

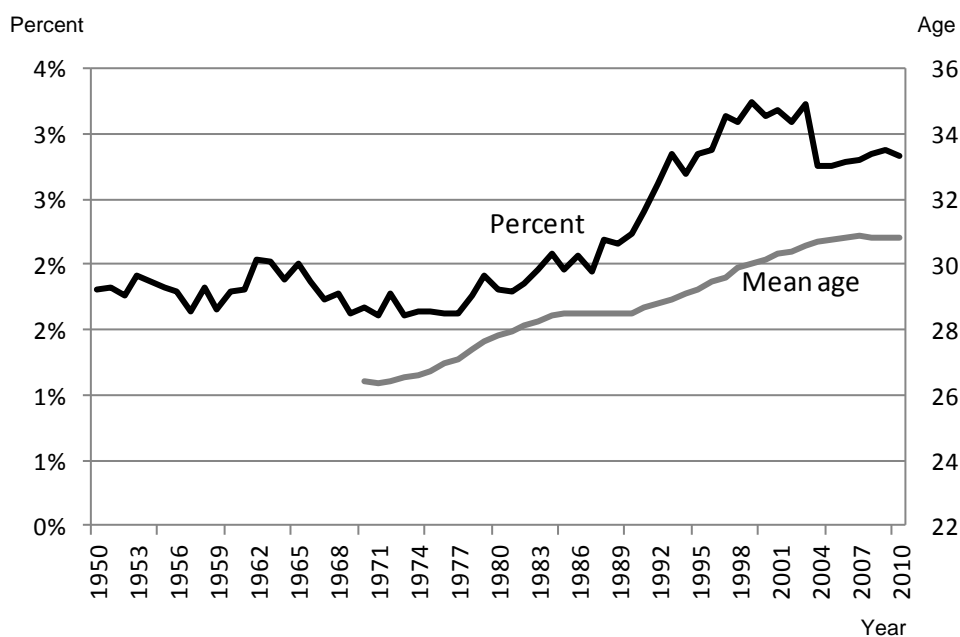
Lower fertility for twins

Introduction

The proportion of children born as a multiple birth has increased since the mid of the 20th century. During year 2010, 2.8 percent of the children in Sweden were born as a twin or triplet. In 1950 the same proportion was 1.8 percent. This increase in multiple births can be explained by the advancing female age at child birth but also that in vitro fertilization (IVF) have been more common.

Fig. 1

Proportion of children born in a multiple birth in Sweden 1950-2010 and women's mean age at birth of first child 1970-2010.



The decline in the multiple births in Sweden 2003 is explained by a change in the law about in vitro fertilization.

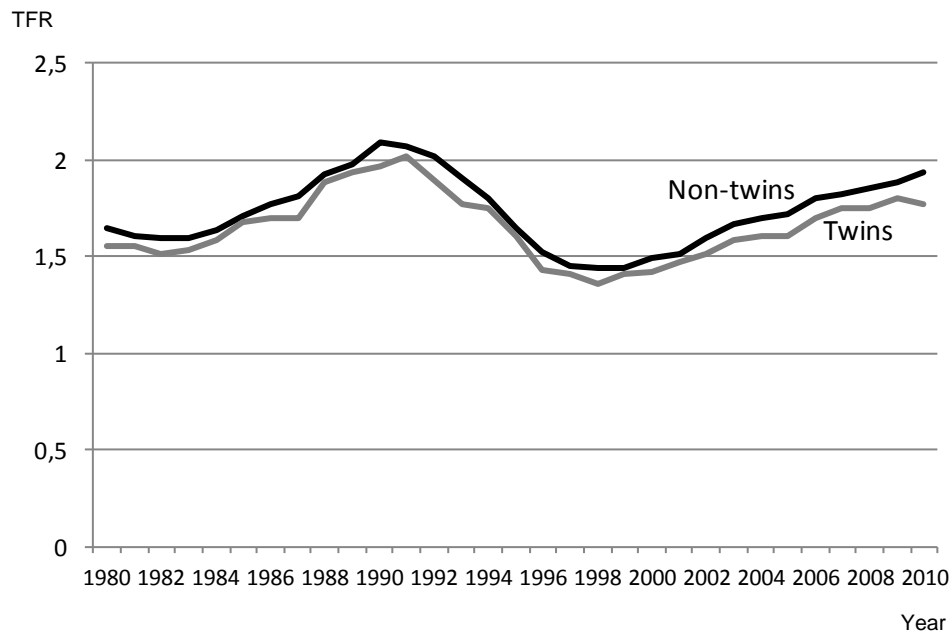
Method

Many studies compare twin siblings. In this study are the twins instead compared with the non-twins. The analysis is based on Swedish register data and the twins are connected to each other when they have the same mother and have the same birth date. The database contains 8.6 million individuals born between 1932 and 2010 and 181 000 of them are twins, triplets or quadruples. There is no information from the registers if the twins are monozygotic or dizygotic twins.

Results

The fertility in Sweden is characterized of big fluctuations during the 20th century. The study shows that both twins and non-twins have the same trends during time. As shown in figure 2 the twins over time have a lower fertility rate than the non-twins. Also the ultimate number of children for women in birth cohort 1950-1965 was lower for twins than non-twins. In 2010 was the total fertility rate for twins in Sweden 1.77 and the same number for non-twins were 1.94 children per woman.

Fig. 2
Total fertility rate for women in Sweden 1980-2010. Twins and non-twins.



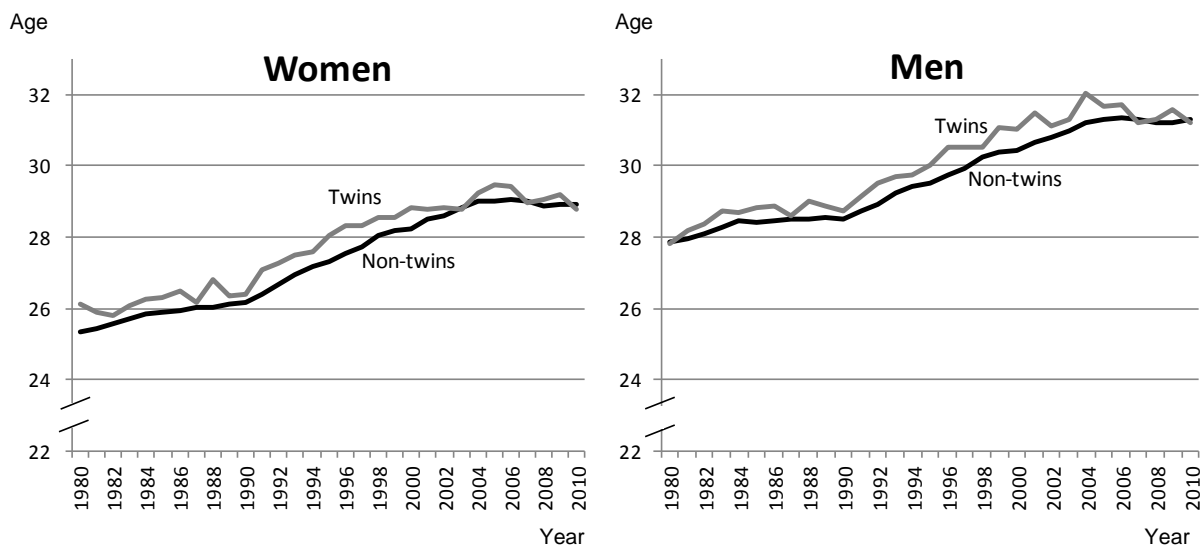
There are not only between twins and non-twins we find differences. When a comparison is made between twin women with a twin brother or a twin sister the study show that they with a sister have a lower fertility rate than they with a brother, see table 1.

Table 1
Total fertility rate for women in Sweden 1981-2010 (five year groups).

| Year | Non-twins | Twin women with twin brother | Twin woman with twin sister |
|-----------|-----------|------------------------------|-----------------------------|
| 1981-1985 | 1,63 | 1,59 | 1,56 |
| 1986-1990 | 1,92 | 1,87 | 1,82 |
| 1991-1995 | 1,89 | 1,91 | 1,76 |
| 1996-2000 | 1,47 | 1,42 | 1,40 |
| 2001-2005 | 1,64 | 1,59 | 1,55 |
| 2006-2010 | 1,86 | 1,81 | 1,73 |

The lower fertility for twins is confirmed when look at the proportion still childless at age 45. For women born 1950-1965 was the childless for twins 15 percent and for non-twins 13 percent. Even for the men it shows the same result. 23 percent of the twins and 20 percent of the non-twins were childless. Figure 3 also show that the mean age at birth of first child is higher than for non-twins, both for men and women.

Fig. 3
Mean age at birth of first child 1980-2010.



The differences between twins and non-twins are not big but the study shows that it is differences in fertility between the groups. Why there are this differences we can't say with just this study, more variables need to consider. One explanation of the result can be that children follow their parents' fertility pattern. If twins parents' in general are older than non-twins parents it's possible that even the children, in this case the twins, have children later. Another theory is that twins are very tight to their twin sibling and doesn't need a partner in the same extension as non-twins, the twin siblings have each other.