The Happiness–Parenthood Link in a Context of Limited State Support: The Case of Switzerland

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Abstract

To ascertain the effect of different institutional settings on the happiness-parenthood link, new studies examining various national contexts are needed. The current research extends previous analyses by considering a new set of panel data, that is, the Swiss Household Panel. Our aim is to ascertain to what extent previous results on consequences of parenthood for life satisfaction are generalizable to a new context characterized by low state support for families. We use fixed effects models controlling for unobserved heterogeneity to analyze changes in life satisfaction for both mothers and fathers. Sub-samples of our stratified analyses (by parity and by sex of parents) include between 3,000 and 6,000 persons. If our findings are overall consistent with previous studies, specific features of the Swiss context emerge: (i) the absence of a peak of happiness for women at the birth of the second child, (ii) the important decline in happiness in subsequent years, and (iii), for more educated women, a strong and significant decline in happiness already after the birth of the first child. We interpret our results in the light of the low level of state support for families in Switzerland and the role played by state policies. Some puzzling results appear also for men, showing no significant change in happiness at the birth of the first and second child.

Keywords: parenthood ; fertility ; life satisfaction; happiness ; fixed-effects analysis

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Introduction

Research on happiness in relation to life-course events is a fast-growing field. This growth in interest is linked to the availability of data on happiness, which may itself be increasing as a response to a growing demand (Clark 2014). One reason to be interested in happiness is offered by Frey and Stutzer (2002:1): "Everyone wants to be happy. There are few goals in life shared by so many people." Any phenomenon we study, be it a status characteristic or a life-course event, is "certainly not an end in itself but only has value in so far as it contributes to human happiness." Researchers have identified some focal life events that contribute to the ultimate goal of achieving happiness. Some of them are demographic events, like marriage and parenthood. If the previous literature has consistently shown that happiness increases after marriage (Zimmerman and Easterlin 2006; Stutzer and Frey 2006; Lucas et al. 2003), results are less straightforward as to the relationship between parenthood and happiness. Some consistency in findings is however observed when considering studies adopting a longitudinal approach. These studies focusing on the dynamics of life satisfaction following the childbirth documented a peak in life satisfaction at the birth of a first child (Myrskylä and Margolis 2014; Pollmann-Schult 2014).[1] After birth, happiness declines (Myrskylä and Margolis 2014; Pollmann-Schult 2014). According to the study by Myrskylä and Margolis (2014), in the years following the birth,

happiness declines and returns to the pre-pregnancy level; while according to Pollmann-Schult (2014) happiness declines, but stays higher than in the pre-pregnancy period.

Apart from the ultimate goal of helping people achieve happiness – a universal concern – another reason for investigating this area is that the most people aspire to making the transition to parenthood, since, according to Baumeister (1991), children are a source of meaning. Parental change in happiness at the arrival of the child may point to a gap between aspirations and reality and the need for something to be done to fill this gap. Results from different settings can be useful for the design and implementation of policies that support families (Aassve, Goisis and Sironi 2012; Billari 2009). This perspective motivates our study.

Previous longitudinal analyses have been based on data from Germany (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Baetschmann, Staub, Studer 2012), Great Britain (Myrskylä and Margolis 2014), and – to a lesser extent – Poland (Baranowska and Matysiak 2011) and Australia (Parr 2010). Our work explores a new data set in the parenthood–happiness literature, the Swiss Household Panel (SHP)[2]. Our aim is to verify to what extent conclusions reached in previous studies can be generalized to Switzerland and what are the basic features of the phenomenon under study. In particular, we take a similar approach than in Myrskylä & Margolis (2014) where Germany and UK were analyzed. As Switzerland is characterized by comparatively low state support for families with children, we expect to find that parenthood has a more negative effect on the happiness of parents in comparison with other countries where that support is higher.

In this study we focus on the early stages of parenthood, from the pre-birth period to when the child reaches the age of 13, and we are interested in seeing how the happiness of the parents evolves through this period. While previous studies did not account for the ages of children or

used aggregated ages, we consider each single age of the child to see how parental satisfaction changes from one age of the child to the next one. The focus is kept on people who became parents at some point during the study. However, childless people will also be included in our sample in order to appropriately account for the effect of parents' age on happiness. Because of different implications of parenthood for mothers and fathers (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Frijters, Johnston, & Shields, 2011; Baxter, Hewitt and Haynes 2008; Sanchez and Thomson 1997), our empirical analysis will be accomplished for men and women separately.

In this paper we use the terms "happiness" and "life satisfaction" interchangeably, thus following those authors who affirm that happiness and life satisfaction can be treated as synonymous (e.g., Easterlin 2005; Blanchflower and Oswald 2004) and empirical studies that support this view (Myrskylä and Margolis 2014; Clark and Georgellis 2013).

To analyze the happiness in parenthood in Switzerland, in the next sections we present the main theoretical frameworks, the related empirical literature, the main features of the Swiss context and our hypotheses. Then, we describe our data and methods. This section is followed by results of the analyses, the discussion and our conclusions.

Theoretical approaches to consequences of parenthood on life satisfaction

Before turning to the analysis of the Swiss case, we outline the main theoretical frameworks and summarize previous empirical literature guiding our analysis. Particularly, we are interested in theoretical frameworks that can enlighten the evolution of parents' happiness at five stages of

parenthood: the pre-pregnancy period, pregnancy and birth, the preschool period of the child, and the school period.

The *set point theory* is particularly useful to understand what happens *at the birth of the child and in the following years*. According to set point theory, the effect of life events on the level of life satisfaction is only temporary. After an event, be it positive or negative, people adapt to the new situation and then their life satisfaction returns to the pre-event level. In other words, the baseline level of life satisfaction is shaped more by personality and genetic traits than by specific life events (Headey and Wearing, 1989). Set point theory predicts that life satisfaction changes temporarily after the birth of a child or during pregnancy and returns to the pre-birth level when the child gets older. However, the theory is not useful to predict at what age of the child parental life satisfaction will return to the baseline level. Another shortcoming is that the theory does not explain why happiness raises already some years before birth.

To understand parents' happiness dynamics *some years before the birth of the child* a key concept could be the *anticipation effect* contemplated by Frijters et al. (2011). "This is in essence the effect of unobserved variables relevant to the event that the respondent already has and reacts to." These unobserved variables can be, for example, the quality of the relationship or some career improvement that increases the family's income and renders the choice to have another child more feasible. Because such unobserved variables affect both happiness and fertility, satisfaction is already rising some years before birth, as has been observed in previous studies (Myrskylä and Margolis, 2014; Baetschmann et al. 2012; Frijters et al. 2011).

The *economic approach* to fertility stresses the financial costs associated with raising children and, thus, can be particularly useful to see what happens in the *preschool period*. With reference to the US context, it has been estimated that raising a child costs 23 dollars to 46

dollars per day (Lino, 2008, cited by Roy, Schumm, and Britt 2014). In Europe, when the state provides some family support, this figure may be substantially lower. For example, in the French-speaking region of Belgium, this figure is estimated at about 400 euros per month (La ligue des familles, 2010). Direct costs deriving from having a child can be especially high in the first year. In the USA, the cost of diapers for the first year has been estimated at 900 dollars (Roy et al., 2014:162).

The economic approach also stresses the opportunity costs of parenthood, that is, the loss of income due to one of the parents ceasing or reducing their work and experiencing a concomitant decrease in career opportunities. These costs are especially high for working parents with young children (Becker, 1991). Having children below age three is difficult in countries where daycare facilities are in short supply. In addition, mothers have higher opportunity costs associated with childbearing than do fathers (Becker, 1991), as they are more likely than fathers to interrupt employment, reduce work time, or make sacrifices to their career in other ways. The economic approach suggests that, as women tend to make more work-related sacrifices than men in their role as parents, women's level of life satisfaction may be more negatively affected by parenthood than men's. The opportunity costs are higher when women have higher levels of education as these women have access to higher-paying jobs. Life satisfaction for more educated women may be especially challenged while the child is between zero and three years of age.

If the economic theory predicts a negative effect of very young ages on parents' happiness, other theories stress some compensatory mechanisms and positive aspects of the preschool age. According to *demand–reward theory*, not only the demand but also the benefits of parenthood will be highest when the child is a *preschooler*. In particular, it has been shown that self-esteem, self-efficacy, and parental satisfaction are highest in parents when children are under five years

old (Nomaguchi 2012). Thus, difficulties with family–work balance may be counterbalanced by broader psychological benefits during the child's preschool years.

The *institutional and cultural context* can also play a crucial role by compensating direct and indirect costs of parenthood (McDonald, 2006), especially during the *preschool period*, thus affecting the happiness in parenthood (Aassve et al. 2012; Billari 2009).

Note that some policies' effects can only be evaluated over the long term: a consistent and stable system of family-friendly policies creates a climate of confidence that can, in the long run, result in an increase in fertility (Micheli 2011; Chesnais 2006) and has the potential to foster life satisfaction for parents. More generally, a family-friendly culture plays a role because it might enhances the parents' expectation that their satisfaction will increase after childbearing. According to *prospect theory*, such a positive expectation may lead to an actual increase in happiness already *at the moment of pregnancy and birth* (Aassve et al. 2012; Kahneman and Tversky 1979). Conversely, in contexts with inadequate family policies, parents' lower satisfaction levels at pregnancy and birth may reflect their worries about the future. Overall, institutional approaches to the parenthood–happiness relationship require studies in various social contexts to ascertain the context-specific nature of happiness in parenthood. As stated before, the Swiss context considered in this study presents an opportunity for understanding happiness in parenthood when state support for families is limited.

Finally, the demand-reward theory mentioned above lets us to make some assumptions about the happiness in parenthood *when the child is older*. According to the theory, during school age emotional intimacy in the parent–child relationship declines as parents decrease in importance in relation to the child's peers (Pollmann-Schult 2014; Nomaguchi 2012). Therefore, in our

analysis, we will look at age 6 – the age of entry into school in Switzerland and most of countries – as a potentially critical age for parents.

Table 1 sums up main theories by stages of parenthood and the expected effect on parents' happiness. Empirical results related to each theory, considered in the next section, are also summarized.

TABLE 1 ABOUT HERE

Previous research on happiness in parenthood

Different results according to the methodological approach

Previous findings on happiness in parenthood very much depend on data and the methodological approach adopted. One *first group of studies* consists of *cross-sectional studies* comparing the happiness levels of parents and non-parents (Aassve et al. 2012; Stanca 2012; Margolis and Myrskylä 2011; Kohler, Behrman and Skytthe 2005). In this group, results are discordant, showing positive or negative effect of parenthood on happiness. A *second group of studies* are those using *panel data*; results appear to be contradictory also in this case (Baranowska and Matysiak 2011; Stutzer and Frey 2006).

The studies we mentioned above may be affected by methodological problems. Some of these studies do not properly account for the selection effect (Aassve et al. 2012; Margolis and Myrskylä 2011). As stated by Stanca (2012:744), "It is quite likely that individual genetic characteristics or personality features, such as optimism or extroversion, determine both reported

wellbeing and decisions about parenthood." If those who are happier are more likely to become parents and this is not controlled for, the estimated effect of parenthood may be biased. Even Kohler et al. (2005), while using the 2002 Danish Twin Registry, only partially controlled for selection: they accounted for unobserved genetic endowments but could not control for other personality traits that are shaped by previous personal experience rather than genetics. Moreover, in some of the above-mentioned studies, no details are given about a parent's life satisfaction at different ages of the child and what is observed is a mean effect across an age range for the child (Aassve et al. 2012; Stanca 2012; Baranowska and Matysiak 2011; Margolis and Myrskylä 2011; Stutzer and Frey 2006; Kohler et al. 2005).

For our purposes, we will focus on a *third group of studies* considering the happiness–parenthood relationship at different ages of the child through panel data. These studies account for the parents' selection effect by a within-parents analysis using fixed effects models (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Clark and Georgellis 2013; Frijters et al. 2011; Angels 2010; Clark, Diener, Georgellis and Lucas 2008). Some of them consider the happiness–parenthood relationship at different ages of the child over a relatively long period (Myrskylä and Margolis, 2014; Pollmann-Schult, 2014). Evidence from these studies is presented below according to the stages of parenthood.

Evidence according to the stages of parenthood

Results from longitudinal studies are overall consistent. They show that happiness is already on the increase some *years before* the first birth (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Clark and Georgellis 2013; Frijters et al. 2011; Clark et al. 2008) supporting those theories maintaining the existence of an anticipation effect, due to variation in unobserved

variables (like quality of relationship, for example). A peak in happiness is observed at the birth of the child and already with pregnancy (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Clark and Georgellis 2013; Baetschmann et al. 2012; Frijters et al. 2011; Clark et al. 2008), especially with the first child. For the first child, Myrskylä and Margolis (2014) show that happiness increases about 0.4 points for German women and about 0.5 points for women in UK, while for men levels of happiness are significantly lower. The peak of happiness is weaker for the second child, while no significant peak is observed for the third child (Myrskylä and Margolis 2014). However, Pollmann-Schult (2014) shows a positive and significant effect on happiness for all orders of births once controlling for income (Pollmann-Schult 2014).

What happens *after the birth*? When the child is one year old, happiness returns to the pre-birth level, which supports set point theory (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Clark and Georgellis 2013; Frijters et al. 2011; Clark et al. 2008). The drop in happiness after birth is more accentuated for women than for men, suggesting their higher indirect costs. However, when controlling for income and the percentage of hours spent in leisure time, the level of happiness seems to remain significantly higher than in the pre-birth period (Pollmann-Schult 2014), stressing that the direct and indirect costs of parenthood are responsible for depressing parents' happiness. As to *school ages of the child*, it has been shown that the period when the child is between 6 and 12 is less positive for women than for men (Pollmann-Schult 2014), lending support for demand–reward theory.

One inconvenient with these longitudinal studies is that they do not properly account for the age of parents (given the correlation with the age of the child). Anusic, Yap and Lucas (2014) are able to control for age of parents by including in the analysis a comparison group of childless people, identified by using a propensity score matching technique. With reference to the Swiss

Household Panel, their findings show that the long run decline of happiness observed after childbirth is related to the ageing process of parents.

Moderators of the trajectories of happiness

Education, marital status, and age of a parent at the birth of a child have been identified as moderators (or modifiers) of the trajectories of happiness at the arrival of the first child (Myrskylä and Margolis 2014). In particular, more educated men are happier than less educated (Myrskylä and Margolis 2014), which could suggest a greater participation of more educated men in family life (Esping-Andersen 2009). Unmarried men and women are less happy at the birth of the child and in the subsequent years than married parents, presumably because of difficulties associated with single parenthood (Myrskylä and Margolis 2014; Umberson, Pudrovska and Reczek 2010). Finally, parents who are older at birth of the first child are happier than younger parents, probably reflecting a greater level of maturity and a better financial situation (Myrskylä and Margolis 2014). These results from previous literature suggest that some of the difficulties of parenthood can be more positively faced with a better income, stable relationship and greater maturity.

The effect of context

Although, the institutional context can be crucial in shaping parents' happiness trajectories, the institutional approach has been rarely applied in studies on the fertility-happiness nexus and little evidence exists on this respect. Using cross-sectional data, Aassve et al. (2012) show that the fertility–happiness nexus does vary according to the institutional setting. With panel data, Myrskylä and Margolis (2014) show that happiness trajectories during parenthood are similar in

Germany and UK and that differences between the two countries are restricted to the group of unpartnered parents. In the UK unpartnered parents are less happy than partnered parents at the birth of the child, while in Germany partnered or unpartnered parents show similar trajectories. Authors assume that this could partly depend on policies: "In Britain, there is a clear dichotomy between means-tested out-of-work benefits and in-work support provided through tax credits, but Germany relies more on the traditional means-tested social assistance" (Myrskylä and Margolis 2014:1862).

In order to extend the limited literature on the influence of institutional settings on the happiness in parenthood, our study will consider the Swiss context adopting a similar methodology than previous longitudinal studies, while appropriately accounting for the parents ageing process in the estimation of the happiness trajectories.

The context of Switzerland

Switzerland has a fertility rate of 1.52 children per woman (OECD 2015, data for 2013), a value approaching the European mean and lying between the fertility rates in the UK (1.83) and Germany (1.41) (we refer to Germany and the UK because happiness in parenthood has been explored in these countries and because of our comparative focus). Despite occupying a comparatively intermediate position on the fertility scale, Switzerland presents a peculiar situation as to proportion of births out of wedlock, governmental family policies, and family and gender norms, all aspects which could be useful to consider for the present study.

As to the proportion of births out of wedlock (defined by the OECD Family database as the percentage of all children born to parents who are not married nor living in a legal partnership), the figure for Switzerland is among the lowest in Europe and equal to 17 percent, compared to 32

13

percent in Germany and 45 percent in UK (OECD 2015: data for the year 2011). Thus, one could assume a certain stigmatization of unmarried parents in Switzerland.

Only a low percentage of three-year-old children attend preschool: 8.5 percent versus 83 percent in UK, 88 percent in Germany, and 68 percent in European Union countries (OECD 2015, data for EU27 for the year 2010). The gap with other European countries is still high for four-year-olds: 38.5 percent of children are enrolled in preschool at this age in Switzerland versus 96.5 in Germany, 97.9 in UK, and 85 percent in European Union countries (OECD 2015, data for EU27 for the year 2010). In addition, Swiss spending on child care and preschool programs is the lowest of all the OECD countries, corresponding to 0.2 percent of GDP. Finally, in Switzerland the cost of child care for a two-years old as a percentage of household income is the highest in the OECD at about 60 percent, the OECD average being 25 percent and the averages in specific countries being 50 percent for the UK and 20 percent for Germany (OECD 2015, data for 2012). Entry into school is also problematic because of penury of supervised lunch programs or after-school care services.

As to leave policies, maternity leave in Switzerland, at 14 weeks at the federal level, is one of the shortest in Europe, and the country does not offer paternity and parental leave at all at the federal level (OECD 2015, data for 2013). Germany has also a 14 weeks maternity leave. However, in this country the payment rate is 100 percent, while in Switzerland is about 56.3 percent.[3] In UK the paid maternity leave is 39 weeks with a payment rate of 30.9 percent.

The main instrument for families in Switzerland in the reconciliation of work and family life is women's part-time work (Levy, Gauthier, & Widmer, 2006; Widmer and Ritschard 2009). If we define part-time employment as working less than 30 hours per week in the main job, in Switzerland 45.6 percent of women work part-time (OECD 2015, data for 2012). In the OECD

area, only the Netherlands has a higher rate, with 60.7 percent of women employed part-time. In Germany 38 percent of women work part-time and in UK 39 percent. On average, the OECD area registers 25 percent of women working part-time. In accordance with these figures, International Sociel Survey Program data (ISSP, 2002) show that respondents in Switzerland express great concern about the child's well-being when the mother works. When presented with the statement "Preschool children are likely to suffer if their mother is employed", 58.9 percent express strong agreement or agreement with it. This is one of the highest percentages observed in developed countries. Only people in Latvia, Austria, Russia, Hungary, Bulgaria, and Portugal express a greater level of worry. Regarding gender norms, World Values Survey data reveal a traditional profile for Switzerland, where 25 percent of women agree that "When jobs are scarce men should have more right to a job than women" (in Germany and the UK, these figures are 16 percent and 14 percent respectively, see: World Values Survey, 2008).

According to the World Values Survey, respondents in Switzerland express a relatively high level of life satisfaction. On a 10-point scale, the mean score is 8 in Switzerland, 7.6 in the UK, and 7.1 in Germany (World Values Survey, 2008: data from 2007, 2005 and 2006 respectively). Nevertheless, given the characteristics of the Swiss context as to family policies and attitudes, we expect an important effect of parenthood on life satisfaction.

Our hypotheses

The current research extends previous analyses of the consequences of parenthood for life satisfaction by considering a new set of panel data, that is, the Swiss Household Panel. Our aim is to ascertain to what extent previous results are generalizable to a new context characterized by low state support for families. Life satisfaction will be studied according to several

characteristics of parents: sex, education, marital status, yearly equivalent household income, and age at the birth of the child. In addition, the analysis will be stratified according to the order of birth. As in Anusic et al. (2014), we properly account for the age of parents in order to control for the ageing-happiness nexus. In addition, our analysis will be detailed by single age of the child and by parity. Further control variables will be included in order to better account for the economic situation (satisfaction with income), and for the family-work-free time balance (satisfaction with free time, satisfaction with division of housework, housework hours).

Considering the theoretical background and building upon previous literature, we formulate the following hypotheses. *First*, we expect that life satisfaction increases *at the birth of the child* (age 0 of the child) and already in the year before (in most cases the period of pregnancy), especially for women and especially for the first birth. As in Myrskylä and Margolis (2014), we expect a weaker increase at birth of the second child and no significant increase with the third child. Moreover, because of low state support for families and because of traditional gender attitudes in Switzerland, we may reasonably assume that less positive expectations around parenthood exist in comparison with other countries and that, consequently, the peak of happiness at pregnancy and birth is not as high.

In line with set point theory, economic theory and with previous empirical literature, for our *second hypothesis*, we assume that *after first year and during the child's preschool period*, life satisfaction of parents decreases. Adopting an institutional approach, because of weak family policies and traditional gender attitudes in Switzerland, we expect a greater decline than previously shown for other countries. In our opinion, the benefits assumed by the demand-reward theory during the preschool period cannot counterbalance the difficulties experienced by parents in Swiss context.

For our *third hypothesis*, in accordance with the economic theory and with previous empirical literature, we expect that more educated, wealthier, married, and older parents (at the birth of the child) are happier than other groups of parents. From an economic point of view, we can assume that these groups can better afford the direct costs of parenthood and can better plan to afford for future costs. Moreover, more educated men may be more prone to participate in family life and draw benefits from parenthood. Inversely, more educated women sustain higher opportunity costs associated with having a child, especially in the Swiss context. As to marital status, married parents could be happier than unmarried parents also because the latter group could suffer stigma due to the low percentage of out-of-wedlock births in Switzerland (17 percent versus 32 percent in Germany in 2011, OECD Family database).

For our *fourth hypothesis*, in line with demand–reward theory, we assume that at the *beginning of the school period* the parents' life satisfaction remains low because of decreased intimacy with the child, who begins to attach greater importance to peers and friends.

Data and methods

Data

We are using data from the Swiss Household Panel (SHP), which aims to observe the dynamics of changing living conditions within the population of Switzerland. Data are collected annually using computer-assisted telephone interviewing (CATI). The survey started in 1999, with a refreshment sample initiated in 2004. The most recent data available at the time of analysis were for the year 2013. We have access to 14 waves overall, but as our dependent variable, i.e. life

satisfaction was not available in wave 1, we used 13 waves of observation for the main sample and 8 waves for the refreshment.

As data are limited to 13 waves, we are able to trace members of each panel back to a maximum of 12 years before or 12 years after the birth. We include in our analysis periods preceding the birth, because the literature showed that life satisfaction of prospective parents may already be changing some years before the birth of the first child (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Clark and Georgellis 2013; Baetschmann et al. 2012; Frijters et al. 2011; Clark et al. 2008). We include in our models a subsample of respondents who had a child or were pregnant (or whose partner was pregnant) in the study period (2000–2013). Overall, we observe 461 mothers and 433 fathers having their 1st child (n = 3,271 persons years for mothers and n = 2,956 person-years for fathers), 425 mothers and 401 fathers having their 2nd child (n = 3,354 and n = 2,963 person-years respectively), and 177 mothers and 164 fathers having their 3rd child (n = 1,474 and n = 1,262 person-years respectively).

Moreover, to properly estimate the effect of parental age on life satisfaction (Anusic et al. 2014), we include in the analysis a control group. For the analysis of the first child, the control group consists of childless persons. For the analysis for the second child, the control sample consists of childless persons and those with only one child. For the analysis for the third child, the control sample consists of the childless and people having not more than two children. Sub-samples of our stratified analyses (by parity and by the sex of parents) include in total between 3,000 and 6,000 persons.

The panels used in the analysis are not balanced. Out of N respondents observed at the birth of the child, a lower number is observed at older ages of the child and in the period before the birth.

Methods

Our dependent variable is life satisfaction, captured with the question: "In general, how satisfied are you with your life if 0 means *not at all satisfied* and 10 means *completely satisfied*?" The variable approximates a normal distribution, is negatively skewed, and peaks at the value of 8, which is both its overall mean and its median.

The main analysis comprises fixed effects regression models of life satisfaction on the stages of parenthood, represented by the age of the child and the years preceding the birth of the child. The stages of parenthood are coded with a set of dichotomous variables, for each child order separately. For example, the variable "birth of the 1st child" is equal to 1 for the wave when the first child is less than 1 year old and equal to 0 otherwise. Although the label "birth" is not strictly correct, it has the advantage of being easily comprehensible in light of previous studies, and so we also employ it in this paper. The dichotomous variables "1 year old", "2 years old", etc. take the value of 1 when the child is, respectively, one or two years old. The dichotomous variables "1 year before birth", "2 years before birth", etc. correspond, respectively, to one year and two years before the year when a child was 0 years old. When accounting for age, the chosen reference category must be appropriated, as suggested by Baetschmann et al. (2012): the happiness of parents at different ages of the child should not be compared with their level of happiness in the years immediately before birth (for example, one or two years before), when happiness is already substantially high, thus exaggerating the adaptation processes that follow a birth. In our study, the reference category is the period five or more years before the birth of the child.

We use fixed effects rather than the OLS regression, because panel data contain repeated observations for individuals, which – due to unobserved time-invariant characteristics of

individuals – may be serially correlated. This violation of the assumption of independence of observations may lead to biasing downwards the standard errors if an OLS model is used (Andreß, Golsch & Schmidt 2013). Fixed effects estimation accounts for this autocorrelation, i.e. for the time-invariant unobserved heterogeneity of individuals (Allison, 2009). It is therefore considered a model of choice for analyzing panel data (Andreß, Golsch & Schmidt 2013). The opportunity of using fixed effect model in the study of happiness in parenthood is also shown in Myrskylä and Margolis, (2014). Fixed effects regression accounts for the within-person variation, while the between-persons variation is singled out in the form of individual fixed intercepts. As comparison is between five years before birth and 12 years after, and as a respondent can be observed for 13 waves at maximum, no respondent can provide complete information.

Because the literature showed different life-satisfaction dynamics depending on parity (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Kohler et al. 2005), we also estimate separate models for the first, second, and third child (because the number of births of higher parity is low, we do not analyze higher-order births). Moreover, because the experience of parenthood may be different for men and women (Myrskylä and Margolis 2014; Pollmann-Schult 2014; Frijters et al. 2011; Baxter et al. 2008; Sanchez and Thomson 1997), we estimate separate models for each sex. Thus, we will have six models by parity and sex.

Equation 1 presents the model formally for the case of the first child:

$$
\begin{aligned}
LS_{it} \quad &= \alpha_i + \beta_{B4}BB_{4it} + \beta_{B3}BB_{3it} + \beta_{B2}BB_{2it} + \beta_{B1}BB_{1it} + \beta_{Birth}Birth_{it} + \qquad (1)\\
&\quad + \beta_{A1}AB_{1it} + \beta_{A2}AB_{2it} + \ldots + \beta_{A12}AB_{12it} + \beta_{A13}AB_{13it} + \\
&\quad + \beta_{Birth2}Birth_{2it} + \beta_{Child2}Child_{2it} + \ldots + \beta_{Birth5}Birth_{5it} + \beta_{Child5}Child_{5it} +
\end{aligned}
$$

$$+ \mathbf{B}_K \mathbf{X}_{it} + u_{it}$$

α_i is the individual fixed effect, i.e. the individual average level of happiness. The coefficients $\beta_{B4} - \beta_{B1}$ describe the dynamics of life satisfaction in the period preceding the birth of the first child (*BB refers to "Before Birth"*), coefficient β_{Birth} shows the effect of the birth of the first child, and coefficients $\beta_{A1} - \beta_{A13}$ refer to the effects of the aging of the child (*AB refers to "After Birth"*). The coefficients $\beta_{Birth2} - \beta_{Birth5}$ capture the effects of subsequent births, and coefficients $\beta_{Child2} - \beta_{Child5}$ capture the effects of the presence of other children in the household. $\mathbf{X}_K$ is a vector of effects of control variables and $\mathbf{B}_K$ is the vector of respective coefficients.

Control variables

We control for additional factors which correlate with life satisfaction and the age of the child. In particular, literature shows that average life satisfaction changes with respondents' age (Anusic et al. 2014), that persons less satisfied with their health have lower life satisfaction (Wilkins, 2014), that household income positively correlates with life satisfaction (Frijters, Haisken-DeNew and Shields 2004), and that own unemployment correlates with life satisfaction negatively (Winkelmann and Winkelmann 1998). Thus, in our model we control for age and age square, satisfaction with health, a dichotomous variable indicating the employment status, and household income[4]. Both satisfaction with finances and use of time change considerably when people become parents, as well as during the stages of parenthood. Pollmann-Schult (2014) showed that lower financial satisfaction and less satisfactory use of time of parents are responsible for the negative effect of parenthood on life satisfaction. Therefore, to test the robustness of our results, we estimate additional models which also control for financial

satisfaction, satisfaction with free time, satisfaction with division of housework, and own weekly hours of housework.

Another factor that could be correlated with life satisfaction and the age of the child is marital status (Myrskylä and Margolis 2014). We control for marital status by including a set of dichotomous variables for never married and for divorced or separated, because these groups typically have lower life satisfaction than married persons. We also control for occurrence of events like marriage and divorce by including dichotomous variables marking the year of marriage and the year of divorce/separation. It has been shown that life satisfaction in the year of marriage tends to be systematically higher than in other periods, and life satisfaction in the period surrounding divorce and separation tends to be systematically lower (Clark and Georgellis 2013; Clark et al. 2008). Moreover, we control for the presence of other children in the household (e.g. presence of child 2, 3 4 and 5 in a model for the first child), and for births of other children (e.g. birth of child 2, 3 4 and 5 in a model for the first child).

Dichotomous variables marking the waves of the survey are included to control for the possible effects of calendar time and of events which could have occurred in the period of conducting the particular waves of the study.

Summary statistics of the dependent, independent and control variables are presented in Table 2.

TABLE 2 ABOUT HERE

Stratified analysis and interaction terms

Additionally, we construct variables for stratified analysis: high/low income, high/low education, young/old age at first birth, and marital status at first birth. All these variables are defined as stable for individuals. We classify respondents as having high income if their income over the observation period (expressed in relation to the wave-specific mean) is above the average value in at least half of the waves. We assign to respondents high education if, at least once during the panel, a respondent declared one of the following educational levels: (6) bachelor/maturity; (7) vocational high school with master certificate, federal certificate; (8) technical or vocational school; (9) vocational high school, ETS, HTL, etc.; (10) university, academic high school, HEP, PH, HES, FH. Finally, we classify respondents as young at first birth if the age at first birth is below the median age at first birth, for men and women separately. (The median age at the first birth is 31 years for women and 34 years for men.)

To investigate the effect of these socio-demographic variables, we estimate fixed effects models adding an interaction term between the age of the child and a socio-demographic variable. In this way, we can see if the trajectories of change in happiness are statistically and significantly different between socio-demographic groups (for example, between more and less educated).

Results

Our descriptive results suggest that women experience a peak in happiness at the birth of the first child while men do not, and that happiness of both parents declines after the birth of the child (Figure 1). The multivariate analysis, accomplished with a fixed effects model, confirms these results, showing that they are statistically significant (Figure 2 and Table 3 in Appendix; all

effects are calculated taking as the reference category the period five years or more before birth). More detailed results by stages of the parenthood and by socio-demographic groups are presented below.

Happiness at birth

Our *first hypothesis* was that life satisfaction increases at the birth of the child and already in the year before, especially for women and especially for the first birth (Myrskylä and Margolis 2014; Baetschmann et al. 2012; Clark et al. 2008). We expected a weaker effect in Switzerland compared to other countries considered in previous studies because of the specificity of the Swiss institutional and cultural context. The main findings of the previous literature are confirmed: women in Switzerland show a peak in happiness at the birth of the *first child* (age 0 of the child) and an increase in life satisfaction already begins to be observed one year before the birth (Figure 2 and Table 3 in Appendix). The increase of life satisfaction is about half a point of happiness for women at the birth of the first child. Results are consistent with Myrskylä and Margolis's results (2014) and are against our expectations about a weaker peak of happiness at birth of the first child in Switzerland.

The specificity of Switzerland, in comparison with what was found in previous studies in Germany and the UK (Myrskylä and Margolis 2014), is that there is no statistically significant peak in life satisfaction for men at the birth of the first child or with pregnancy of the partner (Figure 2 and Table 3 in Appendix). This result for men in the Swiss context is worthy of further investigation as it can reflect men's worries about fatherhood in terms of costs, responsibilities, and the father's role. Our findings could be also related to the absence of a well-recognized father's role, reflected in the absence of paid paternity leave at the federal level.

Another characteristic of the Swiss context is that, contrary to previous studies on other national contexts, there is no statistically significant peak in happiness at birth of the *second child*, for both women and men (Figure 2 and Table 3 in Appendix). This unexpected result indicates that the care of the second child may be particularly cumbersome and can be viewed in light of the low percentage of children enrolled in preschool facilities in Switzerland and considering the high cost of sending children to such facilities (see the section above presenting the Swiss context). In line with prospect theory, worries about the high costs of childbearing may be anticipated at pregnancy and at birth, resulting in the absence of a peak of happiness. This result is in favor of our first hypothesis about less positive expectations around parenthood in Switzerland.

Contrary to previous studies (Myrskylä and Margolis 2014) and in opposition with our hypothesis, the *third birth* has a positive effect on fathers' happiness in Switzerland (Figure 2, Table 3 in Appendix). As parents, and especially fathers, are generally older at higher parities, this new result compared to previous studies on the parenthood-happiness link could depend on our controlling for age of parents in the model. Moreover, when further controls are added to the model (satisfaction with leisure time, satisfaction with financial situation, satisfaction with division of housework, and hours of housework labour), we observe for men an even greater significant increase in happiness at birth of the third child, and already in the year before the third birth (at "age = -1", Table 4 in Appendix). This partially confirmed results by Pollmann-Schult (2014) stressing the role of the financial situation and time use at higher parities.

Happiness after childbirth

In our *second hypothesis*, we assumed that after the year of birth and during the preschool period, parental life satisfaction declines. We also maintained that in Switzerland there is more than the adjustment predicted by the set-point theory, and that decline in happiness could be below the pre-pregnancy level. Our hypothesis is only partially verified. For women having their first child, happiness decreases at age 1 of the child, but stay higher than the baseline pre-pregnancy period (Figure 2 and Table 3 in Appendix). However, for women having their second child, we observe that at age 4 of the second child women's happiness is statistically and significantly lower than in the pre-birth baseline period (Figure 2 and Table 3 in Appendix). Results for the second child could suggest disadvantages related to high opportunity costs with second child, thus emphasizing the economic theory. Such a decrease is greater than for other countries considered in previous studies (Myrskylä and Margolis 2014), stressing for Switzerland the greater penalty of parents during the preschool period.

During the school period, parents' happiness increases again: this occurs for women having a first child and men having a third child at around age 11-12 of the child (Figure 2 and Table 3 in Appendix). In contrast with Nomaguchi's (2012) demand–reward theory, and in contrast with our *fourth hypothesis*, the child's entry into school may be a relief for parents in Switzerland given the low coverage of child care services during the preschool period (and despite the penury of supervised lunch programs and after-school care services). However, this increase does not occur for women having their second child (here a decrease is observed) and for women having their third child.

Happiness by socio-demographic groups of parents

In line with the economic approach, which stresses the relevance of the direct monetary costs and the indirect costs of parenthood, in our *third hypothesis*, we expected that more educated, wealthier, older, and married parents (at the birth of the child) are happier than other groups of parents, with the exception of more educated women who sustain higher opportunity costs.

Our hypothesis seems to be confirmed. We found that less educated men are negatively affected by the birth of the first child in Switzerland (Figure 3), although the gap between more and less educated is not significant (Figure 3, vertical lines that indicate statistical significance are absent in the graph). Our assumption about more educated women is also corroborated: we find that more educated women are less happy than less educated at the birth of the first child. The gap between more educated and less educated women is statistical significant from age 2 of the child till age 8 (Figure 3, vertical lines indicate here that at specific age of the child differences in happiness between the socio-demographic groups are statistical significant). These results contradict the set point theory and reinforce the economic approach, which emphasizes the indirect costs of parenthood. Compared with Myrskylä and Margolis (2014)'s findings for the German context, educated women in Switzerland present a greater disadvantage at the birth of the first child (more than half a point difference in the effect).

Consistently with our hypothesis, our findings show that wealthier fathers are happier than less wealthy fathers. Differences between wealthier and less wealthy fathers are statistically significant (Figure 4, the comparison is not possible with previous studies on this dimension). Myrskylä and Margolis (2014)'s results about the advantage of married parents compared to unmarried is confirmed in our study, but only for women (Figure 6). Thus, the hypothesis of a certain stigmatization of unmarried parents in Switzerland seems to be supported for unmarried women only. Moreover, the lack of family policies balancing work and family could especially

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affect this specific group of mothers. As to the age of parents at the birth of the first child, results are mostly not significant in our sample (Figure 5).

FIGURE 1 ABOUT HERE

FIGURE 2 ABOUT HERE

FIGURE 3 ABOUT HERE

FIGURE 4 ABOUT HERE

FIGURE 5 ABOUT HERE

FIGURE 6 ABOUT HERE

Conclusions

Several findings in our study could reflect higher opportunity costs in Switzerland than in other countries where the fertility–happiness link has been investigated. In particular, these findings are: (i) the absence of a statistically significant peak of happiness for women at the birth of the second child, (ii) the important decline in happiness in subsequent years (relatively to other countries considered in previous studies), and (iii) the strong decline in the happiness of more educated women already at the birth of the first child compare to less educated (more than half a point difference). These results are likely to be related to the low level of state support for families that characterizes the Swiss context and point to the role of state policies. Our findings could suggest that the relatively high percentage of part-time work that characterizes the Swiss market is not enough to guarantee a satisfactory balance of paid and unpaid family labour.

Moreover, some results point to the relevance of financial factors. We have evidence for (i) a greater decrease in happiness for men with a lower household income. We also see (ii) the emergence of a more positive effect of the third birth on men, after controlling for satisfaction with financial situation. One may wonder why a lower household income affects men but not women. In other words, there is evidence for a prevailing-breadwinner cultural model in Switzerland putting pressure on the man in his responsibility as provider (Giraud and Lucas, 2009).

Other puzzling results emerged for men in Switzerland: no peak in happiness is observed with the first child, contrary to what has been found in Germany and the UK (Myrskylä and Margolis 2014; Pollmann-Schult 2014). As we have seen, the only men for whom the arrival of a child is a happiness-inducing event are those having a third child. Apart from this selected group, men show discontentment or worry at the arrival of a child. This could be understood at the light of the prospect theory, suggesting that the pregnancy and the birth of the child can affect less positively parents' happiness because of worries about the future.

We can conclude that the "parenthood paradox" is particularly evident in Switzerland: people continue to have children despite the fact that their happiness declines after childbearing (Baumeister 1991). One reason for this paradox is that, if "everyone wants to be happy" (Frey and Stutzer 2002), everyone also wants a meaningful life, and children are an important source of meaning (Baumeister 1991). A meaningful life seems necessary for the achievement of happiness, but it is not sufficient for it: "For maximum happiness, the person apparently needs to have several goals, which are not in conflict with each other, which do not elicit mixed feelings, and which are seen as neither too hard nor too easy to reach" (Baumeister 1991:216). If children

fill life with purpose, so does external work and leisure time. Hence, any restructuring of society through social policies should take into consideration these competing sources of meaning.

The limitations of our study are similar to those present in other studies on fertility and happiness, as the fixed effects model controls for fixed unobserved heterogeneity between individuals but not for time-varying unobserved heterogeneity, such as the partners' relationship and the parent–child relationship (Myrskylä and Margolis 2014; Pollman-Schult 2014).

Despite this, our study enriches the existing literature on the subject by presenting evidence for the happiness–fertility link in a previously unstudied national context, that of Switzerland, where state policies for families are less developed than in other countries and where traditional gender ideology is stronger. Our statistical modelling let us control for the age of parents, so that any change in life satisfaction we observe with stages of parenthood should be understood as a childrearing effect net of parents ageing.

Acknowledgements

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Table 1: Stages of parenthood, related theories and empirical results.

Stages of parenthood	Related theory	Expected effect	Previous findings from longitudinal studies	References
Pre-pregnancy period	Anticipation effect	Positive	Evidence	
Pregnancy and birth	Set-point theory	Positive (peak)	Evidence	Myrskylä and Margolis (2014); Pollmann-Schult (2014); Clark and Georgellis (2013); Clark, Diener, Georgellis and Lucas (2008)
	Prospect theory	Depending on policies	Evidence	
Preschool ages of the child	Set-point theory	Negative (adaptation)	Evidence	Myrskylä and Margolis (2014); Pollmann-Schult (2014); Clark and Georgellis (2013); Clark, Diener, Georgellis and Lucas (2008)
	Economic theory	Negative	Evidence	Myrskylä and Margolis (2014); Pollmann-Schult (2014)
	Demand-reward theory	Positive	Evidence	Pollmann-Schult, 2014
	Institutional context	Positive	Limited evidence	Myrskylä and Margolis (2014)
School ages of the child	Demand-reward theory	Negative	Some evidences for mothers	Pollmann-Schult, 2014

Note: Previous longitudinal studies here considered are those controlling for selection of parents (see the next section).

Table 2: **Summary statistics (replace with new table and put at the end)**

| Variable	Women						Men					
	Mean	Std. Dev.	Min.	Max.	N	N(id)	Mean	Std. Dev.	Min.	Max.	N	N(id)
Time-varying variables:												
life satisfaction	7.94	1.45	0	10	29876	5755	7.89	1.37	0	10	24428	5109
age of 1st child	14.13	8.61	0	40	19538	2323	13.24	8.31	0	40	16948	1884
age of 2nd child	12.33	7.89	0	36	14062	1664	11.41	7.53	0	34	12271	1357
age of 3rd child	4.46	3.93	0	23	1300	176	4.52	4.42	0	27	1254	159
age	39.27	12.28	18	60	41308	5755	38.49	12.45	18	60	39064	5109
single	0.54	0.50	0	1	41308	5755	0.52	0.50	0	1	39064	5109
married	0.10	0.30	0	1	41308	5755	0.06	0.24	0	1	39064	5109
divorced or separated	0.00	0.07	0	1	41308	5755	0.00	0.05	0	1	39064	5109
just divorced	0.01	0.10	0	1	41308	5755	0.01	0.10	0	1	39064	5109
just married	7.97	1.82	0	10	32719	5755	8.05	1.66	0	10	26620	5109
health satisfaction	60.82	58.14	0	5120	34880	5755	62.51	45.95	0	1613	32746	5109
income (per capita, yearly, net)	0.02	0.12	0	1	41250	5755	0.02	0.13	0	1	39013	5109
unemployed	7.72	2.07	0	10	27985	5145	8.49	1.60	0	10	22446	4568
satisfaction with division of housework	14.16	11.29	0	140	31914	5707	5.47	5.10	0	147	26340	5077
weekly housework hours	7.05	2.19	0	10	32619	5744	6.88	2.08	0	10	26578	5100
satisfaction with financial situation	7.01	2.43	0	10	32630	5742	6.59	2.40	0	10	26567	5099
satisfaction with free time	7.45	3.76	1	13	26745	5755	7.01	3.73	1	13	22060	5109
number of waves	0.54	0.50	0	1	41308	5755	0.52	0.50	0	1	39064	5109
Stratification variables (time –invariant):												
higher education	0.39	0.49	0	1		5748	0.45	0.50	0	1		5104
higher income	0.40	0.49	0	1		5755	0.44	0.50	0	1		5109
unmarried at birth	0.01	0.12	0	1		5755	0.02	0.12	0	1		5109
age at birth < median	0.27	0.44	0	1		5755	0.25	0.44	0	1		5109

Source: SHP data waves 2–14

Figure 1: Descriptive statistics - Average life satisfaction before and after childbirth, separately for the first, second, and third child)
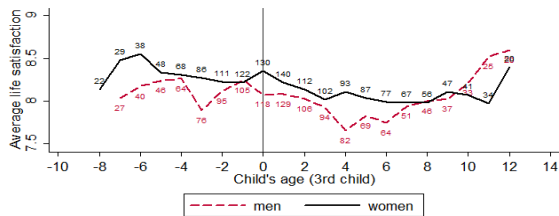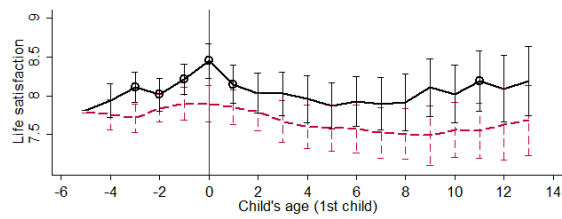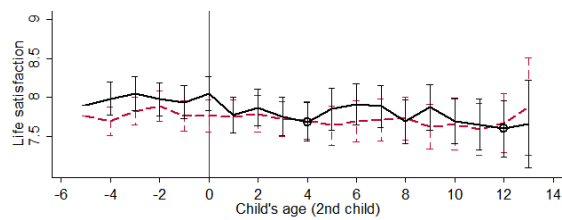
a)
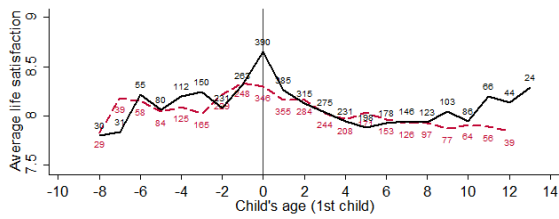
b)
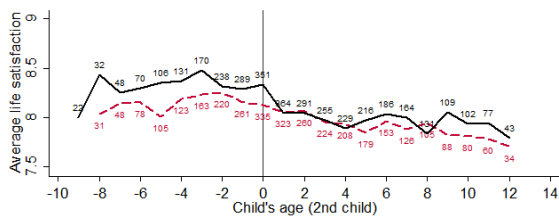
c)

Note: The graphs show the average life satisfaction of respondents who experienced the birth of a child during the panel. Values shown for groups with n ≥ 20 (exact sample size marked on the graph). *Source:* SHP data waves 2–14

Figure 2: Multivariate analysis - Predicted life satisfaction at various stages of parenthood
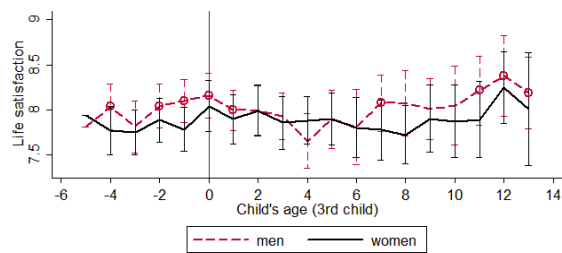
a)

b)

c)

Note: Circles mark statistically significant coefficients (p<10). Sample: parents observed at birth or in the year preceding the birth. The reference category is five years or more before the birth.

Source: SHP data waves 2–14

Figure 3: Changes of life satisfaction at various stages of parenthood depending on educational level
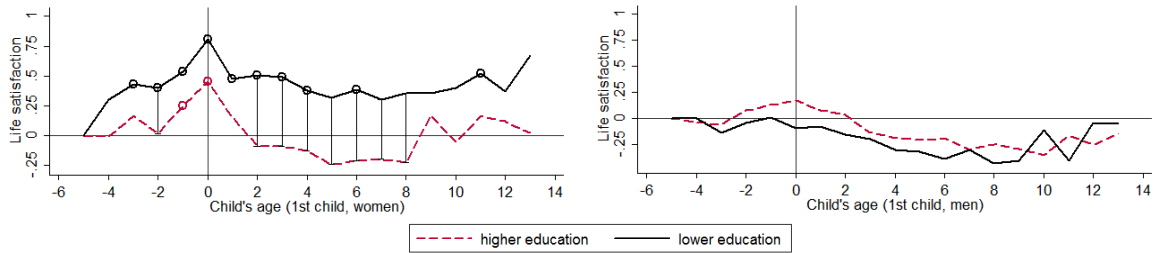
Note: Sample: parents observed at birth or in the year preceding the birth. The reference category is five years or more before the birth. Circles mark statistically significant coefficients compared to the reference category. Vertical lines mark statistically significant difference between the two groups of parents (p<.05).
Source: SHP data waves 2–14

Figure 4: Changes of life satisfaction at various stages of parenthood depending on household income

Note: Sample: parents observed at birth or in the year preceding the birth. The reference category is five years or more before the birth. Circles mark statistically significant coefficients compared to the reference category. Vertical lines mark statistically significant difference between the two groups of parents (p<.05).
Source: SHP data waves 2–14

Figure 5: Changes of life satisfaction at various stages of parenthood depending on parental age at birth
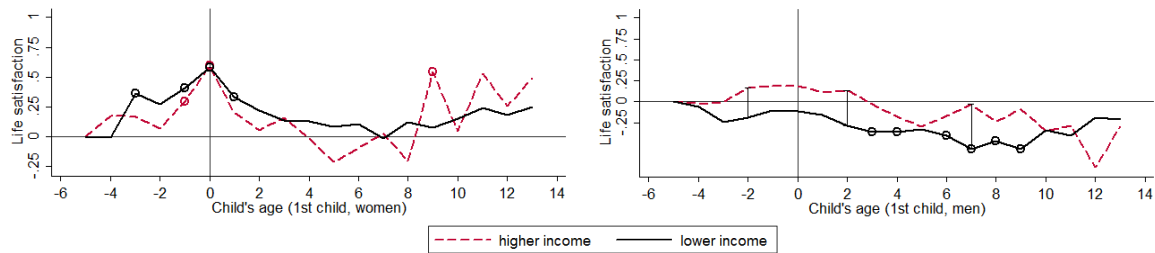

Note: Sample: parents observed at birth or in the year preceding the birth. The reference category is five years or more before the birth. Circles mark statistically significant coefficients compared to the reference category. Vertical lines mark statistically significant difference between the two groups of parents (p<.05).
Source: SHP data waves 2–14

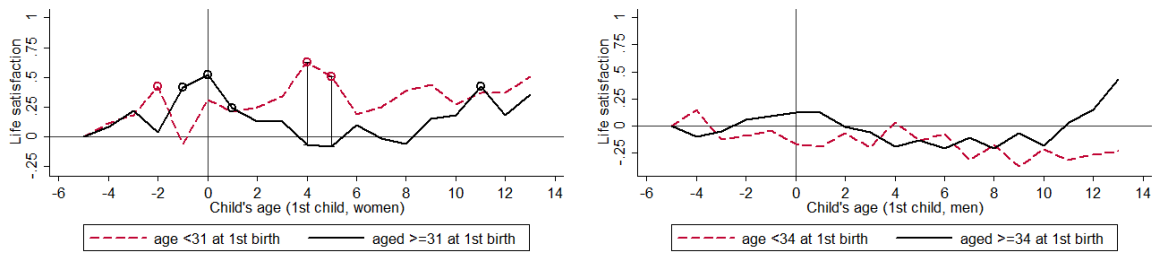# Figure 6: Life satisfaction at various stages of parenthood by marital status at birth

Note: Sample: parents observed at birth or in the year preceding the birth. The reference category is five years or more before the birth. Circles mark statistically significant coefficients compared to the reference category. Vertical lines mark statistically significant difference between the two groups of parents (p<.05).
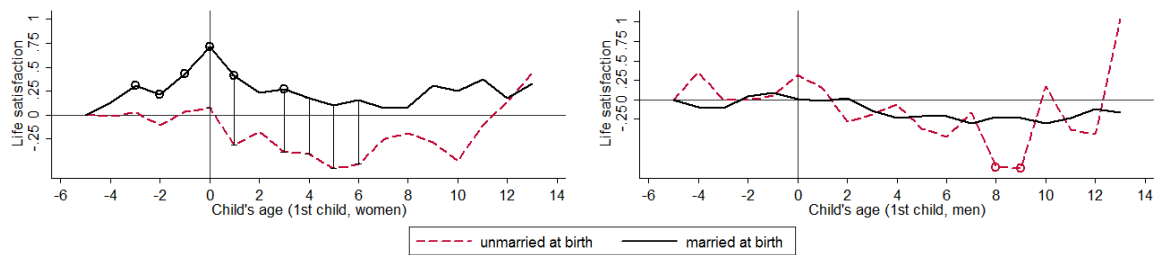*Source:* SHP data waves 2–14

Appendix

Table 3. **Effect of parenthood on life satisfaction for women and men. Fixed effects estimation.**

	(1) Women, 1st child	(2) Women, 2nd child	(3) Women, 3rd child	(4) Men, 1st child	(5) Men, 2nd child	(6) Men, 3rd child
	β (p)	β (p)	β (p)	β (p)	β (p)	B (p)
5y before birth			*reference category*			
4y before birth	0.12 (0.262)	0.08 (0.455)	-0.17 (0.200)	-0.02 (0.826)	-0.07 (0.420)	0.22 (0.081)[+]
3y before birth	0.29 (0.004)[*]	0.15 (0.178)	-0.20 (0.129)	-0.07 (0.473)	0.06 (0.528)	0.00 (0.980)
2y before birth	0.20 (0.063)[+]	0.08 (0.486)	-0.06 (0.641)	0.06 (0.500)	0.12 (0.218)	0.23 (0.061)[+]
1y before birth	0.39 (0.000)[***]	0.04 (0.743)	-0.16 (0.198)	0.12 (0.275)	-0.01 (0.954)	0.29 (0.020)[*]
birth	0.63 (0.000)[***]	0.15 (0.187)	0.10 (0.507)	0.11 (0.335)	-0.01 (0.946)	0.35 (0.006)[*]
1 year old	0.33 (0.008)[*]	-0.13 (0.257)	-0.05 (0.729)	0.07 (0.533)	-0.01 (0.894)	0.19 (0.100)[+]
2 years old	0.21 (0.104)	-0.03 (0.788)	0.05 (0.731)	0.01 (0.922)	0.02 (0.836)	0.18 (0.190)
3 years old	0.21 (0.141)	-0.15 (0.238)	-0.09 (0.562)	-0.11 (0.433)	-0.05 (0.675)	0.12 (0.374)
4 years old	0.14 (0.370)	-0.22 (0.090)[+]	-0.06 (0.644)	-0.18 (0.217)	-0.06 (0.600)	-0.16 (0.310)
5 years old	0.05 (0.732)	-0.05 (0.719)	-0.04 (0.766)	-0.20 (0.186)	-0.13 (0.316)	0.09 (0.600)
6 years old	0.11 (0.506)	0.01 (0.952)	-0.14 (0.405)	-0.21 (0.193)	-0.07 (0.581)	0.00 (0.993)
7 years old	0.08 (0.643)	-0.02 (0.901)	-0.17 (0.323)	-0.26 (0.124)	-0.05 (0.699)	0.27 (0.094)[+]
8 years old	0.10 (0.597)	-0.21 (0.141)	-0.22 (0.181)	-0.27 (0.104)	-0.04 (0.794)	0.26 (0.156)
9 years old	0.29 (0.127)	-0.03 (0.841)	-0.04 (0.837)	-0.29 (0.137)	-0.14 (0.338)	0.20 (0.259)
10 years old	0.20 (0.287)	-0.21 (0.168)	-0.07 (0.727)	-0.22 (0.231)	-0.12 (0.489)	0.24 (0.290)
11 years old	0.37 (0.061)[+]	-0.25 (0.128)	-0.05 (0.809)	-0.23 (0.194)	-0.18 (0.289)	0.41 (0.038)[*]
12 years old	0.27 (0.213)	-0.31 (0.097)[+]	0.31 (0.134)	-0.15 (0.535)	-0.09 (0.629)	0.57 (0.014)[*]
13 years old	0.37 (0.101)	-0.24 (0.399)	0.06 (0.839)	-0.10 (0.671)	0.12 (0.713)	0.38 (0.062)[+]
birth of the 1st child		0.28 (0.000)[***]	0.36 (0.000)[***]		0.03 (0.633)	0.08 (0.224)

	(1)	(2)	(3)	(4)	(5)	(6)
1st child present		-0.38 (0.000)***	-0.37 (0.000)***		-0.02 (0.734)	-0.07 (0.311)
birth of the 2nd child	0.21 (0.029)*		0.13 (0.054)+	0.07 (0.462)		-0.06 (0.346)
2nd child present	-0.23 (0.034)*		-0.24 (0.001)***	0.07 (0.403)		-0.02 (0.724)
birth of the 3rd child	0.31 (0.111)	0.25 (0.092)+		0.11 (0.333)	0.23 (0.099)+	
3rd child present	-0.11 (0.603)	-0.17 (0.292)		0.03 (0.824)	-0.16 (0.263)	
birth of the 4th child	0.12 (0.721)	0.22 (0.323)	0.14 (0.544)	-0.24 (0.202)	0.00 (0.985)	0.01 (0.938)
4th child present	-0.44 (0.205)	-0.45 (0.019)*	-0.13 (0.501)	0.24 (0.086)+	0.12 (0.645)	0.05 (0.730)
birth of the 5th child		0.02 (0.884)	0.76 (0.491)			1.11 (0.000)***
married			*reference category*			
single	-0.15 (0.036)*	-0.21 (0.001)*	-0.18 (0.002)*	-0.18 (0.011)*	-0.15 (0.038)*	-0.14 (0.035)*
divorced or separated	0.01 (0.967)	0.12 (0.326)	0.02 (0.798)	-0.35 (0.005)*	-0.27 (0.034)*	-0.15 (0.182)
just divorced	-0.53 (0.010)*	-0.59 (0.001)*	-0.47 (0.000)***	-0.71 (0.002)*	-0.62 (0.001)***	-0.69 (0.000)***
just married	0.06 (0.354)	0.08 (0.172)	0.14 (0.018)*	0.04 (0.513)	0.09 (0.159)	0.10 (0.094)+
satisfaction with health (centered)	0.15 (0.000)***	0.16 (0.000)***	0.16 (0.000)***	0.14 (0.000)***	0.15 (0.000)***	0.15 (0.000)***
age	-0.02 (0.060)+	-0.00 (0.498)	-0.01 (0.026)*	-0.01 (0.095)+	-0.01 (0.058)+	-0.01 (0.033)*
age^2	0.00 (0.004)*	0.00 (0.008)*	0.00 (0.001)*	0.00 (0.000)***	0.00 (0.000)***	0.00 (0.000)***
yearly household income (centered)	0.00 (0.182)	0.00 (0.135)	0.00 (0.071)+	0.00 (0.001)***	0.00 (0.000)***	0.00 (0.012)*
unemployed	-0.36 (0.001)***	-0.38 (0.000)***	-0.32 (0.000)***	-0.84 (0.000)***	-0.78 (0.000)***	-0.74 (0.000)***
Observations	15510	19239	26696	14166	16980	22043
N(id)	3918	4539	5752	3676	4171	5106
R^2	0.059	0.058	0.056	0.060	0.057	0.054

Note: Sample consists of parents who experienced the birth of a child during the panel.

+ $p < 0.10$, * $p < 0.05$, *** $p < 0.001$; Exact p-values in parentheses;

Source: SHP data waves 2–14

Table 4. Effect of parenthood on life satisfaction for women and men. Fixed effects estimation. Robustness checks accounting for financial satisfaction and time allocation.

	(1) Women, 1st child	(2) Women, 2nd child	(3) Women, 3rd child	(4) Men, 1st child	(5) Men, 2nd child	(6) Men, 3rd child
	β (p)	β (p)	β (p)	β (p)	β (p)	β (p)
5y before birth			*reference category*			
4y before birth	0.18 (0.150)	0.08 (0.435)	-0.18 (0.212)	0.05 (0.662)	0.02 (0.867)	0.24 (0.071)[+]
3y before birth	0.26 (0.023)[*]	0.13 (0.194)	-0.13 (0.336)	0.02 (0.852)	0.15 (0.119)	-0.05 (0.679)
2y before birth	0.20 (0.053)[+]	0.06 (0.548)	-0.03 (0.838)	0.04 (0.660)	0.23 (0.011)[*]	0.21 (0.090)[+]
1y before birth	0.42 (0.000)[***]	0.03 (0.789)	-0.13 (0.313)	0.16 (0.093)[+]	0.12 (0.191)	0.34 (0.006)[*]
birth	0.70 (0.000)[***]	0.21 (0.053)[+]	0.21 (0.151)	0.17 (0.112)	0.12 (0.233)	0.47 (0.001)[***]
1 year old	0.45 (0.000)[***]	-0.08 (0.432)	0.04 (0.759)	0.17 (0.103)	0.15 (0.139)	0.26 (0.043)[*]
2 years old	0.33 (0.008)[*]	-0.01 (0.945)	0.07 (0.611)	0.14 (0.232)	0.18 (0.097)[+]	0.26 (0.047)[*]
3 years old	0.35 (0.009)[*]	-0.07 (0.532)	-0.01 (0.962)	0.07 (0.578)	0.11 (0.305)	0.22 (0.112)
4 years old	0.26 (0.063)[+]	-0.21 (0.081)[+]	-0.10 (0.527)	-0.00 (0.974)	0.10 (0.387)	-0.07 (0.625)
5 years old	0.21 (0.157)	-0.09 (0.496)	-0.01 (0.962)	-0.02 (0.887)	0.07 (0.537)	0.18 (0.254)
6 years old	0.20 (0.200)	-0.04 (0.765)	-0.01 (0.969)	-0.02 (0.867)	0.10 (0.432)	0.07 (0.663)
7 years old	0.15 (0.371)	-0.08 (0.545)	-0.02 (0.885)	-0.04 (0.817)	0.13 (0.308)	0.36 (0.034)[*]
8 years old	0.18 (0.289)	-0.21 (0.151)	-0.16 (0.374)	0.01 (0.973)	0.16 (0.238)	0.33 (0.065)[+]
9 years old	0.39 (0.030)[*]	-0.04 (0.784)	0.05 (0.780)	0.04 (0.799)	0.10 (0.499)	0.28 (0.145)
10 years old	0.27 (0.151)	-0.21 (0.172)	-0.01 (0.963)	0.02 (0.914)	0.11 (0.475)	0.32 (0.110)
11 years old	0.45 (0.024)[*]	-0.23 (0.166)	-0.08 (0.712)	0.08 (0.695)	0.05 (0.744)	0.51 (0.021)[*]
12 years old	0.46 (0.035)[*]	-0.21 (0.280)	0.42 (0.097)[+]	0.13 (0.552)	0.12 (0.524)	0.67 (0.005)[*]
13 years old	0.51 (0.048)[*]	-0.14 (0.609)	0.29 (0.403)	0.25 (0.333)	0.35 (0.184)	0.50 (0.127)
birth of the 1st child		0.34 (0.000)[***]	0.37 (0.000)[***]		0.02 (0.762)	0.07 (0.355)
1st child present		-0.35 (0.000)[***]	-0.35 (0.000)[***]		-0.04 (0.582)	-0.08 (0.279)

	(1)	(2)	(3)	(4)	(5)	(6)
birth of the 2nd child	0.28 (0.005)*		0.18 (0.011)*	0.03 (0.712)		-0.03 (0.716)
2nd child present	-0.24 (0.015)*		-0.27 (0.000)***	0.05 (0.567)		-0.04 (0.513)
birth of the 3rd child	0.37 (0.052)+	0.39 (0.009)*		0.15 (0.381)	0.18 (0.200)	
3rd child present	-0.13 (0.498)	-0.23 (0.130)		-0.02 (0.889)	-0.13 (0.346)	
birth of the 4th child	0.21 (0.681)	0.31 (0.504)	0.18 (0.567)	-0.28 (0.667)	0.06 (0.891)	-0.09 (0.768)
4th child present	-0.56 (0.333)	-0.54 (0.274)	-0.21 (0.508)	0.28 (0.690)	0.00 (0.995)	0.11 (0.726)
birth of the 5th child		0.25 (0.698)	0.81 (0.147)			0.82 (0.113)
satisfaction with housework (centered)	0.06 (0.000)***	0.05 (0.000)***	0.05 (0.000)***	0.03 (0.000)***	0.04 (0.000)***	0.06 (0.000)***
housework hours (centered)	-0.00 (0.231)	-0.00 (0.581)	-0.00 (0.262)	-0.00 (0.174)	-0.00 (0.620)	-0.00 (0.280)
satisfaction with financial situation (centered)	0.10 (0.000)***	0.11 (0.000)***	0.12 (0.000)***	0.10 (0.000)***	0.11 (0.000)***	0.11 (0.000)***
satisfaction with free time (centered)	0.04 (0.000)***	0.04 (0.000)***	0.04 (0.000)***	0.03 (0.000)***	0.04 (0.000)***	0.04 (0.000)***
married			*reference category*			
single	-0.08 (0.261)	-0.14 (0.029)*	-0.12 (0.035)*	-0.14 (0.031)*	-0.09 (0.128)	-0.12 (0.040)*
divorced or separated	-0.21 (0.139)	-0.06 (0.542)	-0.09 (0.189)	-0.41 (0.001)*	-0.11 (0.313)	-0.08 (0.403)
divorce	-0.53 (0.021)*	-0.63 (0.000)***	-0.43 (0.000)***	-0.29 (0.309)	-0.19 (0.358)	-0.33 (0.061)+
marriage	0.05 (0.489)	0.06 (0.348)	0.12 (0.061)+	0.01 (0.916)	0.07 (0.243)	0.06 (0.349)
satisfaction with health (centered)	0.14 (0.000)***	0.14 (0.000)***	0.14 (0.000)***	0.11 (0.000)***	0.12 (0.000)***	0.12 (0.000)***
Age	-0.03 (0.001)***	-0.02 (0.027)*	-0.02 (0.000)***	-0.03 (0.000)***	-0.03 (0.000)***	-0.02 (0.000)***
Age^2	0.00 (0.082)+	0.00 (0.083)+	0.00 (0.021)*	0.00 (0.001)***	0.00 (0.000)***	0.00 (0.000)***
yearly household income (centered)	0.00 (0.081)+	0.00 (0.063)+	0.00 (0.005)*	0.00 (0.282)	0.00 (0.333)	0.00 (0.855)
unemployed	-0.21 (0.017)*	-0.21 (0.008)*	-0.17 (0.016)*	-0.69 (0.000)***	-0.62 (0.000)***	-0.59 (0.000)***
Observations	11598	15124	22171	10858	13508	18437
N(id)	3286	3899	5094	3107	3604	4530
R^2	0.103	0.102	0.101	0.090	0.096	0.093

Note: Sample consists of parents who experienced the birth of a child during the panel.

+ $p < 0.10$, * $p < 0.05$, *** $p < 0.001$; Exact p-values in parentheses;

Source: SHP data waves 2–14

[1] "The level of happiness at the birth of the child" or "…in the year of birth of the child" are typical expressions used in the literature to indicate the parent's level of happiness at age 0 of the child (i.e. age less than 1; see Myrskylä and Margolis, 2014, for example). In this paper, these expressions and the age of the child are used interchangeably. Also, statements such as "after the birth of the child" refer to when the child is aged 1 or more.

[2] At our knowledge, the only study on the happiness-parenthood link in the Swiss context is by Anusic et al. (2014).

[3] According to OECD (2015) "The "average payment rate" is the proportion of gross earnings replaced by the benefit over the length of the paid leave entitlement for a person on average earnings."

[4] For income, we used the variable constructed by the SHP team and included in the data. This is a yearly household income equalized using SKOS scale 1998 (for an explanation of the SKOS scale, see FSO, 2013). This is a net income, i.e. calculated after deduction of social security contributions. Taxes are not deducted. The variable is rescaled from franks to thousands of franks.