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Realization of fertility intentions by different time frames

Abstract

This paper focuses on the realization of positive fertility intentions with different time frames. The analyses are based on a unique combination of survey data and information from Norwegian administrative registers on childbearing in the years following the complete selected sample. Guided by the theoretical and empirical framework of the Theory of Planned Behavior (TPB), the results suggest that a fertility intention's time frame is relevant for childbearing behaviour, but the patterns are somewhat different for respondents who were childless at the time of the interview compared to those who already had children. Overall, childless were less likely to realize their fertility intentions than parents. Following the TPB, childless may underestimate the difficulty of acting on their intentions and therefore have more difficulty realizing their intentions, versus parents who take into account their ability to manage another child. The results also show that childless with an immediate fertility intention are more likely to succeed than those with a longer-term intention. Likewise, parents with an immediate fertility intention are more likely to realize their intention during the two first years after the interview, but after four years the childbearing rate was higher among those with longer-term fertility intentions.

Keywords

Time frame of fertility intentions, realization of fertility intentions, Theory of Planned Behavior, Norway, GGS, register data

Introduction

Research on family size ideals and childbearing behaviour has detected a so-called “fertility gap” in developed countries. This means that country-specific norms of the ideal number of children usually exceed the average number of children in completed families (Goldstein, Lutz, & Testa, 2003; Harknett & Hartnett 2014). In line with this, research on fertility intentions at the micro level has shown that positive fertility intentions are not always realized and tend to overestimate subsequent childbearing, while negative fertility intentions are a good predictor for the absence of births (for an overview see, for example, Régnier-Loilier & Vignoli, 2011). From both a welfare-state perspective, which is concerned about low fertility, and the perspective of individual wellbeing, an important question is why positive fertility intentions are not realized. In this study we contribute with insights into how the time frame of a fertility intention influences the realization of such an intention. In order to understand trends of decreasing fertility and postponed childbearing, we argue that the intended timing of childbearing is important. Fertility intentions are often used as predictors of childbearing behaviour, and our study provides a valuable contribution by demonstrating how the time frame of fertility intentions is important for the realization of intentions and should thus be considered when using fertility intentions as a predictor of childbearing behaviour.

We use the Theory of Planned Behavior (TPB), which is a reasoned action approach to explaining human behaviour, as the theoretical framework that guides our analysis. According to TPB a longer time interval between forming an intention and performing behaviour increases the likelihood that other factors will intervene. This might prevent people from acting on their intentions, and the intentions themselves can change as people understand the difficulty of realizing them or, over the longer term, respond to changes in their lives (Fishbein & Ajzen, 2010). The implication is that individuals who express their goal of realizing their fertility intentions in the immediate future should be more likely to have a(nother) child. We therefore compare the childbearing behaviour of individuals with immediate fertility intentions (*want a child now*) with the behaviour of individuals holding longer-term (but still relatively short-term) fertility intentions (*intend to have a child within the next three years*).

The fertility intentions formed by individuals before they enter parenthood and parents are likely to differ in the extent to which they consider the impediments to having and taking care of a child (Miller & Pasta, 1995a). The way in which having children influences the realization of fertility intentions according to defined time frames is another key aspect of our study. Our study is based on unique data from Norway, combining data from the Norwegian Generations and Gender Survey (GGS) from 2007

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5 with data from administrative registers on childbearing histories in the four subsequent years. The
6 advantage of this approach is that it allowed us to follow the complete initial sample, but it should be
7 noted that we were unable to account for other life events that may have changed after the interview.
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10 11 12 **Background**

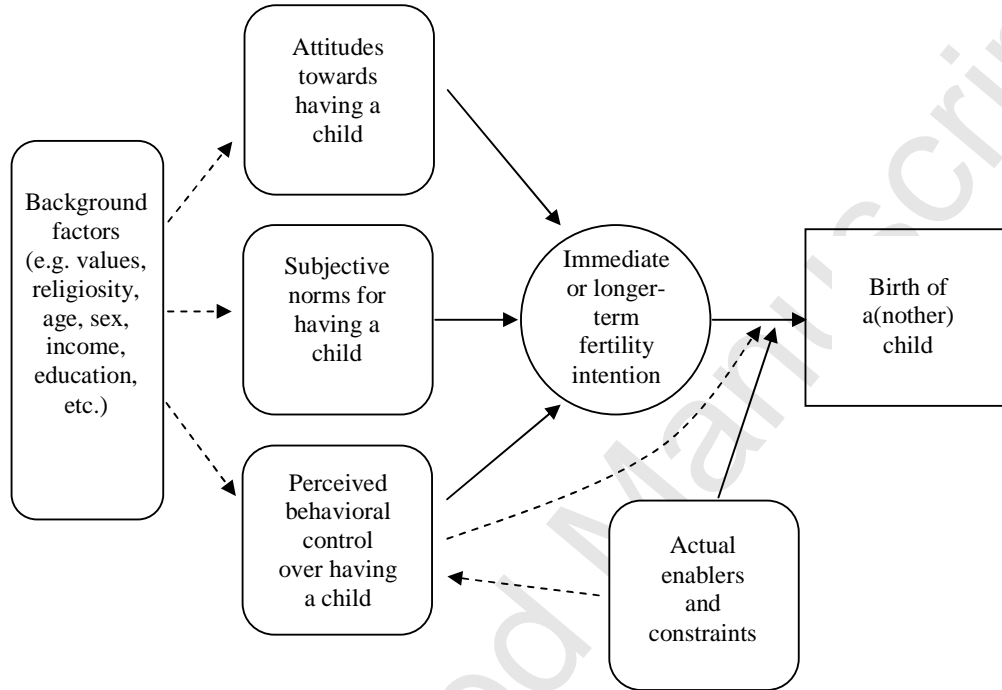
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14 In recent years, several studies have referred to the TPB model in research on fertility intentions or the
15 realization of such intentions and have implemented parts of the framework in their empirical analyses
16 (Billari, Philipov, & Testa, 2009; Buhr & Kuhnt, 2012; Cavalli & Klobas, 2013; Dommermuth,
17 Klobas, & Lappegård, 2011; Iacovou & Tavaré, 2011; Kapitány & Spéder, 2012; Klobas, 2010;
18 Klobas and Ajzen, 2015; Kuhnt & Trappe, 2013; Liefbroer, 2005; Mencarini, Vignoli, & Gottard, in
19 press; Régnier-Loilier & Vignoli, 2011; Spéder & Kapitány, 2009; Testa & Toulemon, 2006; Testa,
20 Cavalli, & Rosina, 2014). TPB is a social-psychological model used for explaining or predicting
21 behaviour (Ajzen, 1991). Within the model, performing a behaviour or achieving a goal is seen as a
22 reasoned action, as behaviour is based directly on an intention which itself is formed through a process
23 of reasoning (see Figure 1). It is not necessary that the reasons for intending to engage in the
24 behaviour or achieve the goal are, at the same time, rational (Fishbein & Ajzen, 2010). Intention
25 formation is based on a set of beliefs that form three determinants: *attitudes*, *subjective norms*, and
26 *perceived behavioural control*. Individual characteristics, such as education or values, may shape these
27 three factors. In addition, realizing intentions may be affected by *actual enablers and constraints* (e.g.
28 low-income status) and may interact with perceived behavioural control (e.g. how the income situation
29 is perceived in relation to goal attainment). Some characteristics may act as background factors
30 affecting the formation of beliefs and the determinants of intentions. Characteristics might also act as
31 actual controls that moderate the transformation of intentions into behaviours (e.g. age can affect
32 attitudes as a background variable, but it also acts as a control variable as fertility declines with age;
33 Cavalli & Klobas, 2013). Furthermore, TPB provides guidance on the definition of compatible
34 intentions as a concrete approach for predicting a behaviour or outcome; e.g. if the outcome to be
35 predicted is the birth of a child, then the appropriate intention is the intention to have a child (i.e.
36 “positive” fertility intention).
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52 In a cross-national comparison based on data from the GGS, Klobas (2010), Ajzen and Klobas (2013),
53 and Klobas and Ajzen (2015) confirm that attitudes, subjective norms, and perceived behavioural
54 control have differential effects on intentions to have a child during the next three years. Parity level
55 differences in Bulgaria are also observed by Billari, Philipov and Testa (2009), while
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Dommermuth, Klobas, and Lappégard (2011) find that the three factors are associated with different time frames of positive fertility intentions in Norway.

Figure 1

A model of fertility decision-making based on the Theory of Planned Behavior



Note: Adapted from Ajzen and Klobas (2013), own illustration.

Other studies have examined the degree to which different fertility intentions were realized, and even though the level of realization varies across countries, there is a general agreement in the literature that fertility intentions are relevant predictors of fertility (see, for example, Kuhnt & Trappe, 2013; Schoen, Astone, Kim, & Nathanson, 1999; Testa & Toulemon, 2006). Particularly negative fertility intentions (*'I don't intend to have a(nother) child'*) are usually realized (Noack & Østby, 2000). The consistency between positive fertility intentions (*'I intend to have a(nother) child'*) and subsequent behaviour is less strong, but still important. Positive fertility intentions are persistent predictors of fertility, even after controlling for background and life course variables in different institutional settings (Kapitány & Spéder, 2012; Kuhnt & Trappe, 2013; Mencarini et al., in press; Miller & Pasta, 1995b; Noack & Østby, 2000; Régnier-Loilier & Vignoli, 2011; Schoen et al., 1999; Spéder & Kapitány, 2009, 2014; Testa & Toulemon, 2006).

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5 Barber (2001) includes the TPB factor *attitudes* and finds that positive attitudes towards children and
6 childbearing increase the rate of marital childbearing in the United States. However, fertility intentions
7 are not included as a distinct measure in Barber's (2001) study. Kuhnt and Trappe (2013) include a
8 measurement for fertility intentions as well as the TPB factor *subjective norms*, referred to as 'social
9 pressure' in their study. They find that the perception of social pressure, defined as families and
10 friends expressing that the respondent should have a(nother) child, increases the likelihood for
11 childbearing among those with a positive fertility intention. This is inconsistent with TPB, which
12 assumes that the effect of social pressure should be channelled through the fertility intention rather
13 than having its own direct effect on childbearing. Based on panel data from Italy, Mencarini, Vignoli
14 and Gottard (in press) include fertility intentions, all three TPB factors, and different control variables
15 in a model on fertility behaviour. In line with the TPB model, they do not find a direct effect of the
16 TPB factors on fertility behaviour, while intention has a strong impact on subsequent childbearing.
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25 Fewer studies address the impact of specific time frames of fertility intentions on subsequent
26 childbearing. Based on data from the United States, Miller and Pasta (1995b) include seven different
27 time frames of fertility intentions (from within a year up to over five years). By including other
28 measures of fertility intentions, namely child-number intentions and childbearing desires, Miller and
29 Pasta (1995b) compare how different measures of fertility intentions are associated with actual
30 childbearing behaviour. Their findings suggest that the time frame of fertility intentions is the
31 strongest predictor for childless individuals and its importance somewhat diminishes once a first child
32 has arrived.
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39 Schoen, Astone, Kim, and Nathanson (1999) use a similar approach, but only distinguish between
40 fertility intentions within four years and beyond four years. Their findings point to a higher realization
41 rate for those with a shorter time frame of their intention, although the time frame's influence is
42 relatively weak compared to the certainty of the fertility intention. Likewise, Testa and Toulemon
43 (2006) discover that measurements of the certainty of fertility intentions are more strongly associated
44 with subsequent childbearing than different time frames of fertility intentions. The three last studies
45 also include negative intentions and their non-realization in their analysis. People with positive and
46 negative fertility intentions represent two rather different groups and including them in the same
47 model might bias the results.
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55 Focusing on positive fertility intentions, previous studies suggest that childless realize their intentions
56 to a lesser degree than parents (Kapitány & Spéder, 2012; Kuhnt & Trappe, 2013; Noack & Østby,
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5 2000; Quesnel-Vallée & Morgan, 2003; Régnier-Loilier & Vignoli, 2011; Testa and Toulemon, 2006).
6 Individuals with a partner are more likely to realize positive fertility intentions than singles (Spéder
7 and Kapitány, 2009, 2014), and union stability has a similar positive effect (Kapitány & Spéder, 2012;
8 Kuhnt & Trappe, 2013; Mencarini, et al., in press). It also appears that age has a negative influence on
9 the likelihood of realizing fertility intentions (Quesnel-Vallée & Morgan, 2003; Testa & Toulemon,
10 2006). Higher socio-economic resources, education, and job security are also found to increase the
11 likelihood of realizing positive fertility intentions (Testa & Toulemon, 2006; Régnier-Loilier and
12 Vignoli, 2011).
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19 Except for one Norwegian study that combines survey and register data (Noack & Østby, 2000), most
20 studies are based on several waves of a survey. The fertility intention measurement is retrieved from
21 the first survey wave and information on childbearing behaviour from later waves. Often, such studies
22 only indicate whether or not a(nother) child was born after the first wave, and the lag between the
23 waves varies between two to five years. These studies have not focused on whether results are
24 sensitive to the length of the observed period or how childbearing develops across the observed period.
25 Furthermore, no account has been taken of different measures for the time frame of fertility intentions.
26 In order to understand the gap between people's fertility intentions and childbearing behaviour, it is
27 necessary to know about the relevance of the time frame of fertility on the realization of the intentions
28 over time. In this paper, we are able to investigate this in more detail and ask how different time
29 frames of fertility intentions shape the timing of entering parenthood and of subsequent childbearing.
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38 Although previous studies underline the differences between childless and parents in realizing fertility
39 intentions, both groups are usually included in the same analytical model. Small sample size may be
40 the pragmatic reason for including both groups in the same model, and in particular the problem of
41 attrition in higher-order waves may be a cause of small sample sizes. As childbearing behaviour has
42 been retrieved from the administrative register for the entire initial sample, a comparatively large
43 sample allows us to study childless and parents in separate models. We can therefore study if the
44 impact of the independent variables on the realization of fertility intentions differs between childless
45 and parents, a possibility given that the impact of the independent variables on the formation of
46 fertility intentions differs between childless and parents (Billari et al., 2009; Dommermuth et al., 2011;
47 Klobas, 2010). In addition, separate models allow us to define specific items for childless and parents
48 (e.g. partnership status and income groups) and include the number of children and the age of the
49 youngest child in the model for parents.
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Data and methods

We use data from the Norwegian GGS 2007 supplemented with the subsequent birth histories of all respondents extracted from the Population Register. The Norwegian GGS is a nationally representative survey based on telephone interviews, with a response rate of 60% (N = 14,891) (Lappegård & Veenstra 2010). Information from administrative registers is linked by a unique ID number, and complete birth histories until 2011 have been added to the dataset. The dependent variable for this study is calculated using the date of the first birth that occurs within four years after the interview. This can be the respondent's first child or another sibling to previous children. The GGS asked about relatively short term intentions, i.e. the respondents were asked in the first wave whether they wanted to have a(nother) child "now" and, in addition, whether they intended to have a(nother) child within the next three years. The three year time frame was implemented because the GGS was designed as a panel study and a second wave was supposed to take place three years after the first one (Vikat et al. 2007). We chose to include all births up to four years after the interview as the question of within three years may be considered as "three years up to conception" or "three years up to actively seeking to become pregnant" (adding a 3-month delay plus 9 months of pregnancy).

The sample is first defined by extracting women and men of childbearing age (18–40 years) at the time of interview, including only respondents who were not pregnant (themselves or their female partner) and who confirmed they were physically able to have children. Table 1 provides an overview of fertility intentions and actual births among this group within four years of interview. Of the respondents holding a negative fertility intention, only 8% had a(nother) child, while the majority (57%) of those holding a positive fertility intention had a(nother) child. Our analysis sample includes only those respondents holding a positive fertility intention, and we investigate the association between the time frame of their positive fertility intentions and childbearing.

Table 1

Respondents with a(nother) childbirth within four years after the interview by fertility intention*

		Birth within four years of the interview		
		<i>Yes</i>	<i>No</i>	<i>n</i>
Intention to have a(nother) child within three years	<i>Yes</i>	57%	43%	1,448
	<i>No</i>	8%	92%	3,414
	<i>Don't know</i>	26%	74%	378
	<i>All</i>	21%	79%	4,940

* Respondents aged 18-40 years, physically able to have children but not pregnant at the time of the interview.

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5 Of the 1,448 respondents with a positive fertility intention within the next three years, 146 cases are
6 excluded due to missing values of key indicators from the survey (142 cases) or due to emigration out
7 of Norway after the interview (4 cases). The selected sample therefore includes 1,302 respondents (see
8 Table 2). The incident and the date of a(nother) birth within this time frame serves as the dependent
9 variable in the analyses.
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14 Our main independent variable measures the time frame of the fertility intention. In addition to
15 holding a longer-term fertility intention (*'want a(nother) within the next three years'*), almost half of
16 the respondents in our sample also answered *'yes'* to the question *'Do you want a(nother) child now?'*
17 and thereby expressed an immediate fertility intention (see Table 2). According to the TPB, a shorter
18 time frame of an intention should be associated with a higher likelihood of realizing the relevant
19 behaviour, provided the intention has taken appropriate account of impediments to the behaviour,
20 because it is less likely that other events will intervene to prevent realization. Therefore, one could
21 expect that parents who hold immediate intentions would have a higher realization rate (e.g. higher
22 proportion with actual births) than parents with longer-term intentions. Parents may also be more
23 likely than childless to realize their fertility intentions because their circumstances are more amenable
24 (on average) to have another baby. A similar pattern might be expected for childless, although with a
25 lower realization rate given their lack of experience with childbirth and childrearing. Previous research
26 on the formation of fertility intentions supports this assumption: The birth of a first child, which marks
27 the transition to parenthood, is a qualitatively different step in the life course than the transition to a
28 second child or a higher parities (Miller, 2007), and childless formulate fertility intentions differently
29 than parents (Dommermuth et al., 2011). In addition, for some it may be physically difficult or
30 impossible to have children. It must be noted that our sample includes only respondents that were not
31 aware of any such childbearing hindrances for themselves or their partner. Nevertheless, it is likely
32 that such hindrances are higher among childless than among parents, as the latter have already have
33 proved their ability to have at least one child.
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47 The TPB suggests that attitudes, subjective norms, and perceived behavioural control are the
48 antecedents of intentions or the time frame of intentions, but these should not be related to the
49 behaviour itself (see Figure 1). In order to provide new insight into the decision-making process in
50 fertility behaviour, we test this TPB aspect by adding these three factors into our analysis. The GGS
51 includes three blocks of questions to capture the background factors of fertility intentions according to
52 TPB (Vikat et al., 2007). In the Norwegian GGS, each factor is evaluated by at least three questions
53 (in total 23 items), with an answering scale from 0 to 10 (Lappegård & Veenstra, 2010). Based on an
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5 explorative factor analysis, four factors (based on 20 items) were constructed: (i) positive attitudes, (ii)
6 negative attitudes, (iii) subjective norms, and (iv) perceived behavioural control. The results of the
7 factor analysis are presented in Table A1 in the Appendix, while Table 2 includes the mean score of
8 each TPB factor for respondents with and without children.
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12 Attitudes to having a child are measured through the following question: “*Suppose you will have*
13 *a(nother) child within the next three years. On a scale from 0 to 10 where 0 means ‘much worse’ and*
14 *10 means ‘much better’ how would this effect ... ?”* Positive attitudes were defined through five items
15 (what people around you think of you, general quality of life, closeness between you and your partner,
16 care and security you might get in old age, contact between you and your parents) and negative
17 attitudes were defined through three items (employment opportunities, financial situation, sexual life).
18 Subjective norms are measured through three items where the respondent were asked to rate the extent
19 to which they agree that different groups of people think they should have a(nother) child. The three
20 items were introduced by the following question: “*Although you may feel that the decision of whether*
21 *or not to have a(nother) child is yours, it is likely that others have opinions about what you should do.*
22 *On a scale from 0 to 10, where 0 means ‘strongly disagree’ and 10 means ‘strongly agree’, to what*
23 *extent do you agree with these statements?”* The statements were: “*My parents think I should have*
24 *a(nother) child”* “*Most of my relatives think I should have a(nother) child”* and “*Most of friends think*
25 *I should have a(nother) child”*. The factor for perceived behavioural control is based on nine items,
26 introduced by the question: “*On a scale from 0 to 10, where 0 means ‘not at all’ and 10 means ‘a*
27 *great deal’, how would your decision about having a(nother) child within the next three years be*
28 *affected by ... ?”* The following items were included in this factor: financial situation, housing
29 situation, availability of childcare, opportunity to go on parental leave, life situation of parents, one’s
30 own and partner’s employment, and health status.
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44 The perception of the importance of these circumstances might be mutually influenced by the
45 respondent’s actual situation, labelled as ‘actual enablers and constraints’ in the TPB model (see
46 Figure 1). Based on the data from 2007, six distinct measures for these actual enablers and constraints
47 could be included: income, employment status, dwelling size, health status, union status, and age (see
48 Table 2).
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Table 2

Dependent and independent variables for childless and parents at time of the interview

	Childless	Parents
Birth of a(nother) child within four years after the interview	51%	68%
Immediate fertility intention (“ <i>Want a(nother) child now</i> ”)	47%	50%
Factors of TPB, mean value (standard error)		
<i>Positive attitudes</i>	7.2 (0.04)	6.6 (0.05)
<i>Negative attitudes</i>	4.8 (0.05)	4.9 (0.05)
<i>Subjective norms</i>	5.3 (0.11)	4.7 (0.14)
<i>Perceived behavioural control</i>	5.7 (0.08)	6.3 (0.09)
Median income after tax of respondent (NOK p. year)	242 000	274 000
Employment situation		
<i>Permanent position or self-employed</i>	73%	78%
<i>Temporary contract</i>	17%	12%
<i>Not employed</i>	10%	11%
Housing situation		
<i>No available room</i>	24%	33%
<i>One available room</i>	35%	28%
<i>Several available rooms</i>	41%	39%
Health status of respondent: <i>Serious illness or bad health</i>	11%	11%
Union status of respondent		
<i>Single</i>	26%	5%
<i>Non-residential union</i>	23%	4%
<i>Cohabitation</i>	38%	45%
<i>Marriage</i>	13%	46%
Respondent’s age		
<i>18-24 years</i>	25%	7%
<i>25-29 years</i>	37%	29%
<i>30-34 years</i>	25%	39%
<i>35-39 years</i>	12%	24%
Intended number of children		
<i>One (more) child</i>	4%	69%
<i>Two (more) children</i>	62%	27%
<i>At least three (more) children</i>	34%	5%
Respondent is a women	52%	53%
Level of highest education		
<i>Compulsory education</i>	18%	16%
<i>Secondary education</i>	35%	40%
<i>Tertiary education</i>	47%	45%
Number of children and age of youngest child		
<i>No children</i>	100%	0%
<i>One child, 0-3 years</i>		53%
<i>One child, 4 years or older</i>		16%
<i>Two or more children, youngest 0-3 years</i>		23%
<i>Two or more children, youngest 4 years or older</i>		8%
N (% of total sample)	755 (58%)	547 (42%)

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5 The respondent's income after tax in the year of the interview was used as a measure for economic
6 situation. Based on the median income, we distinguish between those with a higher income (above the
7 median) and a lower income (up to and including median income). As parents have, on average, a
8 higher income than childless, we created group-specific dummy variables (see Table 2). The
9 respondent's employment status at the time of the interview was included to control for the
10 employment situation, and the variable consisted of three categories: (i) being employed in a
11 permanent position or being self-employed, (ii) holding a temporary position, and (iii) not working
12 (including students, the unemployed, and a few, mostly female, homemakers). To include an objective
13 measure for the housing situation, we created a variable by combining the number of household
14 members and rooms in the dwelling. Respondents were asked how many bedrooms and living rooms
15 are available in the dwelling and how many persons live in the household. Based on this information,
16 we distinguished between three categories: (i) no available room, (ii) one available room, and (iii) two
17 or more available rooms.
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27 The measure for health status is based on respondents' own evaluation of their health status.
28 Respondents who reported bad health or a serious illness and stated that this illness limited them in
29 their daily activities were coded with '1' in the corresponding dummy variable.
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33 Union status includes both non-residential and co-residential unions. For childless, we created four
34 categories: (i) single, (ii) non-residential union, (iii) cohabitation and (iv) marriage (see Table 2).
35 Among respondents with children, relatively few had no partner or a non-residential partner (see Table
36 2), and we integrated these two union statuses into category (i), while cohabitation (ii) and marriage
37 (iii) were treated separately.
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43 Finally, age at the time of interview was included as a measure of actual enablers and constraints. We
44 distinguished between four age groups: 18–24, 25–29, 30–34, and 35–40 years.
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48 In addition to these independent variables related directly to TPB, several socio-demographic
49 background variables were included in the models: sex and highest level of education (compulsory
50 education, secondary education, and tertiary education, i.e. university colleges and universities), the
51 number of children (still) wanted, and for parents a combination of the number of children and the age
52 of the youngest child. Table 2 shows that the selected sample includes slightly more female than male
53 respondents. All respondents were asked how many children they (still) expect to have. For childless,
54 we differentiate between those who wanted one child, those who wanted two children, and those who
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5 wanted three or more children. For parents, we distinguish between those who wanted one more child
6 and those who wanted at least two more children. Furthermore, information on the number and age of
7 the parents' children was available. We combined this information into one variable with four
8 categories: (i) one child, three years or younger, (ii) one child, older than three years, (iii) two or more
9 children, youngest child three years or younger, and (iv) two or more children, youngest child older
10 than three years.
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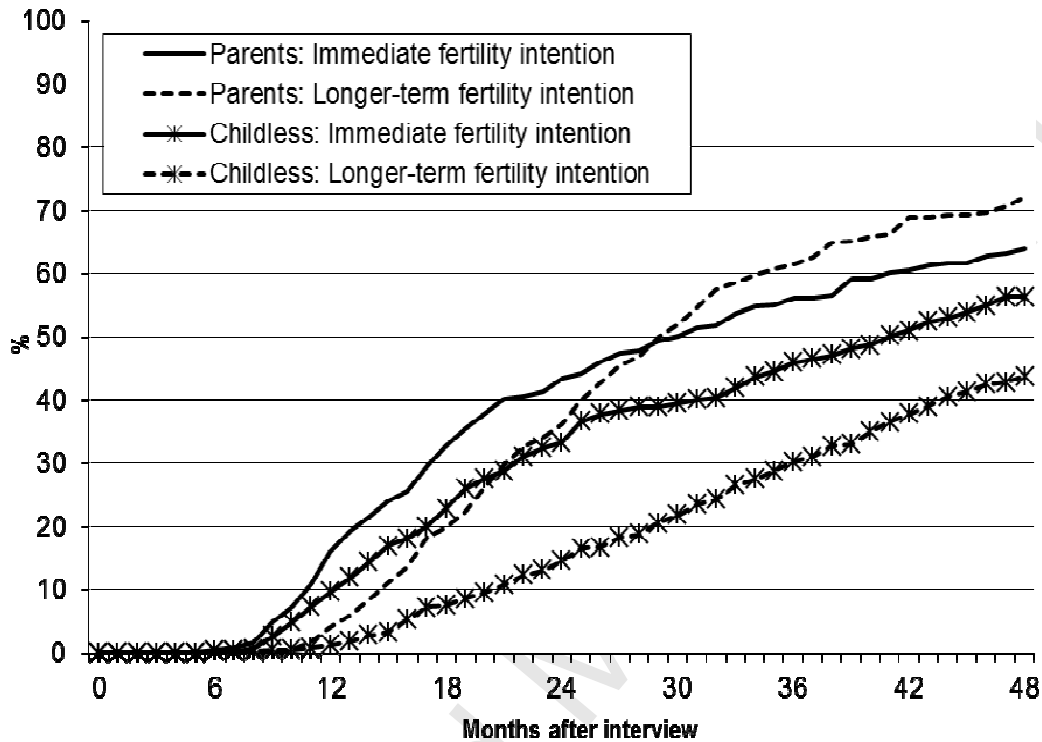
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16 The time between the interview and a possible birth in the four subsequent years is the dependent
17 variable in the analyses. In a first step, we describe the timing of childbearing after the interview by
18 the time frame of the fertility intention based on so-called life tables. In a second step, Cox regression
19 models (Cox, 1972) are applied to estimate the association between the independent variables and the
20 tempo of childbearing in the 48 months after the interview. A dummy variable indicating whether or
21 not a birth has occurred serves as a censoring variable, and those without a birth were followed up at
22 the end of the four-year period. As the selected sample does not include pregnant respondents or those
23 with a pregnant partner, no births were registered in the first months after the interview. To avoid a
24 confounding effect of this time period without any event in the Cox regression models, we exclude the
25 first eight months after the interview. The few children who were born between 6 to 8 months after the
26 interview are coded with a value of 1 (which then equals 8 months after the interview). In total, 58%
27 of the respondents in our sample had a(nother) child within four years after the interview, and the
28 realization of the fertility intention was higher among parents (68%) than among childless (51%).
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40 **Results**

41 Figure 2 displays the cumulative share of respondents who had a(nother) child within four years after
42 the interview. As pointed out above, we only include respondents with a positive, longer-term fertility
43 intention in our sample, but they are separated by whether they hold an immediate fertility intention or
44 not. The figure shows that parents, more so than childless, realize their fertility intentions independent
45 of the time frame of the intention. The time frame also seems to influence the realization rate
46 differently for childless and parents. More childless with an immediate fertility intention experienced
47 the transition to parenthood (56%) compared to childless with a longer-term intention (44% had their
48 first child). Also, the proportion of first births increases faster among those with an immediate fertility
49 intention and stays constantly above that of those with a longer-term intention. This result is in line
50 with the TPB, in that the shorter time frame of the intention is associated with a higher realization rate.
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Figure 2

Births within four years after the interview, by parity and the time frame of the fertility intention



Among parents, the picture is similar at the beginning of the observed period, as those with an immediate fertility intention had a higher realization rate until two and a half years after the interview compared to those with a longer-term intention. After this point, the realization rate increased more rapidly in the latter group, and the lines cross 29 months after the interview. By the end of the four-year period, 72% of respondents with a longer-term fertility intention had another child, compared to 64% of those with an immediate intention.

Using Cox regression models, we investigated whether the described differences in realization by the time frame of the intention were significant, and we tested whether and how the other independent variables are associated with fertility outcomes. Results for childless are presented in Table 3 and for parents in Table 4. Each table includes three models. Model 1 includes only the time frame of the fertility intention as an explanatory variable. In model 2 we add the four factors of the TPB and the related measures of actual enablers and controls, while model 3 includes all independent variables. We report the hazard ratios which can be interpreted as the relative chance for a(nother) birth, as well as the standard errors.

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7 Looking at model 1 for childless at the time of the interview (Table 3), the time frame of the fertility
8 intentions is significantly associated with the transition to parenthood in the following four years. The
9 hazard for a first birth is about 55 per cent higher among those with an immediate fertility intention
10 compared to those with only a longer-term intention. This association remains significant in model 2,
11 when controlling for the TPB factors and actual enablers and controls, and is even stronger in model 3
12 (hazard ratio of 1.83), when including all independent variables. This is in line with the TPB, as the
13 association between intention and outcome should not be confounded by the determinants of the
14 intention, actual enablers and constraints, or other socio-demographic variables. In addition, we find
15 no significant association between the factors of the TPB and subsequent childbearing, which is again
16 in line with the TPB model. To be sure, we also ran an additional model including only the measures
17 for subjective norms, perceived behavioural control, and positive and negative attitudes; this model
18 also showed that the TPB factors are not significantly directly associated with the transition to
19 parenthood.
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29 Income seems to be positively related to the realization of the fertility intentions, as the hazard ratio of
30 respondents with an income above the median is positive and significant on the 0.05 level. Somewhat
31 surprisingly, those in temporary employment at the time of interview have a higher hazard ratio (1.35)
32 compared to reference group, including those with a permanent position and those who are self-
33 employed. One explanation is that most people start off as temporarily employed when they are
34 getting established in the labour market, and for many this is also the time for establishing a family.
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Table 3

Childless at the time of the interview: Proportional hazard models of childbirths within 48 months, Hazard ratio (standard error).

	Model 1		Model 2		Model 3	
Time frame of the fertility intention (<i>ref. longer-term fertility intention</i>)						
<i>Immediate fertility intention</i>	1.55***	(0.10)	1.77***	(0.11)	1.83***	(0.12)
Factors of the TPB						
<i>Positive attitudes</i>			1.09	(0.06)	1.10	(0.06)
<i>Negative attitudes</i>			0.96	(0.05)	0.96	(0.05)
<i>Subjective norms</i>			0.93	(0.06)	0.93	(0.06)
<i>Perceived behavioural control</i>			1.07	(0.05)	1.08	(0.06)
Income after tax (<i>ref. up to median</i>).						
<i>Higher than median</i>			1.40**	(0.13)	1.37*	(0.13)
Employment (<i>ref. permanent- or self-employed</i>)						
<i>Temporary contract</i>			1.39*	(0.14)	1.35*	(0.14)
<i>Not employed</i>			1.19	(0.19)	1.15	(0.19)
Housing situation (<i>ref. no available room</i>)						
<i>One available room</i>			1.02	(0.14)	1.04	(0.14)
<i>Several available rooms</i>			0.97	(0.14)	0.96	(0.14)
Health status (<i>ref. no serious illness/bad health</i>)						
<i>Serious illness or bad health</i>			0.85	(0.18)	0.87	(0.18)
Union status (<i>ref. cohabitation</i>)						
<i>Single</i>			0.34***	(0.15)	0.33***	(0.15)
<i>Non-residential union</i>			0.61***	(0.14)	0.62***	(0.14)
<i>Marriage</i>			0.69*	(0.16)	0.70*	(0.16)
Respondent's age (<i>ref. 25-29 years</i>)						
<i>18-24 years</i>			1.00	(0.14)	1.06	(0.15)
<i>30-34 years</i>			0.87	(0.14)	0.85	(0.14)
<i>35-39 years</i>			0.47***	(0.21)	0.48***	(0.22)
Intended number of children (<i>ref. one child</i>)						
<i>Two children</i>					1.36	(0.32)
<i>At least three children</i>					1.43	(0.33)
Sex of the respondent (<i>ref. men</i>)						
<i>Women</i>					0.87	(0.11)
Level of highest education (<i>ref. secondary education</i>)						
<i>Compulsory education</i>					1.06	(0.16)
<i>Tertiary education</i>					1.22	(0.13)
<i>N</i>				755		
<i>n</i> with a birth in the observed period				384 (51%)		
Generalized R^2	0.02		0.14		0.15	

* $p < .05$. ** $p < 0.01$. *** $p < 0.001$.

According to the results, neither housing situation nor health status is significantly associated with the transition to parenthood, while union status at time of the interview is strongly associated with becoming a parent. As expected, singles and those with a non-residential partner have a significantly

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5 lower chance of realizing their fertility intention (hazard ratio of 0.33 and 0.62 compared to those
6 living in cohabitation). Somewhat surprisingly married are less likely to become parents than
7 cohabiters (hazard ratio of 0.70). As having children within cohabitation, especially first births, is as
8 common as having children within marriage in Norway, one could have expected little difference
9 between the two groups. Among married there is often a “honeymoon” effect with high childbearing
10 rates in the first year after the wedding. However, most of the married couples in our sample have
11 been married more than a year at the time of the interview. As we focus on individuals with a positive
12 fertility intention, it might be that in our sample those married are a more selective group than those
13 cohabiting in terms of having fecundity problems.
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21 Union status is the most important independent variable when comparing the explanatory power of the
22 independent variables in the model (likelihood ratio chi square of 69.48 for testing the null
23 hypothesis). This reflects some differences in actual control: in general, having a partner gives more
24 opportunities to have sexual intercourse, and couples might also be able to pool resources that provide
25 greater control for having a child.
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30 Moreover, the respondent’s age seems to play a significant role in the pathway from fertility intentions
31 to a first birth. Respondents older than the reference group (25–29 years) are less likely to realize their
32 fertility intention, but only the hazard ratio (0.48 in model 3) of respondents aged 35–39 years differs
33 significantly from the reference group.
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38 Among childless the results show no significant association between the number of expected children,
39 the sex of the respondent, or highest level of education and the realization of their fertility intentions
40 (see Table 3).
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44 Time plays a crucial role in our analyses, but on different levels (e.g. time frame of the intention,
45 length of the observed period after the interview, age of respondents). Therefore we examined this
46 aspect thoroughly to ensure the robustness of the results. One assumption of Cox regression models,
47 the proportional hazard assumption (ph-assumption), presupposes that the effect of each covariate
48 does not vary over time. It must be noted that Cox regression models still provide valid and relevant
49 estimations when this assumption is not fulfilled (Allison, 2010). If the covariate’s effect varies over
50 time, the hazard ratio does not capture the exact variation during the observed period, but rather
51 displays an average effect over the range of time observed in the data (Allison, 2010). Such a mean
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5 effect of a covariate over time is usually of central interest. Nevertheless, testing for the ph-assumption
6 can provide more insight into the process from fertility intentions towards childbearing.
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10 Among childless, a test for the ph-assumption reveals that the effects of the time frame of the fertility
11 intention and the age of the respondent fluctuate over time. We accounted for this non-proportionality
12 by including interactions between time and these two variables (see Table A2 in Appendix). Doing so
13 did not change the results for the other independent variables, but the significant coefficient for the
14 interaction between time and the time frame of the fertility intention confirms that the influence of the
15 time frame varies within the observed period. Testing the effect of the time frame of the fertility
16 intention at any given month indicates that holding an immediate fertility intention has a positive
17 influence on first births up to 32 months after the interview. These results confirm the descriptive
18 findings from Figure 2, showing that the proportion of a first birth increases strongly for respondents
19 with an immediate fertility intention in the beginning of the observed period. After 32 months,
20 however, the curves for those with an immediate and long term fertility intention proceed parallel.
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29 The model with the time dependent covariates for childless also shows that the childbearing rate of the
30 oldest respondents (35–39 years) varies over time (see Table A2 in the Appendix). This group has the
31 lowest proportion of first births four years after the interview. Tests for the effect of age at any given
32 month reveal that there is no significant difference in the childbearing rates by age in the beginning of
33 the observed period. In fact, a relatively high proportion of the oldest respondents had their first child
34 within 15 months after the interview. It is possible that the oldest respondents with a shorter time
35 available to become a parent are more eager to have a child and are therefore less realistic in their
36 intentions, meaning that they might say they intend to have a child soon even if their lives are not
37 configured to accommodate that. Also, it might reflect the decline in actual control in the form of
38 ability to have a child at older ages. In line with this, previous analyses based on the same data
39 indicate that the likelihood for holding an immediate fertility intention increases with age among
40 childless (Dommermuth et al., 2011). For the realization of the fertility intentions, tests of the non-
41 proportional model (Table A2 in the Appendix) indicate that seventeen months after the interview
42 older respondents are significantly less likely to have a first child compared to younger respondents.
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51 This again reflects the decrease of fecundity with age.
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55 The results for parents (see Table 4) differ in several ways compared to the results for childless. This
56 is already visible in the first model, as the hazard ratio that compares parents with and without an
57 immediate fertility intention is not significant. This implies that the mean effect of the time frame of
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5 the fertility intention does not differ significantly among parents. However, a test for the ph-
6 assumption indicates that the effect of this variable fluctuates over time. To account for this non-
7 proportionality, we include an interaction term between the time frame of the fertility intention and
8 time, while controlling for all other covariates (see Table A2 in the Appendix). This interaction term is
9 significant and further tests indicate that holding an immediate fertility intention is positively
10 associated with subsequent births in the beginning of the observed period (up to one and a half years
11 after the interview). However, from 34 months after the interview until the end of the observed period,
12 the difference is reversed: those with a longer-term fertility intention are significantly more likely to
13 have another child compared to parents with an immediate fertility intention. The varying influence of
14 the time frame of the fertility intentions is also visible in the descriptive findings in Figure 2. These
15 findings indicate that the parents were quite realistic about the time frame of their fertility intention.
16 Those with an immediate fertility intention fairly often realized this intention within a relative short
17 time frame after the interview. Later on, the immediate intention was either comparatively often
18 abandoned or could not be achieved. The other group of parents, those with a more long-term fertility
19 intention, was less likely to have another child shortly after the interview, but had a higher realization
20 rate four years after the interview. The hazard ratio of the other covariates remained stable when
21 including the time dependent covariate (Table A2 in the Appendix) and the other covariates met the
22 ph-assumption.
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35 Among parents, the factors of the TPB are not significantly associated with subsequent childbearing
36 (see Models 2 and 3 in Table 4). It must be noted, however, that in additional models where either
37 only the four TPB factors or the factors and the time frame of the intention are included, the
38 '*subjective norms*' factor is positively associated with subsequent childbearing (significant at the 0.05
39 level). Subjective norms measure how the individual perceives what parents, relatives, and friends
40 think about them having another child. The positive relationship of this factor with childbearing
41 indicates that those who perceive their close social network to be supporting them have a higher
42 realization rate of their fertility intentions than those with lower levels of perceived support. This
43 positive association is no longer significant when controlling for actual enablers and constraints.
44 Taken together, these findings support the model of the TPB, as the determinants of the intention are
45 not directly associated with the outcome, while the time frame of the intention plays a distinct role for
46 the childbearing behaviour at different points during the observed period.
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Table 4

Parents at the time of the interview: Proportional hazard models of childbirths within 48 months,
Hazard ratio (standard error).

	Model 1		Model 2		Model 3	
Time frame of the fertility intention (<i>ref. longer-term fertility intention</i>)						
<i>Immediate fertility intention</i>	0.93	(0.10)	0.98	(0.11)	1.11	(0.12)
Factors of the TPB						
<i>Positive attitudes</i>			1.07	(0.06)	1.08	(0.06)
<i>Negative attitudes</i>			0.95	(0.06)	1.01	(0.06)
<i>Subjective norms</i>			1.06	(0.06)	1.02	(0.06)
<i>Perceived behavioural control</i>			0.97	(0.05)	0.98	(0.06)
Income after tax (<i>ref. up to median</i>)						
<i>Higher than median</i>			1.33***	(0.12)	1.19*	(0.13)
Employment (<i>ref. permanent- or self-employed</i>)						
<i>Temporary contract</i>			1.39*	(0.17)	1.40	(0.17)
<i>Not working</i>			0.81	(0.20)	0.82	(0.20)
Housing situation (<i>ref. no available room</i>)						
<i>One available room</i>			1.25	(0.13)	1.35*	(0.14)
<i>Several available rooms</i>			1.15	(0.13)	1.16	(0.13)
Health status (<i>ref. no serious illness/bad health</i>)						
<i>Serious illness or bad health</i>			0.87	(0.19)	0.93	(0.19)
Union status (<i>ref. cohabitation</i>)						
<i>Single or non-residential partner</i>			0.32***	(0.27)	0.41**	(0.28)
<i>Marriage</i>			1.19	(0.11)	1.17	(0.11)
Respondent's age (<i>ref. 25-29 years</i>)						
<i>18-24 years</i>			0.99	(0.21)	0.91	(0.22)
<i>30-34 years</i>			0.79	(0.13)	0.80	(0.13)
<i>35-39 years</i>			0.62**	(0.16)	0.67*	(0.17)
Intended number of children (<i>ref. one more child</i>)						
<i>At least two more children</i>					1.29**	(0.12)
Sex of the respondent (<i>ref. men</i>)						
<i>Women</i>					0.93	(0.13)
Level of highest education (<i>ref. secondary education</i>)						
<i>Compulsory education</i>					0.99	(0.18)
<i>Tertiary education</i>					1.44**	(0.12)
Number of children and age of youngest child (<i>ref. one child, 4 years or older</i>)						
<i>One child, 0-3 years</i>					2.11***	(0.19)
<i>Two or more children, youngest 0-3 years</i>					1.34	(0.21)
<i>Two or more children, youngest 4+ Years</i>					1.52	(0.27)
<i>N</i>					547	
<i>n</i> with a birth in the observed period					372 (68%)	
Generalized R^2	0.00		0.11		0.18	

* $p < .05$. ** $p < 0.01$. *** $p < 0.001$.

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7 Regarding the variables measuring actual enablers and constraints, the results in Table 4 indicate that a
8 higher income is positively associated with realization of fertility intentions among parents. This was
9 also the case among the childless individuals (see Table 3), which implies that a disadvantageous
10 economic situation can be a hindrance for the realization of fertility intentions. Temporary
11 employment seems to have a positive influence on subsequent births (compared to permanent and self-
12 employment), but the association is only significant in the second model. A housing situation without
13 an available room at time of the interview is negatively associated with having another child. One
14 possibility is that the necessity to move to a different dwelling in the longer run is perceived as a
15 drawback for the realization of fertility intentions. There is no significant association between the
16 health situation of the respondent and subsequent childbearing. It must be noted that all respondents in
17 our sample expressed a positive fertility intention, which means that even respondents with
18 comparatively bad health thought that they would be able to have and take care of a(nother) child.
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27 Union status is also the most important actual enabler or constraint among parents. Parents living in
28 cohabitation serve as the reference category, and compared to this group, singles or those with a non-
29 residential partner have a significantly lower hazard for realizing their fertility intention (0.41). The
30 hazard ratio of 1.17 for married in model 3 peaks in the opposite (i.e. positive) direction, but does not
31 differ significantly from those in cohabitation. This may reflect that cohabitation also has become a
32 normal setting for having children in Norway, although higher order births occurs more often among
33 married than cohabitators.
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40 Age is significantly associated with subsequent childbearing, as the group of the oldest respondents
41 (aged 35 to 39 years at the interview) are, with a hazard ratio of 0.67, less likely to realize their
42 fertility intention compared to respondents aged 25 to 29. This pattern is similar, but stronger among
43 the childless (see Table 3), and reflects declining control of fertility with age.
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48 While we find no significant association between the respondent's sex and the timing of subsequent
49 childbearing, the other independent variables are significantly associated with subsequent
50 childbearing. Parents who wanted at least two more children had another child sooner, and their
51 intentions to have a child were realized more often than those of parents wanting only one additional
52 child. This seems logical, as people with a preference for large families need to have several children
53 in the same time window as people who want only one more child. Parents with a tertiary education
54 have a significant positive hazard ratio (1.44) for subsequent births compared to those with a
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5 secondary education. Interestingly, earlier findings show that higher educated parents are less likely to
6 formulate an immediate fertility intention than those with a secondary education (Dommermuth et al.,
7 2011). This might imply that higher educated parents formulate comparatively realistic fertility
8 intentions or that their living conditions are more advantageous for the realization of such intentions.
9 Finally, we control for number of children and the age of the youngest child. Compared to respondents
10 with one child aged at least four years (reference group), those with one younger child were more
11 likely to realize their fertility intention within 48 months after the interview (hazard ratio of 2.11). This
12 may be seen in relation to the fact that most parents with one child proceed to have a second child in
13 Norway, which then often occurs before the first child is four years old.
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20 Besides the dependent variable measuring childbearing behaviour, all the applied measures are based
21 on the data from the Norwegian GGS in 2007. Also, these measures can change after the interview,
22 and changes might have a distinct impact on fertility behaviour. As there is no second wave of the
23 Norwegian GGS, we are not able to control for such changes, but the main purpose of this study is to
24 investigate the impact of differences in the time frame of a fertility intention on subsequent
25 childbearing.
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32 Results of analyses of fertility behaviour that are based on survey panel data indicate that having a
33 partner and union stability are important factors for childbearing decisions (Kapitány & Spéder, 2012;
34 Kuhnt & Trappe, 2013; Mencarini, et al., in press). As all respondents in our sample expressed a
35 positive fertility intention, we chose to also include singles in our analysis. If we had excluded singles
36 from the analysis, this would have led only to minor changes in the results of the parents, as only 5%
37 did not have a partner at time of the interview (see Table 2). Most importantly, this reduction of the
38 sample increases the proportion with another birth from 68% to 70%. Among childless individuals,
39 26% were single at the time of the interview (see Table 2). Excluding this group increases the
40 proportion of those who had a first child within four years after the interview from 51% to 58%. This
41 growth is equally distributed among those with an immediate and those with a longer-term fertility
42 intention. The results of the Cox regression model including all independent variables change only
43 slightly if we exclude singles among the childless (results available on request). The independent
44 variables are similarly associated with subsequent first births. Only the hazard ratio of respondents
45 with temporary employment no longer differs significantly from the reference group.
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Discussion

This paper focuses on the realization of fertility intentions with different time frames among childless individuals and parents at the time of interview. Based on unique data from Norway, combining survey data from 2007 and information from the administrative register on childbearing in the four subsequent years for the complete sample, insights from the Theory of Planned Behavior are applied in the analyses. Results indicate that the time frame of the fertility intention is relevant for the childbearing behaviour of both childless and parents, but the association is different in the two groups.

Among the childless, an immediate fertility intention is positively associated with the transition to parenthood. This group was more likely to become parents within 32 months after the interview, and they also had a higher realization rate four years after the interview compared to those with longer-term fertility intentions. This is in line with the TPB, as the risk that intentions are not realized increases with the time interval between the intention and the behaviour (Fishbein & Ajzen, 2010).

Interestingly, the pattern among parents at time of interview is different. First, more parents than childless realized their fertility intention (68% vs. 51%). It seems that the experience gained from already being a parent enables parents to have more achievable fertility intentions than childless. In addition, parents were more often in a co-residential relationship, and the fact that they already had children shows that they were physically able to have children. Second, parents, versus those without children, were more likely to act in line with the expressed time frame of the fertility intention. If parents had an immediate fertility intention, they comparatively often had the child in the beginning of the observed period or abandoned their intention. Some of those who appear to have abandoned their intentions may however been unable to get pregnant. If the parents had longer-term fertility intentions, they were less likely to have a child right after the interview, but many realized their intention in the second half of the observed period. In general terms of the TPB, this means that the goal attainment of people with prior experience (in this case, of childbearing) is less disturbed by intervening conditions and events than that of people who have no previous experience with it. Time frames of intentions, expressed on the basis of earlier experience (in this case, by parents), are achievable projections for the timing of future behaviour. By contrast, the time frame of an intention expressed by people without earlier experience (here, the childless) can be interpreted as an expression of commitment to the intention, or level of certainty that they will act, and is associated with a higher likelihood of goal attainment.

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5 These findings can be integrated with a more general discussion about the realization or non-
6 realization of fertility intentions and childlessness. Taking the increase in childlessness in many
7 modern societies as a starting point of such a discussion, the presented results show that fertility
8 intentions with a shorter time frame are better predictors for the transition to first parenthood than
9 fertility intentions with a longer time frame. Previous analysis based on the same survey data
10 demonstrates that the perceived support from significant others (subjective norms) and the perceived
11 level of control play important roles (Dommermuth et al., 2011). Childless who perceived support for
12 their fertility intentions were more likely to want a first child now and not only within three years.
13 Also, those perceiving that their actual life situation allowed them to become parents were more likely
14 to express an immediate fertility intention. Together with the findings presented here, which show that
15 immediate fertility intentions are associated with a higher hazard ratio for first births, this means that
16 childless can be supported in their fertility decision-making process, which can increase their chances
17 of becoming parents. Likewise, results based on German panel data (Kuhnt & Trappe, 2013) indicate
18 that supportive surroundings and a secure life situation can increase the chance for realizing positive
19 fertility intentions among childless.
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30 A limitation with our study is that we have not been able to add information from the administrative
31 registers other than childbearing data, due to restricted access and availability. For instance,
32 information about changes in union status might have been valuable as union status is a major
33 predictor of fertility. On the other hand, the administrative registers give scarce information about
34 cohabitation especially among couples without children. We are confident that changes in the main
35 background variables most likely would have no confounding effect on our main finding regarding the
36 distinct association between the time frame of positive fertility intentions and childbearing behaviour
37 of parents and childless. Changes in, for example, the income situation or health status should not be
38 very distinct in either of the two groups, and there is no reason to expect that these conditions would
39 affect either group differently. It is rather the question of how individuals change or adjust their
40 fertility intentions over time. Earlier research shows that individuals switch between positive or
41 negative pregnancy intentions (Miller, Barber, & Gatny, 2013) or adjust the number of children they
42 wish to have (Buhr & Kuhnt, 2012; Iacovou & Tavare, 2011; Liefbroer, 2009). As most young people
43 intend to become parents, a promising approach could be to focus on individuals with positive fertility
44 intentions and investigate how they adjust the time frame of their positive birth intention in response to
45 other events or at which point fertility intentions are abandoned.
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5 The analyses presented here confirm that the Theory of Planned Behavior provides valuable insight
6 into the development and realization of fertility intentions. Applying event history methods, the results
7 also reveal that the length of the observed time frame can affect the conclusions one might draw when
8 studying the realization of fertility intentions. If we would had followed up on the respondents for only
9 two or three years after the survey, the picture would have been different from the results based on the
10 observed four-year period. Still, we cannot be certain that the behaviour would change again with an
11 even longer period. But by describing the exact timing of the births, rather than just comparing
12 whether or not a birth happened at the end of the period, we call attention to the connection between
13 time frame and childbearing.
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Appendix

Table A1

Factor loadings and factor alpha coefficients of items of perceived behaviour control, subjective norms and attitudes towards the intention to have a(nother) child within the next three years.

	Factor 1 Positive attitudes	Factor 2 Negative attitudes	Factor 3 Subjective norms	Factor 4 PBC
<i>“Suppose you will have a(nother) child during the next three years, would it be worse or better for...?”</i>				
What people around you think of you	0.50	0.17	0.08	0.00
Your general quality of life	0.68	0.03	-0.02	-0.03
The closeness between you and your partner	0.67	0.13	-0.07	0.02
The care and security you might get in old age	0.55	-0.07	0.02	-0.03
The contact between you and your parents	0.66	-0.08	0.03	0.05
Your employment opportunities	-0.04	0.61	0.00	-0.01
Your financial situation	-0.02	0.68	0.01	-0.02
Your sexual life	0.13	0.55	-0.03	0.03
<i>“Others might think about you having a(nother) child during the next three years, do you disagree or agree with these statements?”</i>				
My parents think I should have a(nother) child	0.02	-0.06	0.83	-0.04
Most of my relatives think I should have a(nother) child	0.00	0.00	0.94	0.02
Most of my friends think I should have a(nother) child	0.01	0.04	0.78	0.01
<i>“How much would the decision on whether to have a(nother) child during the next three years depend on the following?”</i>				
Your financial situation	-0.04	0.03	0.04	0.61
Your work	0.00	-0.02	-0.05	0.64
Your housing conditions	0.07	-0.01	-0.02	0.58
Your health	0.01	-0.04	0.02	0.67
Your partner’s employment	-0.02	0.02	-0.03	0.72
Your partner’s health	0.01	-0.07	0.02	0.60
The availability of childcare	-0.01	0.03	-0.01	0.65
Your opportunity to go on parental leave	0.01	-0.03	-0.08	0.61
The life situation of your parents	-0.03	0.07	0.08	0.54
<i>Factor Alpha Coefficient</i>	0.70	0.56	0.88	0.94

Note: Loadings highlighted in bold indicate the factor on which the item was placed.

Table A2

Proportional hazard models of childbirths within 48 months including time-dependent covariates,
Hazard ratio (standard error)

	Childless ¹	Parents ²
Time frame of the fertility intention (<i>ref. longer-term fertility intention</i>)		
<i>Immediate fertility intention</i>	3.99*** (0.23)	2.47*** (0.20)
<i>Time*time frame of intention</i>	0.96*** (0.01)	0.95*** (0.01)
Respondent's age (<i>ref. 25-29 years</i>)		
<i>18-24 years</i>	0.96 (0.28)	
<i>30-34 years</i>	0.91 (0.26)	
<i>35-39 years</i>	1.00 (0.35)	
<i>Time*18-24 years</i>	1.01 (0.01)	
<i>Time*30-34 years</i>	1.00 (0.01)	
<i>Time*35-39 years</i>	0.96* (0.02)	

¹ Based on Model 3 in Table 3 for the childless, controlling for all other covariates.

² Based on Model 3 in Table 4 for parents, controlling for all other covariates.

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