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Item 8 – Assumptions on future fertility

New family values and increased childbearing in Sweden?

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Abstract

In many countries the patterns of partnership formation and dissolution has changed substantially with a general trend towards less stable unions. In Sweden, this development seems to have come to an end. One of our studies, using register data of all children in Sweden living with their biological parents 1999–2011, shows that the percentage of children who experience a separation of their parents have decreased during the 2000s. To better understand the reasons for this development an analysis using logistic regression has been carried out. Results show that parents higher level of education and postponement of family formation are important factors explaining the downturn.

Another of our studies also suggest an end of the trend with less stable unions. Register data of all children born in Sweden from 1970 shows that half-siblings have become less common during the 2000s. An increasing proportion of children born today have only full siblings. Thus, the impact of stepfamily fertility has declined. With a logistic regression we show that higher levels of education and postponement of family formation are once again two explanatory factors of this development. But these and other socioeconomic and demographic factors do not seem to fully explain the development.

In Sweden, in the 21st century, there has been a rise in fertility. Couples who have stayed together account for the entire rise. Increased gender equality at home can have led to stronger family ties, which in turn could make women and men more inclined to have more children (with the same partner). Another explanation could be a trend towards more family-oriented values in society.

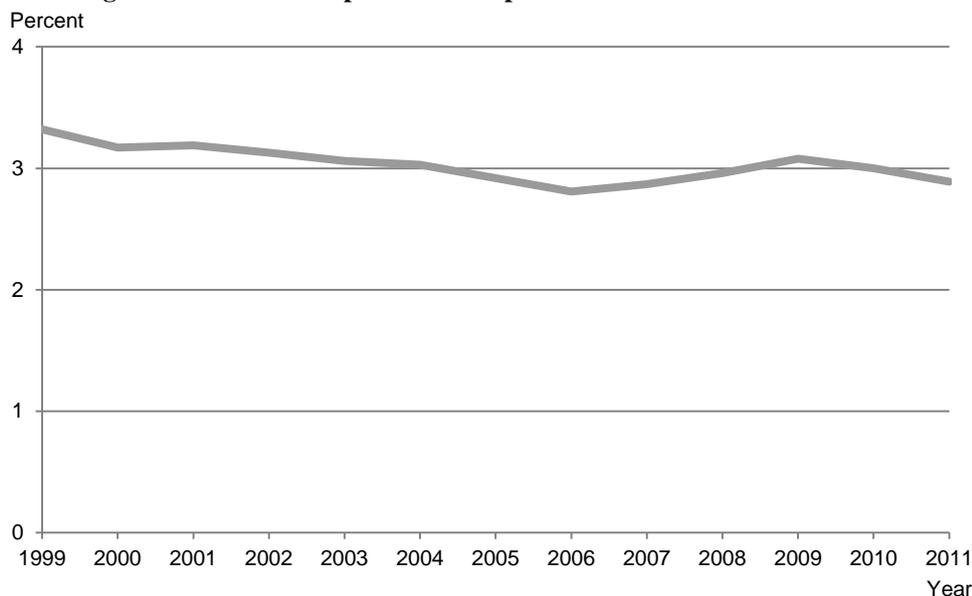
In the 2000s, marriages have increased and childlessness has decreased. To have a second child has become more common and third births have increased, at least among women in their late 30s. That is clear when parity dependent cohort fertility is studied. How will continuing increased gender equality and attitudes towards childbearing and family formation affect childbearing in the future?

Introduction

In recent decades there has been a trend towards less stable relationships, and divorces and separations have increased both in Sweden and in many other countries. Researchers seem to agree that women's entrance onto the labour market is one of the most important reasons for this (see for example Oláh & Gähler 2012). When women began earning money, they became more economically independent, and it became possible to get by economically even after a separation. Women's participation in the Labour force may also have created an imbalance in the family since the traditional division of labour was changed. The fact that it became easier and more acceptable to divorce is of course also one of the reasons that separations have become more common (see for example Simonsson & Sandström, 2011).

However, in Sweden, the development towards less stable unions seems to have come to an end or there may even be a trend reversal in the 2000s. This is shown in two recent studies made at Statistics Sweden. One of them (Statistics Sweden 2013a), using register data of all children in Sweden living with their biological parents 1999–2011, shows that the percentage of children who experience a separation of their parents has decreased during the 2000s. In the year 2011, 41 300 children in Sweden living with their biological parents experienced a separation, that is 2.9 percent of the total child population living with both biological parents. The number of children that experienced a separation decreased between the year 2000 and 2006, followed by a slight increase and then once again a decrease during the last years, see figure 1.

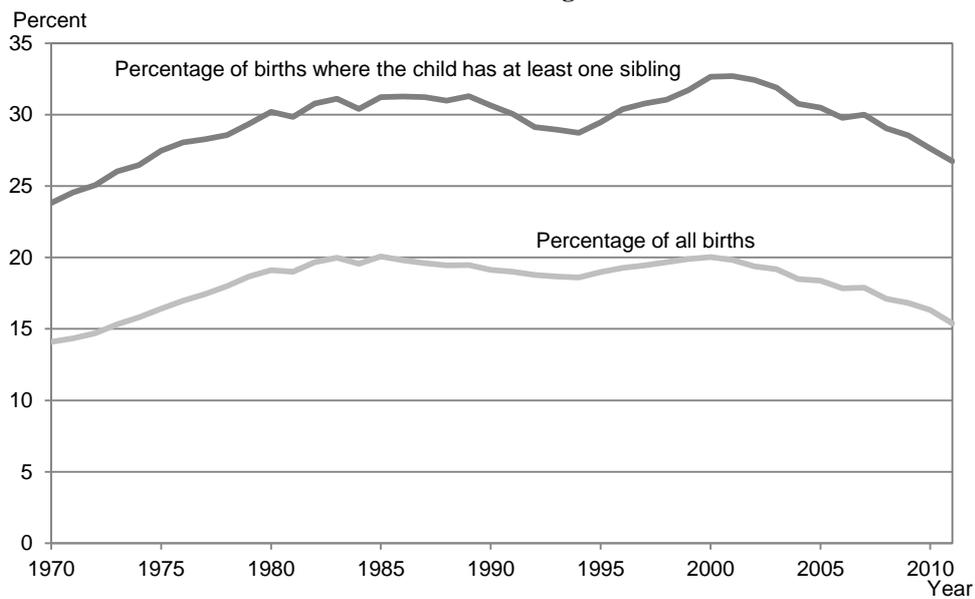
Figure 1
Percentage of children that experienced a separation in Sweden 1999–2011.



The other study (Statistics Sweden 2013b) also suggest an end of the trend with less stable unions. Register data of all children born in Sweden from 1970 shows that half-siblings have become less common during the 2000s. An increasing proportion of children born today have only full siblings. Thus, the impact of stepfamily fertility has declined. This means that children who have at least one

half-sibling upon birth comprise an increasingly smaller share of all children born. It means that it has become more common that children only have full siblings when they are born. This also means that women and men to a greater extent have children with the same partner. Of *all* children who were born in 2011, 15 percent had half-siblings at birth. If the share is only calculated based on those who at birth had *siblings*, 27 percent had at least one half-sibling, while the remaining 73 percent only had full siblings. At the beginning of the 2000s it was more common to have half-siblings. At that time 33 percent of all children born, and who had siblings, had at least one half-sibling, see figure 2.

Figure 2
Births where the child has at least one half-sibling 1970–2011



The next two sections analyses *the reasons* why parental separation has decreased during the 2000s and why it has become less common that newborn children have half-siblings. In the first of the two sections parental separations are studied and in the second section the development of half-siblings is analysed.

1. Parental separations during 2000s

Few studies analyse separations from the children's perspective, earlier studies have often instead looked at separations from the adults' perspective. In this register study parental separation is analysed for all children in Sweden, 0–17 years old, living with both their parents (biological or adoptive) during the year 1999–2011. The register includes around 1.4 million children every year and is a revision from the Swedish Total Population Register. Parental separation includes both separation (parents moving apart) and divorce. The aim of the study is to find explanations for the development of separations in Sweden during the first decade of the current century.

A significant increase in the level of education of the population has occurred in Sweden. In 2000, 37 percent of the women and 32 percent of the men aged 25–44 had a post-secondary education. In 2011 those shares had risen to 52 percent of the women and 41 percent of the men (according to Statistics Sweden's survey on the education of the population). As in many other countries there has also been a continuous postponement in childbearing. In 1970, the average age for women to have the first child was 24. Today the average age is 29. The upward shift accelerated during the 1990s because of the economic recession at that time. So in the 1990s an increasing number of young women and men instead went on to higher education and postponed having children. This pattern has remained in the 2000s.

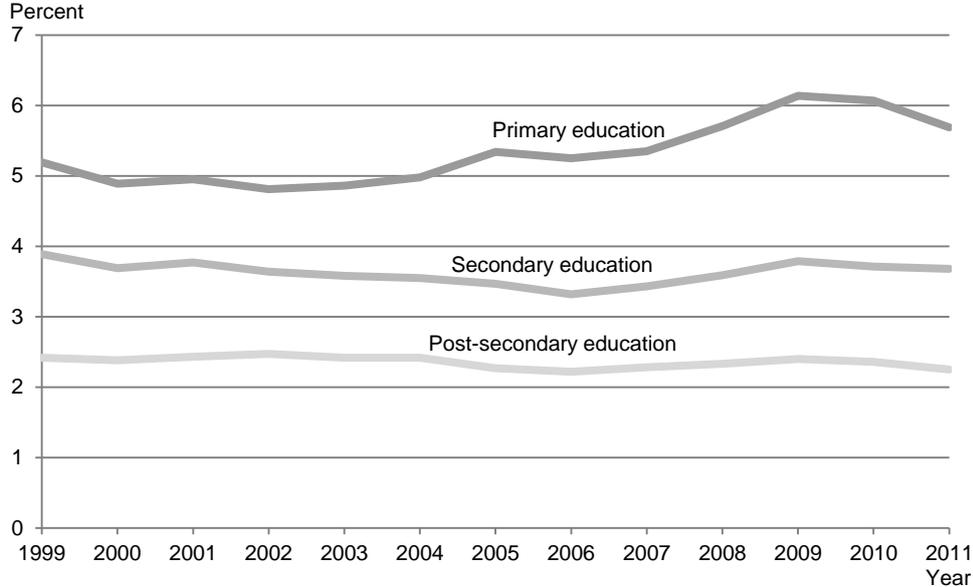
The risk that parents will separate depends on different socioeconomic and demographic conditions for the child, the family and the parents. In the study the development of separations is studied for children with different background. The different background variables are: type of family, child's age, number of children living at home, country of birth of the child and the parents, educational level, mother's age at birth of the child and the employment status of the parents.

There are big differences between the groups. The study shows that children with cohabiting parents have roughly twice as high a risk to experience a separation compared to married parents. However, the downturn of separations during the 2000s was greater for those with cohabiting parents than for children with married parents.

The results also show that the country of birth of the child and the parents also affects the risk of experiencing a separation. Children who themselves were born abroad, or who have parents that were, run a greater risk of experiencing a separation than children with Swedish born parents. The age of the parents at birth also has significance. The younger the mother is during childbirth, the greater the separation risk. We can clearly see that mothers younger than 30 years of age at childbirth have a significantly higher risk than those over 30 years old. The results show that children with cohabiting parents have around twice the risk for experiencing a separation between their parents compared to those with married parents.

Level of education is another factor that affects separations. We see that the higher the level of education of parents, the lower the risk that the child will experience a separation. If both parents only have primary education the risk for separation is more than double than if one parent has post-secondary education, see figure 3.

Figure 3
Proportion of children aged 0–17 whose parents have separated by parents’ highest level of education. 1999–2011

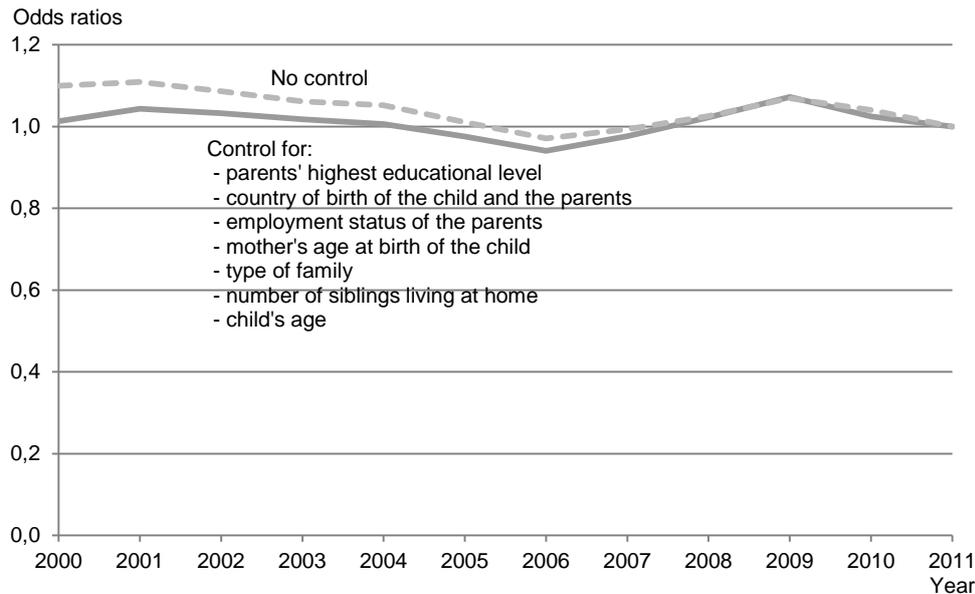


To further analyse the reasons for the upswings and downturns of separations during the 2000s a logistic regression model is used including the background variables. In the logic regression, the risk that a child experiences a separation is compared between the period 1999–2010 and the year 2011. First of all, the above variables are checked one at a time, and then all are checked at the same time. The differences over time decrease when all factors are entered.

The basic model analyses the difference in parental separation without any control variables. The results of the basic model are presented as a broken line in figure 4. When all the above factors are included in the model the differences over the years nearly disappears. This means that the downturn between 1999 and 2006 is largely due to demographic and socioeconomic changes. This model is shown with a continuous line in the same figure. The most important explanation for the downturn is that parents have a higher level of education and have become older at the same time. However, most of the years, the regression is still significantly separated from 1. That means that the control variables do not explain the whole change during the 2000s, there are other explanations in addition to these.

Figure 4
Comparison over time for children aged 0–17 who experience that parents separate during the year. The

years 2000–2010 are compared with 2011. The results are presented in the form of odds ratios.



2. Half siblings less common

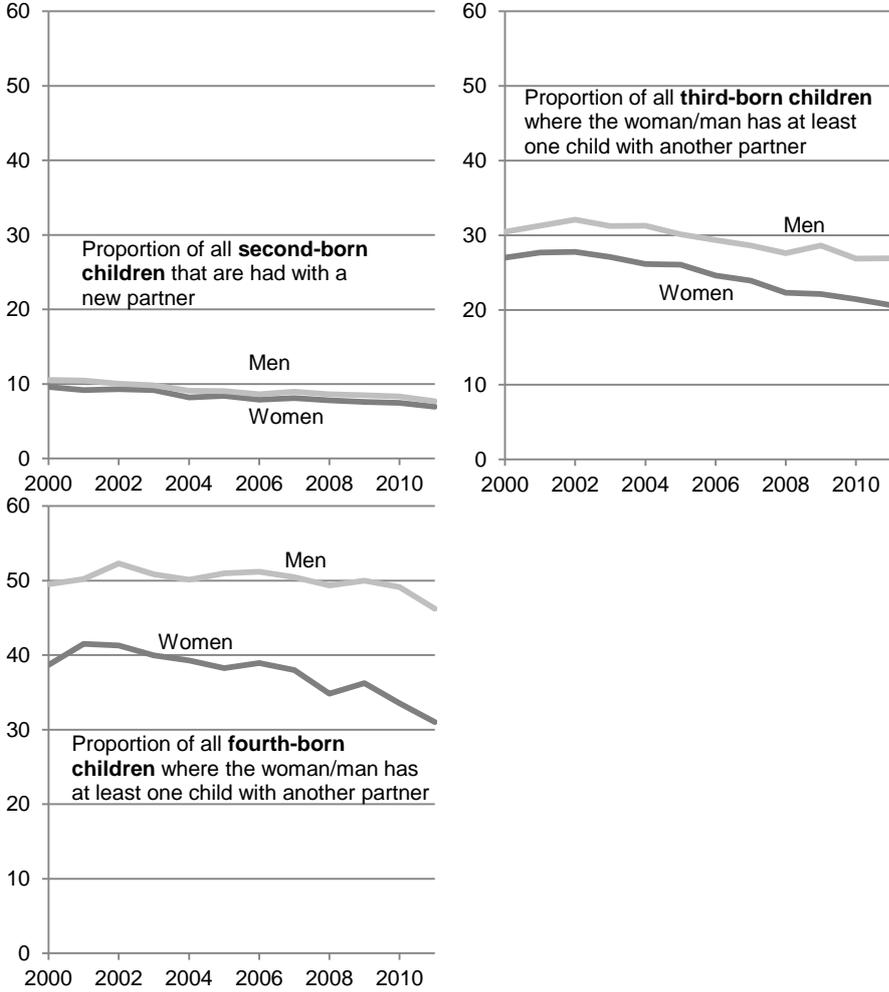
The demographic changes that Sweden and other countries have experienced in recent decades, such as having a family and children later in life and less stable relationships, have resulted in more single person households or single parents. When these groups become larger, the possibilities to create new relationships also increase. If these new relationships occur during childbearing ages, it can contribute to further childbearing. In the study the development of childbearing that is dependent on new relationships is studied for the period 1970–2001. The analysis is based on data from registers with information on all births for women and men 1970–2011. The partner that the persons have children with can also be identified in the registers.

The analysis has been done from the perspective of children as well as the perspective of parents. In the perspective of children the number of newborns who have half-siblings at birth is calculated. If a child has a half-sibling, then one of the parents had children earlier with another partner. From the parents' perspective we study how many women and men have children with more than one partner. The results from the perspective of children is illustrated in figure 2. During the period 1970 – 1990 it became more and more common that newborn children had half-siblings but in the 2000s there has instead been a downward trend.

In figure 5 the results from the parents perspective is illustrated. Most women and men have their second child with the same partner as the first child they had together. In 2011 7 percent of women and 8 percent of men had their second child with a new partner. Of those who had their third child in 2011, 21 percent of the women and 27 percent of the men had one of the three children with another partner. A relatively large percentage of women and men who have a fourth child have had their children with several partners. In 2011 this applied to 31 percent of the women and 46 percent of the

men who had a fourth child. Development during the 2000s shows that it has become less common to have children with different partners. This applies to the second as well as the third and fourth child.

Figure 5
Proportion of all second-, third and fourth-born children that are had with a new partner
2000–2011



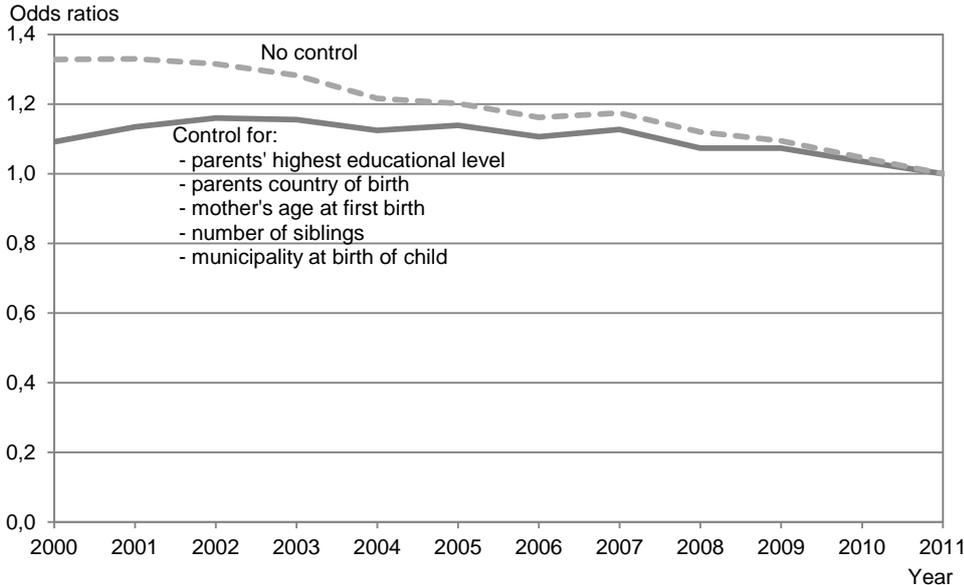
There are several possible reasons for this kind of development. One reason is that people are starting families and having children later. The risk of separation is greater for those who have children at an earlier age than those who do so at a later age (as was shown in the previous section). The age for starting a family also influences the time one has to find a new partner to have more children with, in case of a separation. Starting a family at a younger age (and thereby also separating at a younger age) means that there is more time to find a new partner to have additional children with. When families are started later in life (and separations occur likewise), many will not have time to have children with several partners.

Previous studies have shown that people with a higher level of education are less likely to have children with more than one partner (for example, see Thomson et al. 2012). The fact that women and men have a higher level of education to a greater extent can also be a contributing reason why more and more have their children with the same partner.

Another factor that may have contributed to the decrease in the 2000s is that there are more foreign born persons in the population. Studies show that foreign born persons have children with several partners to a lesser extent (for example, see Thomson et al. 2012). During the period that has been studied, the share of foreign born persons in the population has increased. In 2000, 15 percent of the population was born abroad. The corresponding share in 2011 was 21 percent.

In a logistic regression model the reasons for this decline is explored. The basic model analyses the differences in how common it is to have half-siblings at birth without any other factors. The year 2011 acts as a comparison year and it is the relative level compared with this year that is shown for other years. The results of the basic model are presented as a broken line in figure 6. The years 2000–2010 are significantly higher than for 2011. In the next model the following control variables are included: the mother's age at the birth of the first child, the level of education of the parents, the country of birth of the parents, the municipality group upon the birth of the child and the number of siblings at birth. This model is shown as a continuous line in the same figure. When these variables are inserted into the model, the differences over time decrease during the 2000s compared with 2011. The period 2000–2010 is still significantly higher than for 2011. This means that the downward trend of the 2000s can only partly be explained by changes in the factors described above, such as older first-time mothers, parents with higher educational levels and more children with foreign born parents. There are probably more explanations in addition to these.

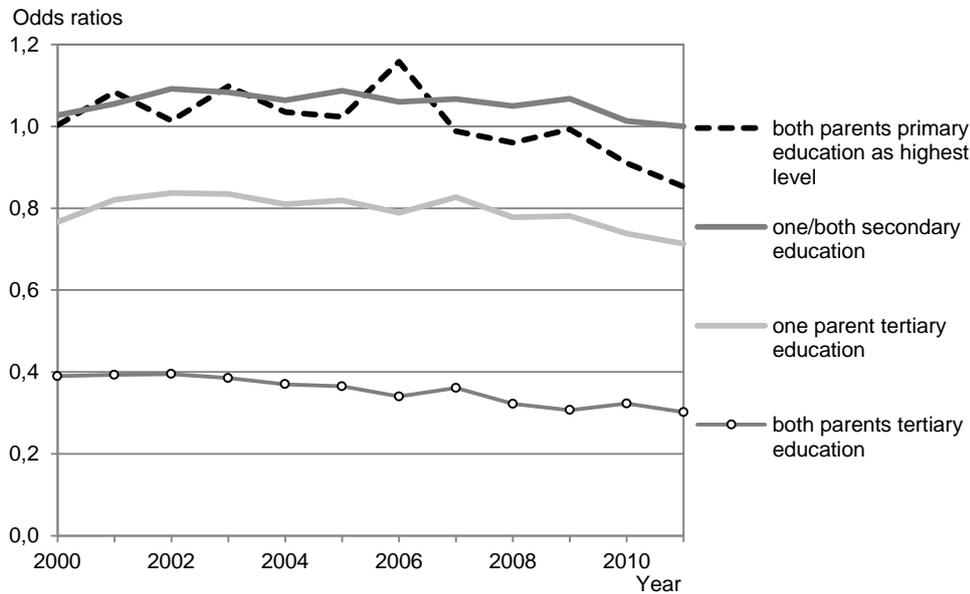
Figure 6
Comparison over time that children at birth have half-siblings. The years 2000–2010 are compared with 2011. The results are presented in the form of odds ratios.



There is a clear connection when it comes to the level of education of the parents. The higher the level of education of the parents, the less likely that the child is born with half-siblings. To see the development over time on the level of education of the parents, an interaction has been done between this variable and the year. The results are illustrated in figure 7. The tendency to have half-siblings at birth has decreased during the period regardless of the parents' level of education. The results may

indicate that the decrease began first among those with parents who had post-secondary education. For children with parents who had upper secondary education, the tendency decreases first at the end of the period.

Figure 7
Comparison over time that children at birth have half-siblings, by parents' level of education. 1990–2010 compared with 2011. The results are presented in the form of odds ratios



Discussion

Both studies indicate that socioeconomic and demographic factors have been significant for the downturn both in children that experienced a separation between the parents and a downturn in the tendency that newborn have half-siblings in the 2000s.

However, it appears that it is only partly explained by the factors included in these analyses. It is possible that the differences over time would decrease if more explaining variables were included in the model. But it is also probable that there are explanations in addition to the socioeconomic and demographic ones.

One such explanation could be increased gender equality between women and men. Increased gender equality can have led to stronger family ties, which in turn could make women and men more inclined to have all their children with one and the same partner. Researchers often conclude that the development of gender equality occurs in two steps (see Goldscheider 2010 for example). In the first step, gender equality increases in the public sphere. This mainly occurs by women's increased participation in the labour force. The second step occurs in the private sphere, that is, the family. In the first step, women enter the labour force while the men do not enter the home sphere to the same extent. This is believed to lead to increased conflicts in the family. In the second step of gender equality development, disagreement decreases and the family is strengthened. This is assumed to occur when

men begin to contribute more to household work. Some researchers believe that gender equality development in step two has a positive effect on childbearing (see Goldscheider 2010 for example).

The statistics give support to the fact that Sweden has come closer to step two. For instance, the Labour Force Surveys show that women with small children have increased their working time during the 2000s while working time among men with small children has decreased (Statistics Sweden 2012a). So even if women with young children still work less than men with young children, they are becoming closer to one another in working time. The same applies to time use of women and men for household work. Women spend more time on housework than men, but the time use studies that were done 1990/91, 2000/01 and 2010/11 show that the differences over time between the sexes have decreased (Statistics Sweden 2012b).

Perhaps gender equality has increased the most among highly educated persons. Research shows that those couples who build a career are those who are the least likely to separate and most likely to have a second, third and fourth child (Dribe & Stanfors 2010). One reason is thought to be that these couples have a more even distribution of housework which in turn could be positive for the relationship and for having children. Those with a higher level of education are also those who share parental leave the most. Men with a high level of education use more parental allowance days than men with a lower level of education, and the reverse is true for women (Swedish Social Insurance Agency 2011).

Thus it could be that Sweden has reached step two to a greater extent, and that families have become stronger. In this studies, the trend towards stronger families could be shown as an increased tendency to no increased separations and to have children with the same partner during the 2000s. More and more children who are born do not have half-siblings at birth, but only full siblings.

Another explanation to the reduced tendency in the 2000s to parental separations and the increased tendency to have children with the same partner could be a trend towards more family-oriented values. During the 2000s marriages have increased, childlessness has decreased (Statistics Sweden 2011) and that it is more common to have a third child (Statistics Sweden 2012c). These changes could be signs that attitudes have changed towards a more traditional view of the family-forming process. Perhaps is the "outdated" nuclear family on the march again?

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Appendix

Table T.1
Comparison over time for children aged 0–17 who experience
that parents separate during the year.
1999–2010 are compared with 2011.
The results are presented in the form of odds ratios.

Variable	Odds ratios	
	Model 1	Model 2
Year		
1999	1,15*	1,05*
2000	1,09*	1,01
2001	1,10*	1,04*
2002	1,08*	1,03*
2003	1,06*	1,02*
2004	1,05*	1,01
2005	1,01	0,98*
2006	0,97*	0,94*
2007	0,99	0,98*
2008	1,02*	1,02*
2009	1,06*	1,07*
2010	1,04*	1,02*
2011	1	1
Parents' highest level of education		
Primary education		1,20*
Secondary education		1
Post-secondary education		0,80*
Child's and parents' country of birth		
Swedish born, both parents born in Sweden		1
Swedish born, one parents born in Sweden and one foreign born		1,40*
Swedish born, both parents foreign born		1,07*
Foreign born		0,89*
Foreign born, adopted		0,89*
Parents' employment status		
Both parents employed		1
Only father employed		1,39*
Only mother employed		1,92*
Non parents employed		2,31*
Mother's age at childbirth		
Under 24 years		1,41*
25-29 years		1
30-34 years		0,85*
35-39 years		0,77*
40 years or older		0,75*
Family type		
Married		1
Cohabiting		2,01*
Number of siblings		
No siblings		1,11*
1 sibling		0,96*
2 siblings		1
3 or more siblings		1,12*

Table T.1 (cont.)

Variable	Odds ratios	
	Model 1	Model 2
Child's age		
0 years		0.97*
1 years		1.26*
2 years		1.38*
3 years		1.41*
4 years		1.45*
5 years		1.42*
6 years		1.38*
7 years		1.36*
8 years		1.32*
9 years		1.29*
10 years		1.24*
11 years		1.22*
12 years		1.19*
13 years		1.20*
14 years		1.17*
15 years		1.17*
16 years		1.09*
17 years		1

*p<0.05

Table T.2
Comparison over time that children at birth have half-siblings.
2000–2010 are compared with 2011.
The results are presented in the form of odds ratios.

Variable	Odds ratios	
	Model 1	Model 2
Year		
2000	1.33***	1.09***
2001	1.33***	1.13***
2002	1.32***	1.16***
2003	1.28***	1.16***
2004	1.22***	1.12***
2005	1.20***	1.14***
2006	1.16***	1.11***
2007	1.17***	1.13***
2008	1.12***	1.07***
2009	1.09***	1.07***
2010	1.05**	1.04*
2011	1	1
Mothers age at first birth		
-19 years		2.99***
20-24 years		1.66***
25-29 years		1
30-34 years		1.25***
35 years-		3.51***
Parents' educational level		
Data missing		0.44***
Compulsory		0.95***
Upper secondary		1
One parent post-secondary		0.75***
Both parents post-secondary		0.33***
Municipality group at time of child's		
Large cities		1.23***
Suburbs		1.02*
Larger towns		1.06***
Other municipalities		1
Parent's background		
Both parents born in Sweden		1
1 Swedish born. 1 foreign born		1.46***
Both parents foreign born		0.44***
Number of siblings at time of birth		
1 sibling		1
2 siblings		4.97***
3 siblings		9.92***
4 or more siblings		10.76***

***p<0.0001; **p<0.01; *p<0.05