we concentrate on people who have *positive intentions* to have a(nother) child, and investigate their fertility intentions within a given period of *time*; we are not interested here in the behaviour of people who *do not* plan to have a child within a given time period. Successful realisation is measured by the birth (or not) of a child within the given time period. Furthermore, we also wish to find out more about those who do not fulfil their intended fertility intentions, and find out if they maintain or abandon their intentions.

In analysing people with positive short-term intentions, we wish to understand the *factors* that support or hinder the realisation of fertility intentions. As a result, we try to discover if there are social groups who have a higher probability of realising their intentions than others. Furthermore, we are also interested in which social groups maintain or abandon their short-term childbearing intentions when they fail to realise them. Our *comparative approach* – comparing the fertility intentions and realisations in four different countries, enabling analysis of how far universal or specific demographic factors influence the realisation of fertility intentions – is a novel one. Indeed, it is the only approach that enables us to differentiate between universal and country-specific factors.

Our analysis is structured as follows. First, we review and discuss relevant literature. Based on this, we construct hypotheses for our empirical analysis. The methodological section starts with an outline of fertility developments in the four selected countries, and continues with description of the data sets employed (and harmonised) by us, and the methodological tools we employ. During discussion of the results we concentrate on the effects of classical socio-demographic variables, namely age, parity and partnership status. The effects of the control variables are also taken into account: we argue that further investigation of these variables would yield valuable and novel results. Finally, we draw attention to the effects of socio-economic and attitudinal differences in understanding fertility decision-making.

¹ This research was carried out within the project “Reproductive decision-making in a macro-micro perspective REPRO”. Grant Agreement: SSH-2007-3.1.2- 217173. The Hungarian Research Fund (OTKA) supported the completion of this study (No. NN776648).

2 Fertility Intentions, Fertility Behaviour, and Longitudinal Research: Literature Review

When studying the determining factors of fulfilment and failure of fertility intentions, it is tempting to take all the studies analysing social determinants of fertility behaviour into account, particularly those which reveal social and attitudinal factors influencing the decision to become a parent (or have subsequent children). Even though these studies are undoubtedly important, in our analysis we concentrate on literature that explicitly focuses on fertility intention variables. Based on our research focus, we limit ourselves to *longitudinal studies*: studies measuring intentions at certain points of time, and which relate these intentions to subsequent childbirth. Before proceeding with the literature review, we outline our research within the larger body of research on fertility intentions, elaborating the concrete features of our intention variables.

Intentions in General and in Practice

A lot of research has recently been carried out in the field of fertility intentions and outcomes, concentrating on the discrepancies between them (Schoen et al. 1999; Heaton et al. 1999; Noack and Østby 2002; Quesnel-Vallée and Morgan 2003; Berrington 2004; Testa and Toulemon 2006). We have previously written on much of this literature in detail (Spéder and Kapitány 2009) and will therefore refrain from going into much detail here. In brief, we found that the different research results might be related to the fact that fertility intentions and preferences can be understood in many different ways, that the classification of fertility intentions varies (Miller and Pasta 1995), and that a clear and unambiguous definition of ‘intention’ is therefore required. In addition, we found that the *timing* and *certainty* of intentions – and furthermore consideration of a *partner’s intentions* –, all play crucial roles in realising intentions. However in our analysis we concentrated only on the operationalisation of time dependent fertility. Research results support our approach: since the realisation of intentions is strongly correlated with the time-frame (cf. Schoen et al. 1989), and because short-term intentions can also be understood as “strong” or “involved” intentions, we believe that this approach is crucial to understanding the relationship between intention and behaviour. Moreover, previous analyses also show that demographic and social factors contribute to successful childbearing intentions or to their possible postponement.

The methodology and construction of key dependent variables employed in this study come from Heaton et al. 1999. In their study, they concentrated not only on the fulfilment or failure of fertility intentions, but also analysed changes in intentions over given periods of time. They found several social and attitudinal factors that were relevant to explaining fulfilment and changes of intentions (Heaton et al. 1999). In addition, work carried out by Berrington, who used multinomial regression techniques for a similar analysis, has helped inform our research from a methodological point of view (Berrington 2004).

As mentioned, our investigation concentrates on *time-related intentions*, and also considers whether failed intentions are maintained or abandoned. Those who intend to have a child within two years and successfully realise

this intention within three years² are called “*intentional parents*”. Since we are interested in how “reversible” these intentions are, we group people who do not realise their intentions into two groups: those who maintain their intention to have children are classified as “*postponers*”, and those who abandon their plans are classified as “*abandoners*”. The table below shows our typology, and the construction of our dependent variable.

The potential influencing factors on whether positive fertility intentions will be fulfilled (or not), or if intentions will be maintained (or abandoned) will be discussed below in detail.

Table 1
Basic Types of Positive Fertility Intentions and Outcomes

Fertility intention- outcome Types	Fertility intention within two years (at the 1 st wave)	Had a birth within three years (between the 1 st and 2 nd waves)	Intend to have a child at subsequent wave (the 2 nd wave)
Intentional parents	Yes	Yes	
Postponers	Yes	No	Yes
Abandoners	Yes	No	No

Theoretical frameworks enable us to consider the most important potential factors influencing fertility decision-making, in our case the realisation of intention. At the same time the possibilities and limitations of the data available constrain the kinds of research questions which can be more closely examined. Since we work with a post-harmonised data set, and are able to construct only a limited number of identical explanatory variables, we concentrate our analysis on three important demographic factors: age, parity and partnership. Although we have constructed some social and behavioural variables to compare our results (see section 2.3), due to the need to construct very simple variables, we have only utilised them as controlling factors. Consequently, the setting up of hypotheses concentrates on demographic variables.

*Potential Factors of
Intention Realisation
(Hypotheses)*

Age. Previous research very strongly indicates a positive relation between age of the respondent and the realisation of intention. A study carried out by Noack and Østby (2000) about fertility expectation and realisation stressed the salient role of demographic factors. Being younger (18–24 years) is associated with having more realistic fertility intentions. Schoen et al. (1999) showed that after controlling for all the characteristics of intentions and other background factors, age remains the most significant factor in determining childbirth: younger respondents have a higher likelihood of having a child. More recently, Philipov (2009) found that if we control for a sensitively constructed intention variable, those below the age of 30 in Bulgaria have significantly higher chances of having a child. Berrington (2004) studied a more specific group, namely childless women between the

² The fact that the time-frame of the intention and the time period for realisation do not match is due to the limitations of the different surveys we utilised.

ages of 30 and 39, and also concluded that the advancement of age decreases the chance of successfully realising childbearing intentions.

Heaton et al. (1999) and Testa and Toulemon (2006) called for greater attention to be paid to the effects of age in different kinds of failures of fertility intentions. Focusing on childless people, Heaton et al. (1999) found not only that older people are more prone “to switch to childlessness”, but also to switch from “not wanting any child to parenthood”. On the other hand however, they did not find any differences in age between “intentional parents” and “postponers”³. Testa and Toulemon found that the probability of involuntary postponement⁴ inevitably increased with age until the age of 32, and then stays at a high level before declining. They concluded that “those who failed to have a desired birth and still want to start a family five years later are probably those who cannot have a child due their advanced age and the resultant limited fecundity” (p. 65). Indeed, most of the research which finds a significant relation between failure of realisation and advanced age assumes the operation of biological factors⁵. Some research also assumes that ‘lifestyle’ factors may come into greater conflict with childbearing decisions at later ages (Philipov 2009). We characterise the above mentioned research results as the “*biological-clock approach*”: because fecundity reduces with age, realisation of intention will become increasingly unsuccessful as age increases. As a consequence, abandonment of childbearing intention will be more likely for those of an older age.

Although none of the reviewed research results directly support an alternative hypothesis, some approaches suggest considering alternative ways of thinking. Research demonstrating higher instability of intentions in younger ages (such as Rindfuss et al. 1988) indicates higher failures of intention-realisation in earlier life-course phases. In a study on the relation between intention and behaviour, Miller and Pasta also assumed a higher likelihood of realising fertility intentions at later ages: “The time pressure associated with higher age, longer marital life and higher age of previous child are likely to promote the occurrence of procreation” (op. cit. p 535), namely higher probability of realisation at later ages. However, analysis of their results concerning young married couples does not support this assumption. Considerations about the prevalence of age norms in modern societies (Settersten and Hagestad 1996; Heckhausen et al. 2001; Billari et al. 2010) also suggested a higher likelihood of realisation at older ages. According to the model of developmental regulations of the life-course worked out by Heckhausen et al. (2001), people approaching the end of their fertile period intensify their efforts to realise their fertility intentions. Since people are conscious of the deadline – and a social deadline also exists (cf. Mynarska 2009) –, we can assume that people approaching this age limit, whatever this happens to be, will strive to realise their intentions. Consequently, the “*social age norm*” approach assumes that postponement decreases with increased age⁶.

³ Our categorisation differs somewhat from Heaton et al. 1999.

⁴ Testa and Toulemon’s “involuntary postponement” corresponds perfectly with our “postponer” category.

⁵ Shown by Leridon 2008.

⁶ Since biological age limits differs according gender, the consciousness could differ also accordingly. Unfortunately due to low sample size in some countries, in this study we cannot carry out separate analyses by gender.

Some parts of the literature on childlessness can help us to make the relationship between postponement and abandonment more apparent. Several studies argue that many childless individuals did not originally intend to stay childless. However, by constantly revising their intentions and by postponing a decision to have the child, they abandon their original plan and become childless (Berrington 2004). According to the above mentioned mechanism an abandoner will be older than a postponer.

Based on the above mentioned considerations, and in-line with the two basic approaches (“*biological clock approach*” and the “*social age norm*”), we outline our hypotheses about the role of age in the fulfilment and failure of time-related fertility intentions as follows:

H1a) Based on the biological clock approach *postponers* will be older than *intentional parents*, whereas according the social age norm approach younger people will be more prone to postponement than older people.

H1b) Comparing *intentional parents* vs. *abandoners*, both approaches expect the same outcome: higher risk of abandonment with increasing age.

H1c) Comparing the relationship between *postponers* and *abandoners*: based on the continuous postponement concept, postponers will be younger than abandoners.

Parity. Longitudinal studies usually include parity as a control variable, and therefore parity relevant results frequently become ‘by-products’ of analyses focusing on fertility intentions. Research carried out by Schoen et al. 1999, showed that those who have one child at a given time usually exhibited a higher likelihood of having another child in the subsequent period (up until the next interview). However, among non-married women (living alone or in cohabitation) women of parity three also have significantly higher chances of having another child. In analysing the British Household Panel Survey, Berrington found that in a given six year period, those with no child or one child had the highest likelihood of realising their (further) childbearing intentions (Berrington 2004). The strength of the parity effect also depends on the time spent since the last birth; the shorter the period since the last child the higher the likelihood of having another intended child.

Studies investigating childless people stress the instability of intentions at younger ages (Rindfuss et al. 1988) and that many people do not realise and postpone childbearing intentions (Heaton et al. 1999). In the US, among childless people of fertile ages, 45 per cent of those who intended⁷ to have a child did not realise their intention within five years. As reported by Testa and Toulemon in France, 54 per cent of childless people stating “I want a child within five years” had a child within that five years period (op. cit. p. 57). These results allow us to argue that among childless people we can assume a low level of realisation of intention and high level of postponement. This assumption concurs with studies which demonstrate competing and conflicting life goals (Rindfuss et al. 1988; Barber 2001; Philipov 2009), since childless people exhibit a wide range of different life-goals that frequently conflict with childbearing intentions (Barber 2001).

Longitudinal studies investigating the realisation of family size intentions show that those intending to have two children have the highest chances of

⁷ The intention did not refer to any specific time-frame.

realising their initial intentions (Quesnel-Vallée and Morgan 2003). Furthermore, those planning to have no children or one child will often end up having more, while those intending to have three or more, often end up having less. As a result we can deduce that people with two or more children have lower chances of realisation than those who have none or only one child and assume that:

H2a) Childless people are more likely to postpone and less likely to abandon their plans in relation to successful realisation (intentional parents).

H2b) People with one child have the highest likelihood of realising their fertility intention within three years.

H2c) People with two or more children will be more prone to abandon than to realise or to postpone their plans.

Partnership. Many researchers claim that a cohabiting partnership (and especially marriage) is a prerequisite for realising childbearing intentions (Heaton et al. 1999; Schoen et al. 1999; Berrington 2004; Testa and Toulemon 2006; Spéder and Kapitány, 2009). This should also be true in our case, although partnership form (marriage, cohabitation, or living alone) is also one of the strongest factors determining of the formulation of short-term childbearing intentions (cf. Philipov et al. 2006; Billari et al. 2009). Consequently, partnership form dominates the whole decision-making process from the emergence of intentions up until conception.

A more intriguing question is whether the form of partnership (marriage or cohabitation) has any effect on realisation of intentions. It seems that in some countries, such as France where cohabitation is widespread, this form of partnership has only a modest effect on the chances of childbearing (Toulemon and Testa 2005). On the contrary, cohabiting couples in the United States are less likely to realise their intentions (Heaton et al. 1999). Heaton et al. conclude that “despite documented increase in non-marital childbearing, a close relationship between having children and marriage persist” (op. cit. 536). In a more detailed analysis we also find that in Hungary cohabiting females are less likely to realise their positive intentions than married ones (Spéder and Kapitány 2009). We agree with those authors who note that the meaning of ‘cohabitation’ varies from country to country (Heuveline and Timberlake 2004); this is related to the prevalence of cohabitation within different countries. The four countries we analyse are interesting cases in this respect, because cohabitation is spread quite differently in each of the four countries.

It is also clear that stability of the partnership will influence chances of realisation (Heaton et al. 1999; Testa and Toulemon 2006). We can formulate common sense associations: on the one hand, separation or divorce will increase the likelihood of being a postponer or abandoner. Starting to cohabit or getting married will, on the other hand, increase the likelihood of being a successful realiser (intentional parent)⁸. This assumption is in accordance with the social-psychological approach, since this theory suggests that (unexpected) events in the life-course discourage

⁸ There is no space here for examining the mutual relationship between childbearing and partnership behaviour.

actors from realising their (earlier) intentions (Ajzen 1988; Miller and Pasta 1995). Based on the above mentioned research results we assume that:

H3a) Cohabiting people (married and living in non-marital partnerships) will have a higher likelihood of successfully realising their intentions than people living alone. (This is a very plausible assumption, however one should bear in mind that we include only those single, non-cohabiting respondents in our analyses who intend to have a child within the next two years.)

H3b) Cohabiting people might be less committed to each other than married ones (Waite and Gallagher 2000); therefore, the rate of realisation of intentions will be lower among cohabitants than among the married. However, due to different meanings of cohabitation, we expect differences across the countries.

H3c) Separated people will have a much higher likelihood of postponing or abandoning than cohabiting people – independent of the institutional form of the partnership. We also assume that separated people will have lower chances of realisation than single ones.

We agree with those views which assume that the fertility decision-making process is set in a specific social context, and is carried out by people possessing different resources and who have diverse values and attitudes (cf. Westoff and Ryder 1977; Rindfuss et al. 1988; Heaton et al. 1999; Schoen et al. 1999; Noack and Østby 2000; Berrington 2004; Testa and Toulemon 2006; Philipov 2009; Spéder and Kapitány 2009). For this reason, structural positions (social and economic status) and attitudes should be taken into account when analysing childbearing decisions, and also the realisation of intentions. Using a post-harmonisation data set always has its limitations, especially if comparable indicators of living conditions and attitudes are constructed. We can harmonise just three such variables – *level of education, economic activity, and religious denomination* –, and even then only in a very simple manner. However, we use them in our model, since they might contribute to our analysis as controlling factors and help us to reveal the effects of the specific demographic factors discussed earlier. With this very selective review of the literature of the three mentioned domains we do not aim to elaborate hypotheses and cannot assess the results. We note that if we had relevant and well designed variables we might gain better understandings of intention realisation.

*Additional
Controlled Factors:
Education, Activity,
and Religious
Denomination*

Research results concerning *education* are ambiguous. In studies analysing US data, education usually helps in understanding the relationship between intention and behaviour. For example, Heaton et al. (1999) found that better educated individuals are more prone to postpone their intentions. In the study, which used the two waves of the National Survey of Households and Families, education only played a significant and similar role amongst non-married women, either living alone or in cohabitation (Schoen et al. 1999). Explanation of the results followed an economic rationale: more highly educated women invest greater resources in building up human capital, and having a child therefore costs much more. The results of various European studies differ. Testa and Toulemon found that better educated French women are more likely to realise their fertility intentions; Noack and Østby on the other hand did not find any educational effect on having realistic fertility expectations in Norway (Noack and Østby 2000).

Education can mediate the effects of economic resources (“income effect”), and if no relevant ideational factors are present in the model, can also mediate effects of value orientations. A variety of lifestyles and cultural resources are linked to education⁹. It could be important to highlight that people with a higher level of education are generally more informed and knowledgeable, and we can assume that intended parenthood will be the most widespread among them. Last, the mentioned human capital aspect (“opportunity cost effect”) should not be neglected either.

Research on different economic activity or employment statuses is abundant. Concentrating on employment status, we should highlight the effects of being unemployed on the realisation of fertility intentions. Rindfuss et al. indicate that *male unemployment* hinders the realisation of fertility intentions. Adsera in Spain and Testa and Toulemon in France found the same pattern: unemployment is a barrier to realising childbearing intentions (Adsera 2005; Testa and Toulemon 2006). We also found that employed men are more likely to realise their fertility plans than unemployed men (Spéder and Kapitány 2009). This corresponds with the well known income-effect mechanism assumed at work among males (Ermisch 2002). We can also assume that a *woman’s* economic position can influence the realisation of fertility intentions in different ways (cf. Kreyenfeld 2001), but we cannot find strong empirical evidence for this.

We also agree with those who include overall *subjective variables* into the investigations, focusing on the *strength* of fertility intentions (cf. Heaton et al. 1999; Berrington 2004; Philipov 2009; Spéder and Kapitány 2009). All these studies point to the additional effects of subjective factors. Heaton et al. included several ideational variables, and general value orientations etc., in their analysis (Heaton et al. 1999). Some of their results are expected: strong leisure orientation inclines people to postpone, and agreement with statements arguing that mothers’ employment is harmful to children supports realisation; surprisingly, career-orientation, did not have a significant effect. Berrington showed that gender role attitudes, particularly more egalitarian ones, increased the chances of childless females in their 30’s conceiving a child (Berrington 2004). We revealed that in Hungary secular beliefs among women increase the likelihood of being an abandoner, and males’ bright “future outlook” (high overall satisfaction) contributed to being an intentional parent and not an abandoner (Spéder and Kapitány 2009).

Unfortunately, our post-harmonised comparative data set provides only very limited space for comparing ideational factors, and we can only use *religious denomination*. From a scarce literature on comparative analyses in Europe, Philipov and Berghammer’s (2007) findings present a mixed picture according to different fertility intentions and preferences. Multi-denominational countries showed contradictory evidence regarding preferences. In this analysis, however, our dependent variable is different: we focus on intentional outcomes.

⁹ Employment motivations also differ. For example, career dominates amongst those with a higher level of education whilst those with a lower level of education are more concerned with making ends meet.

3 Context, Data and Methods

In striving for a European comparison, we planned to include as many countries as possible in our study, but we only selected countries where longitudinal data sets are available and where the data sets include time specific fertility intention questions. We also wanted to have data sets from chronologically similar periods of time. Naturally it was also requisite that the questions could be harmonised. Here we outline developments in fertility since 1990 in the selected countries, and describe the situation in the last decade when the data used in our analysis was collected.

The Netherlands: The level of fertility is quite high and stable in the European context, though mothers give birth to their first child at a late age (Fokema et al. 2008). The Netherlands is a case where recuperation took place quite early in comparison to other West European countries (Lesthaeghe 2001), and is an example of increasing fertility after a longer period of decline. During the time of our data collection (the period between 2004 and 2007), the mean age of mother at the first childbirth increased by 0.2 years. The total fertility rate resides at a high European level, above 1.7. All of this indicates that the Netherlands represents a stable fertility regime.

Switzerland: Switzerland is characterised by low and very late fertility. Furthermore, the mean age of mothers at birth is continuously increasing. Around the beginning of the 1990's the mean age of mothers at childbirth was lower than in the Netherlands, but at the time of our inquiry (between 2004 and 2007) the mean age of mothers in Switzerland had surpassed that of the Netherlands, increasing during this period by 0.5 years. The TFR was around 1.45 at the time of the data collection.

Hungary: The Hungarian fertility transition started at the beginning of the 1990's. For seven years starting in 1991 the level of fertility (TFR) dropped from 1.84 to 1.29 in 1999, and since that time has fluctuated around 1.3. The mean age of mothers at first birth has increased continuously since the second half of the 1990's. The fertility transition in Central Eastern Europe is taking place at a greater pace than in Western Europe. During the investigated period (2001 to 2004) the mean age of mothers at first birth increased from 25.3 to 26.3. Naturally, if the postponement distortion was acknowledged in the calculation of the TFR then the adjusted fertility would be much higher than the actual one (Bongaarts and Feeney 1998).

Bulgaria: Bulgarian fertility followed the pattern of fertility transition seen in other former Communist countries. During the investigated period the transition process continued: the mean age at first birth increased by 0.8 years from 2002 to 2005. At the same time Bulgarian fertility showed a very slight increase having reached its nadir at the end of the 1990's (1997–1998) at a level slightly above 1.1. Between 2002 and 2005 it increased by 0.1. The transition in society in Bulgaria lagged somewhat compared to other Central European countries, and the economic and social crisis was somewhat deeper (Koytcheva and Philipov 2008).

*The National Context: Fertility Tendencies in the Netherlands, Switzerland, Hungary and Bulgaria, 2000–2007*¹⁰

¹⁰ We give more detailed accounts of the countries, pointing out some social and institutional differences in our parallel study (cf. Spéder and Kapitány 2010).

This very brief description of the four countries does not give a comprehensive account of differences in fertility at macro level, but that was not our intention. Rather, our aim has been to show that the individual and group behaviours are embedded in quite different fertility regime settings.

Figure 1
Mean Age of Mothers for All Births in Netherlands, Switzerland, Hungary and Bulgaria, 1998–2007

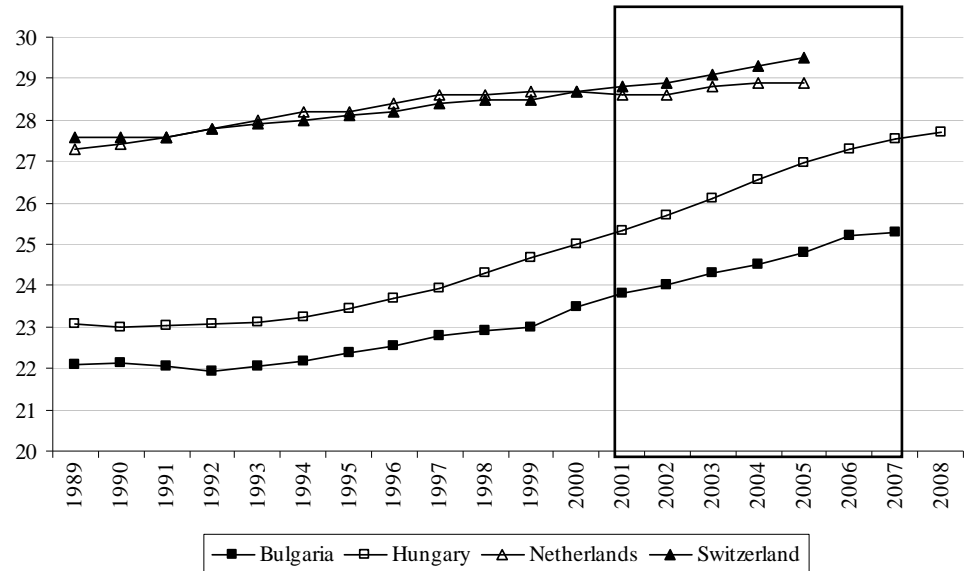
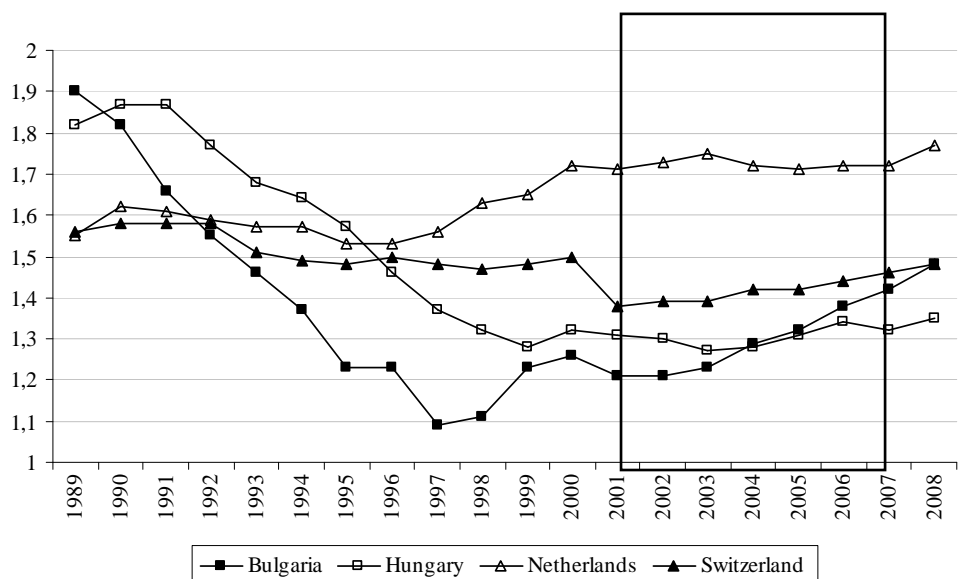


Figure 2
Total Fertility Rate in the Netherlands, Switzerland Bulgaria and Hungary, 1989–2007



We use four quite different but nationally representative large-scale longitudinal panel surveys. The Hungarian and the Dutch surveys resemble each other: they focus on changes in demographic behaviour¹¹. We use the first two waves of the Netherlands Kinship Panel Survey (Dykstra et al. 2007), and the Hungarian Turning Points of the Life Course Survey (Kapitány ed. 2003). The time-frame of the follow-up was three years in both cases. In the case of Switzerland, the Swiss Household Panel survey's follow-up was organised annually; therefore we used the 6th and the 9th waves for our analysis (Voorpostel et al. 2009). In the Bulgarian Social Capital survey more than 10,000 women and men aged 18–35 were interviewed between 2002 and 2005¹². Selected features of the surveys are noted in the appendix (Table A1). The first investigated waves of the surveys were between 2002 and 2004, and the subsequent investigated waves took place between 2005 and 2007. Although the questionnaire programmes of the four surveys are rather different, in our opinion fertility intention questions are suitable for comparison. All four surveys contain questions on time-related fertility intentions (though in somewhat different formats), and provide an accurate account of births between the waves.

Since we utilised four independent surveys, it is not surprising that we encountered many difficulties harmonising them. However, we believed that we could construct a dependent (intention-outcome) variable suitable for comparison, and a comparable independent variable covering basic influencing factors of intention-behaviour realisation. Obviously, we had to make some compromises: the two year time-frame of the Swiss and Bulgarian surveys is the reason for having the two year time-frame for the intention-question in this comparative study. Furthermore, women who were pregnant at the time of the interview were handled differently in all three countries¹³. Our solution, adding second wave pregnant to intentional parents, was satisfactory for our purposes.

For the sake of our analysis we selected a subsample of the surveys. Only those persons who intended to have a(nother) child within two years and who were subsequently interviewed were selected into the subsample. In short, we needed to fulfil two criteria: 1) whether a respondent intended to have a child, 2) whether a child was born and if the intention subsequently changed or was maintained.

We applied *multinomial regression* techniques in our analysis. This method was used by Heaton et al. (1999) and Berrington (2004) to study the relationship between fertility intentions and the behaviour of childless people. We also utilised this approach in our Hungarian study (Spéder and Kapitány 2009). Since our research question is aimed at exploring and understanding failures of realising positive intentions, we used the group of intentional parents as the *reference group*.

The basic distribution of our dependent variable, the fertility intention-outcome variable, reveals huge differences among the countries. The rate of successful realisation is quite high in the Netherlands: three out of four

¹¹ Both surveys will be incorporated in the Generations and Gender Surveys (GGS) after harmonisation.

¹² The Bulgarian survey was carried out as part of the project “The Impact of Social Capital and Coping Strategies on Reproductive and Marital Behavior”, organised by the MPDIR Rostock and the Bulgarian Academy of Science (See Bühler and Philipov 2005).

¹³ The exact wordings of the questions are presented in the appendix, Table A2.

people realise their two-year-intention within three years. The ratio of realisation only slightly surpasses the level of 50 per cent in Switzerland. In Hungary and Bulgaria, two fifths of time-related fertility intentions are realised; the ratio of those successfully realising their intentions therefore seems to be quite low in Hungary and Bulgaria. In this study we focus on *similarities and dissimilarities with regard to determining factors*¹⁴.

Table 2
*The Distribution of Fertility Intention and Outcomes Variable
in Four Countries*

Fertility outcomes	Countries			
	Netherlands	Switzerland	Hungary	Bulgaria
Intentional parents	75	55	40	38
Postponers	15	(27)	42	44
Abandoners	11	(18)	18	18

There is no need to describe all of the independent variables in detail as they are self-evident from the discussion in the preceding chapter and from the descriptive statistics in the Appendix (Table A3). We only need to point out that *age (number of years)*, and also the control variable *education (number of completed years)* are continuous variables. *Parity* separates the people with intentions into three groups: childless, with one child, and those with two or more children. For the present study *partnership status* takes into consideration the presence and form, but not the length of partnership: people are clustered into (1) living alone¹⁵, (2) cohabiting, and (3) married. Cases where respondents are in a partnership for the first wave and then subsequently separate afterwards are also considered a separate variable. The control variable *job* distinguishes between having a job or not at the first wave. For religious affiliation, we use Catholics (except in Bulgaria where we use Orthodox) as the reference group, and we also include Calvinists, other denominations and non-religious people¹⁶. Since the low sample size does not allow us to separately analyse by gender, it serves as a control variable in our models.

4 Results

Age is a clear-cut predictor of the investigated relationships between intention and behavioural outcomes, since in seven out of the eight studied relations it has a significant effect (*cf. Table 2, first line*). Those who fail to realise their intentions within three years - regardless of changes in their intentions - are older than those who succeed. In other words: the younger the respondent the easier s/he can realise positive fertility intentions. This

¹⁴ The Spéder and Kapitány 2010 study is devoted to describing and explaining country-specific differences in the rate of realisation.

¹⁵ It should be mentioned that many of them have longstanding partnerships, but they do not permanently cohabit.

¹⁶ All four studied countries are religiously mixed, and differ in the ratio of the different denominations. In Hungary Roman Catholics form the majority, and Protestants (Calvinists and Lutherans) the minority. In Switzerland, Protestants and Roman Catholics are equally represented. The Netherlands can be seen as a secular country, although Roman Catholics and Protestants are also present. In Bulgaria the majority of the population belongs to the Greek Catholic (orthodox) church.

result *clearly supports the “biological clock” approach* as assumed in H1a and H1b hypotheses, since both postponers and abandoners are older than intentional parents. This unambiguous result, at least in the relation parents vs. postponers (H1a), rejects the “social age norm” approach, since according to that idea people approaching a dead-line of some sort (biological or social) are more likely to realise than to postpone their intentions. The contrary is actually the case: postponers are older than intentional parents. Only in the Netherlands do we not find age-differences between posponers and intentional parents.

Abandoners are clearly older than postponers in Hungary and the Netherlands, and slightly so in Bulgaria. This result supports our H1c assumption, and fits the argument that abandonment in the three mentioned countries is a result of “perpetual postponement” (Berrington). Nevertheless, the Swiss case does not support this concept.

The effect of the *number of children (Parity)* appears to be significant in most cases (14 out of 16 coefficients), and the remaining two coefficients correspond with the direction of the others, although the effect is statistically insignificant. Our assumptions seems to be confirmed regarding most of the categories, however there are some exceptions. When looking at the relationship between intentional parents and postponers, we see very clearly that *childless people (parity 0) have a higher risk of becoming postponers than successfully realising their intentions*: the H2a hypothesis is supported. It confirms our assumption that conflicting life goals prevent realisation – often resulting in childlessness (Rindfuss, et al. 1988; Barber 2001) – or supports the idea that having a first child somewhat inhibits the realisation of alternative life goals. Nonetheless, one exception seems to exist, but only in relation to parity 0 and parity 1: in Bulgaria people with one child are more likely to become postponers than childless people. However, comparing childless and two or more parities, the general correlation can also be found in Bulgaria: childless people are more prone to postpone than people with two or more children. The Bulgarian case needs further investigation, but one explanation seems plausible: higher likelihood of realisation at parity 0 can also be a sign of increasing prevalence of single child families. This could be a sign of the diffusion of the single child family model found in Russia and Ukraine (Adveev 2003; Perelli-Harris 2005; Philipov 2009).

Analysing our second parity-specific assumption (H2b) and studying whether people with one child (parity 1) have the highest risk of becoming intentional parents, we get controversial results. Only the relationship between intentional parents and abandoners seems to support this assumption, since those with higher (2+) parity are more likely to abandon their short-term fertility intentions and reduce their family size intentions. In contrast, in terms of the relation between postponement and successful realisation, the coefficient of being non-realiser at parity 2+ is not significantly higher than at parity 1, so this does not support the mentioned H2b hypothesis. Therefore the idea of having two children as the most successful project is only partially supported by our analysis focusing on how short-term intentions are realised.

If we compare those who abandon their childbearing intentions to those who realise them, it seems that people in Bulgaria, Hungary and in the Netherlands with one (or more) child(ren) are significantly more likely to

abandon their intentions than childless people. This is in accordance with our third parity-specific (H2c) hypothesis. Conversely, in Switzerland the relation is reversed: childless people (Parity 0) are more likely to abandon their intentions than people with children (Parity 1 and Parity 2+¹⁷). This result calls for attention to be paid to differences between fertility regimes in Europe. In two Eastern and one Western European countries people abandon their childbearing intentions if they have more children, or at least one. In this respect Swiss behaviour seems to be an exception: the higher risk of being an abandoner among parity 0 and in relation to higher parities points to – and is an indicator of – high childlessness in Switzerland (Dorbritz and Ruckdeschel 2005).

To summarise our parity-specific analysis, we have to emphasise that on the one hand realisation of positive short-term childbearing intentions differs according to the parity-specific context. This is valid in several countries. On the other hand, we should also highlight that in addition to general correlations we can also identify country-specific behavioural elements in Switzerland and Bulgaria.

Partnership status exhibits a clear influence if comparing single non-cohabitants with married and cohabitants. Furthermore, partnership in all four countries is a prerequisite to the realisation of fertility intentions (Schoen et al. 1999; Philipov 2009). However, we cannot find clear differences between realisation of fertility intentions and the type of partnership¹⁸. (One might also question whether asking people living alone to state their childbearing intentions is actually relevant, but we should also consider that many of them may be dating and/or in LAT partnerships).

Changes in *partnership status* clearly influence the realisation process: as expected, separation hinders the realisation of fertility intentions. In three out of the four studied countries people who dissolve their partnership abandon their short-term fertility intentions. The chances of becoming an abandoner are particularly high in Switzerland. The exception is the Netherlands, where there is no difference between postponers and abandoners. We should also highlight that this result clearly supports the assumption that life-course changes strongly influence the relationship between intention and behaviour (Ajzen 1988). However, they may not weaken the relation, but probably force changes in intentions, at least in short-term. This could again have long-term consequences, namely downsizing long-term family size intentions (cf. Liefbroer 2009).

The *control variables* have significant effects in all of the countries studies. However, *the directions of the effects are often contradictory and vary from country to country*. This is perhaps due to the fact that social forces play different roles in the country-specific cultural context and/or institutional settings, and therefore have varying impacts on intention realisation.

Lastly, we cannot rule out the possibility that the simplicity of the three variables resulting from our harmonisation of surveys led to the contradictory effects. For example, in three of the four countries *education*

¹⁷ Although in Parity 2+ the odds are clearly lower in relation to parity 0, but not significant.

¹⁸ Here it should be noted, that for Hungary, where it was possible to run separate model for women and men, we find significant differences among women. Considering negative intentions cohabitants had a higher chance to realise their negative fertility intentions than married people (Spéder and Kapitány, 2009).

clearly plays a role in abandonment in relation to intentional parents. With increasing level of education the likelihood of being an abandoner decreases. But coefficients comparing “successful realiser” and “postponer” show contradictory results. In the two Western countries there is no educational difference between intentional parents and postponers. In the two Eastern countries the results are the opposite. In Bulgaria the respondents with higher education are inclined to postpone. In Hungary, by contrast, individuals with a higher level of education are more inclined to realise their short-term intentions. The rather generous family support in Hungary (six months full pay followed by 18 months at 75 per cent of pay) may counterbalance the opportunity costs resulting from staying at home after birth. The prevalence of this 24-month long parental leave could explain why higher educated, formerly employed women are more likely to realise fertility intentions in Hungary. On the contrary, in Bulgaria opportunity costs might make respondents postpone realisation of their short-term fertility intentions.

The same conclusion can be made when considering the impact of religious denominations, as an example of ideational indicators on intention realisation. The effects of different denominations are selective and contradictory. In Hungary and the Netherlands non-religious individuals seem to be more likely to postpone than to realise their intentions. In the Netherlands, Roman Catholics have a significantly higher chance than those of any other denomination of realising their fertility intentions. In Switzerland there are no differences between Roman Catholics, Protestants, and non-religious people: only those belonging to “other religion” have a higher likelihood of postponing their intentions. In Bulgaria, surprisingly, non-religious people have a lower likelihood of becoming abandoners than intentional parents. These results demonstrate the wisdom of including ideational factors, but simultaneously indicate the need for further research on religion and religious denominations in particular, and other ideational factors in general.

Employment status may influence intention realisation, and according to the literature gender differences related to the labour market are very strong. However, as mentioned earlier, separated models according to gender could not be built into this study due to low sample size. In addition, our “employment” variable is quite rough-and-ready. The “no-job” category includes many different statuses, especially for women; these include: unemployed, on parental leave, housewife, student, other inactive dependent, etc. We may need more refined employment status categories.

Table 3
Multinomial Regression Predicting Patterns of Realisation of Time-Dependent Intentions
(Odds Ratios Predicting the Risk Being Intentional Parent, Postponer or Abandoner)*

	Postponers				Abandoners ^a			
	Netherlands	Switzerland	Hungary	Bulgaria	Netherlands	Switzerland	Hungary	Bulgaria
Age	.99	1.09***	1.12***	1.04***	1.30***	1.08**	1.32***	1.17***
Female	1	1	1	1	1	1	1	1
Male	1.55	1.04	.88	.89	3.61***	.79	.49***	1.34**
Parity0	1	1	1	1	1	1	1	1
Parity1	.34***	.14***	.65**	1.46***	1.61	.24***	3.48***	5.68***
Parity2+	.46	.25***	.38***	.52**	2.84**	.58	5.20***	15.93***
Married at wave 1	1	1	1	1	1	1	1	1
Cohab. at wave I	1.44	.60	1.16	1.12	1.17	.30**	.81	.491***
Alone at wave I	2.36	4.27***	4.20	6.85***	2.69*	6.99***	3.67***	3.02***
No lost partner	1	1	1	1	1	1	1	1
'Lost' partner	10.43***	3.77	4.15***	2.38***	9.46**	54.62***	6.23***	5.48***
Education	.95	.99	.95*	1.04*	.83**	.96	.85***	.94***
No job	1	1	1	1	1	1	1	1
Job	.64	.83	1.16	.94	1.39	1.71	1.15	1.05
Catholic**	1	1	1	1	1	1	1	1
Calvinist	3.54*	1.37	1.23	1	.99	.73	.93	-
Other religion	5.76**	4.07***	.88	.94	.66	.86	.44**	1.01
No religion	2.63*	1.37	1.47	1.01	.99	1.93	1.04	.41***
Chi-Square:	119	122	432	745				
Df:	24	24	24	22				
Nagelkerke R ²	0.28	0.32	0.38	0.33				
N:	458	408	1069	2196				

*The reference category: "intentional parents", those successfully realised their two years intentions within three years.

** In case of Bulgaria the reference category: 'Orthodox'.

5 Concluding Remarks

We aimed to compare factors influencing the likelihood of whether short-term fertility intentions are realised. We focused on the question of whether the same factors (the same forces) lead to non-realisation (postponement or abandonment) of fertility intentions. Since we used data which were obtained from research focusing on different research questions, after the harmonisation was completed only a limited number of comparable variables (factors) could be utilised. However, based on these limited number of variables, we are able to identify *very strong and mostly similar* kind of influences of social-demographic variables such as *age, parity and partnership* in all of the countries studied. This shows us that different social and demographic positions/statuses, such as young age, parity 1, stable partnership, establish a more positive milieu for intention-realisation. On the other hand, other demographic positions such as older ages, and parity 0 or higher, hinder the realisation of intended behaviour. Parallel to social status in social science, demographic positions seems to be key factors in determining fertility behaviour.

At the same time, we also found interesting and important *country-specific differences*. The multivariate analyses revealed that intention-behaviour relations differ at some parities. Unintended childlessness is demonstrated in Switzerland, and the unintended increase of one-child families is identified in Bulgaria.

The clear influence of separation draws our attention to the need for deeper and more extensive analysis of intention and realisation within the life-course of individuals (cf. Liefbroer 2009; Iacovue and Traves 2010). Some types of life-course events may turn out to be as significant as partnership break-up when trying to understand failure or success in realising intentions.

The investigation of structural (socio-economic) and ideational factors was not that successful. Post-harmonisation of the data sets enabled us to include only limited number of harmonised variables, and we could only construct quite rough variables. Consequently it is not surprising that we can only demonstrate slight influences of these kinds of factors. However we do demonstrate that structural and ideational factors influence the realisation of fertility intentions (cf. Spéder and Kapitány 2009). Further research would reveal the extent to which social positions (education, employment status, occupational status) on the one hand, and general ideational factors (perception of life, perceived anomie or partnership quality) on the other might contribute to the success and failure of the realisation of fertility intentions.

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Appendix

Table A1
The Main Characteristics of the Four Surveys Used

	Netherlands	Switzerland	Hungary	Bulgaria
Name of the survey	'Netherlands Kinship Panel Survey' (Netherlands GGS survey)	Schweitzer Household-Panel (SHPSI.-SHPSII.)	'Turning Points of the Life Course' (Hungarian GGS survey)	Social Capital Survey
Fieldwork first wave	2003/4 (1st wave)	2004 (6th wave)	2001/2 (1st wave)	2002
Fieldwork second wave	2006/7 (2nd wave)	2007 (9th wave)	2004/5 (2 nd wave)	2005
Non-adjusted panel attrition (inclusive deaths, emigration etc.) between the two waves	N/A	N/A	17%	25%
Longitudinal sample size (Unweighted N)	6326	N/A	13540	7481
The number of respondents intending to have a(nother) child within two years (subsample, unweighted - N)	458	385	1056	2196
Weighting variables	Bweight0	WP07L1S	S2_suly	No
Weighted subsample	493	409	1069	No
Description of data, methods, field-work	Dykstra at al. 2007	Voorpostel at al. 2007	Kapitány, 2003. 2003 (in Hungarian)	Bühler and Philipov, 2005
Home page of the surveys	www.nkps.nl	www.swisspanel.ch	www.demografia.hu	--

Table A2
The Formulation of the Fertility Intention Questions in the Different Questionnaire Programmes

NKPS (Netherlands)	SHPS (Switzerland)	HGGS (Hungary)	SCS (Bulgaria)
Q.: Do you think you'll have {more} children in the future? A.: Yes/no/don't know	Q.: Do you intend to have a child in the next 24 months? A.: Yes/no	Q.: Would like to have additional child(ren)? A.: Yes /pregnant-partner pregnant /no, does not want/cannot have more children /don't know	Q.: Do you intend to have (another) child during the next two years? A.: Definitely yes/ Probably yes/ Probably No/definitely no
IF YES Q.: Within how many years' time would you like to have your {first/next} child? <u>Int.</u> If pregnant / partner pregnant= 0	<u>Interviewer:</u> Pregnant women: not counting the child you are currently pregnant with = another child in addition to the one you are expecting?	IF YES Q.: At what age would you like to have your next child?	<u>Interviewer:</u> if the respondent/partner is pregnant add: besides the one you are expecting?

Table A3
Mean and Standard Deviation of Independent Variables

	Netherlands		Switzerland		Hungary		Bulgaria	
	Means	Std. Dev.	Means	Std. Dev.	Means	Std. Dev.	Means	Std. Dev.
Age	31.4	4.6	33.0	5.3	29.2	4.9	27.4	5.6
Sex (0-male; 1 female)	0.67	0.47	0.48	0.50	0.49	0.5	0.48	0.5
Parity1	0.41	0.49	0.37	0.48	0.30	0.46	0.33	0.47
Parity2+	0.14	0.34	0.18	0.39	0.17	0.38	0.25	0.43
Cohabiting at w1	0.31	0.46	0.19	0.39	0.19	0.40	0.13	0.34
Alone at w1	0.07	0.26	0.13	0.34	0.27	0.44	0.26	0.48
Separated from partner	0.02	0.14	0.02	0.15	0.04	0.19	0.03	0.17
Job	0.85	0.36	0.85	0.35	0.76	0.43	0.79	0.41
Education (continuous. classes)	14.6	2.1	13.2	2.7	11.7	2.5	11.6	2.85
Calvinist	0.18	0.38	0.34	0.47	0.15	0.35	-	-
Other religious denomination	0.06	0.23	0.08	0.27	0.11	0.31	0.14	0.35
Non-religious	0.57	0.50	0.13	0.34	0.21	0.40	0.09	0.28

LIST OF WORKING PAPERS

1. László Hablicsek, Pál Péter Tóth: The Role of International Migration in Maintaining the Population Size of Hungary between 2000–2050
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