Re-partnering and third Births. Evidence from Sweden 1990-2005.
Martin Dribe \& Maria Stanfors

## Extended abstract

In research dealing with the interaction between work and family in contemporary societies there is a strong view that family life is highly incompatible with having career ambitions, at least for women. Most of the research has been studying women only and often found corroborating evidence for the rather negative connections between professional life and family life, although there are different views in the literature as well. However, in a previous study we could show that so called power couples (i.e. couples where both the man and the woman have the highest educational levels in fields most likely characterized by pronounced career paths) did not have lower fertility after first birth in Sweden between 1990 and 2005 (Dribe and Stanfors 2008). Quite the contrary, power couples had considerably higher fertility after the first birth than other couples. In fact we observed a more or less linear positive relationship between educational power and fertility in all intervals, where the couples with the lowest educational status also had the lowest likelihood of having another birth, while those with the highest status had the higher birth chances (see figure below). In couples where only one spouse had high educational status, there were only minor differences in fertility between couples where the man had higher educational status and couples where the woman had highest status. In this study we also showed that power couples with at least one spouse employed in the public sector were more likely to experience a third and a fourth birth than other power couples. It did not seem to matter much if the man or the woman worked in the public sector. We interpreted this as an indication of work conditions in career occupations being more compatible with family in the public sector compared to the private.

In the previous study we followed couples (both married and cohabiting) that remained together as a couple. However, it is possible that the likelihood of partnership dissolution differ between different couples, which in turn might affect the likelihood of continued childbearing. In this paper we study to what extent re-partnering is important for third birth fertility. Does the chance of a third birth increase if a couple is dissolved? Does the partnership context of third birth fertility differ according to the couple's educational power, career orientation and couple income?

The data used come from the Swedish population registers maintained by Statistics Sweden. From a dataset consisting of all individuals in the birth cohorts 1942-89 who resided in Sweden at any time from 1961 onwards, we select heterosexual couples (married or cohabiting without being formally married) who are in their first partnership. We follow these couples from the birth of the second child to the third birth and control for partnership status (same partner or re-partnered). The data are derived from the multigenerational register (Flergenerationsregistret) which contains information on biological and adopted children to all index persons in the sampling frame (all individuals in birth cohorts 1942-89 who resided in Sweden at some point in time after 1960). Due to frequent missing information on adoption dates for adopted children we only include biological children in the analysis. Because we only study couples in their first partnership with children, the number of children previously born is always the same for men and women in the couples.

From 1990 onwards the Swedish population registers record non-marital cohabitation when there are common children (RTB-families). To make sure that we follow the entire history of the couple from the birth of the first child onwards, only couples experiencing their first births after 1989 are included in the sample. For the individuals in these couples we have linked register based information on place of residence, income, education (level and field), branch of employment, as well as demographic events (deaths, external migration, and changes in civil status). In total we have 353,773 couples with two common children in the sample.

Most of the register based information is available once a year while the demographic information is available on a monthly basis. Even though, in principle, it is possible to construct a dataset for fertility analysis that is continuous with monthly precision in terms of the events studied and the starting time of partnerships, such an approach creates a large number of tied observations because a majority of birth intervals are between two and three years, and thus most couples share a rather limited number of birth intervals. For this reason we choose a discrete approach in the multivariate analysis, studying the probability of having a birth during the year conditioned on the values of the covariates at the beginning of the year.

To study the connection between power couples and fertility we construct a variable indicating the educational status of the spouses in the couples. It is defined according to both the highest educational level obtained and the field of education. For the group with the high educational power we also add a dimension of potential career-family compatibility as we distinguish between those who are employed in the private sector or government owned corporations, because we expect work conditions and demands in these occupations to be different from occupations in public administration or non-governmental organizations. A private sector career track is assumed to be more competitive and less compatible with family responsibilities than a career in the public sector. We categorize educational status into four different categories depending on the level of education, field of education and sector of employment:

1. High education power, private sector ( $\mathrm{high} / \mathrm{p}$ ): Post-graduate degree $(\mathrm{PhD}, \mathrm{PhLic})$ all fields, university education three years or more in fields of medicine, social sciences, law, business administration, science, mathematics, computer and technology. Employed in private companies or government owned corporations
2. High education power, other (high/o): Same levels and fields of education as in high/p, but employed outside private companies or government owned corporations (i.e. state or municipality administration, non-governmental organizations, other occupations).
3. Medium education power (middle): University education three years or more in fields of teaching, humanities and arts, farming and forestry, health and social work (except medical doctors), and services. High school and post-high school education less than three years (universities, community colleges, nursing schools etc), all fields.
4. Low education power (low): High-school education two years or less and basic education (up to nine years), all fields.

Table 1 show the distribution of third births for the couples in the sample by partnership status. Clearly most couples do not continue the childbearing after the second birth to have a third. About $20 \%$ of the couples experience a third birth within eight years in unchanged partner conditions, while only a bit more than $2 \%$ of the couples experience a third birth in new partnership context.

In Table 2 we show multinomial logit estimates (odds ratios) of third births in different partnership contexts with no birth as the base outcome. Thus, in this model we follow couples for up to eight years after the second birth and treat third birth in different partnership situations as competing risks. A couple might experience a third birth remaining together, or the man but not the woman could have a third birth with a new partner, or the woman but not the man, or both the man and the woman could have third births with new partners. The estimates in the table indicate the extent to which educational status, income, age, country of origin, and civil status at the birth of the second child affect the likelihood of the different outcomes.

First of all it seems quite clear that our previous finding that power couples have higher third birth fertility than low-power couples is not a result of only looking at non-dissolved partnerships. Comparing to couples with middle educational status, we see that the odds of having a third birth are higher among power couples not only for same partner third births, but also for re-partnered births in most cases. It is interesting to note, however, that if we look in the other end of the power scale low-power couples are considerably more likely to have a third birth in a re-partner context compared to middle-power couples, while they have lower odds of having a third birth in the same partnership. This indicates that the work-family compatibility in career occupations is quite high in Sweden, not posing serious constraints on continued childbearing. For low-power couples, on the other hand, third births are to a much higher extent connected to re-partnering, and it might be a way of confirming the new partnership.

It is also clear that the impact of re-partnering on third births differ by couple income, age, country of origin and civil status. Although there is a negative relationship between income and third births regardless of partnership context, the effect is much more powerful for repartner fertility, especially the outcome where both the man and the woman have third births with new partners. As expected, higher ages of the spouses are connected to lower chances of third births in general, but also in this case the effects are stronger for re-partnered birth outcomes.


Table 1. Distribution of third births by partnership eight years after second birth.\%
No birth
No birth ..... 78.0
Birth with same partner ..... 19.8
Man birth with new partner ..... 0.8
Woman birth with new partner ..... 1.0
Both births with new partners ..... 0.4
Total ..... 100
N353,773

Note: Only births within 8 years since second birth.

Table. Multinomial logit estimates of third births in different partnerships. Couples with two common children. Base outcome: no birth.

|  | Same partner |  | Man with new partner |  | Woman with new partner |  | Both with new partners |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | OR | $P>\|z\|$ | OR | $P>\|z\|$ | OR | $P>\|z\|$ | OR | $P>\|z\|$ |
| Education status |  |  |  |  |  |  |  |  |
| m high/p-w high/p | 1.72 | 0.00 | 0.86 | 0.57 | 1.82 | 0.02 | 3.62 | 0.00 |
| m high/p - w high/o | 1.79 | 0.00 | 1.06 | 0.87 | 1.62 | 0.16 | 3.80 | 0.00 |
| m high/o - w high/p | 1.55 | 0.00 | 1.88 | 0.10 | 2.26 | 0.07 | 1.80 | 0.41 |
| $m$ high/o - w high/o | 2.03 | 0.00 | 1.57 | 0.11 | 1.69 | 0.12 | 1.45 | 0.46 |
| m high/p-w middle | 1.48 | 0.00 | 0.82 | 0.24 | 1.37 | 0.03 | 3.00 | 0.00 |
| m middle - w high/p | 1.16 | 0.00 | 1.68 | 0.01 | 0.89 | 0.74 | 1.87 | 0.07 |
| m high/o - w middle | 1.61 | 0.00 | 1.30 | 0.20 | 0.63 | 0.14 | 3.33 | 0.00 |
| $m$ middle - w high/o | 1.36 | 0.00 | 1.74 | 0.01 | 1.26 | 0.44 | 1.48 | 0.31 |
| m middle - w middle | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| m high/p-w low | 1.23 | 0.00 | 2.13 | 0.00 | 1.89 | 0.01 | 3.62 | 0.00 |
| m low - w high/p | 0.88 | 0.08 | 1.66 | 0.14 | 0.71 | 0.56 | 1.09 | 0.90 |
| m high/o-w low | 1.44 | 0.00 | 1.77 | 0.17 | 2.60 | 0.00 | 0.89 | 0.87 |
| m low - w high/o | 1.14 | 0.06 | 2.27 | 0.01 | 1.93 | 0.09 | 2.68 | 0.03 |
| m middle - w low | 0.97 | 0.10 | 1.64 | 0.00 | 1.66 | 0.00 | 1.87 | 0.00 |
| m low - w middle | 0.92 | 0.00 | 1.44 | 0.00 | 1.28 | 0.00 | 1.21 | 0.08 |
| m low - w low | 0.99 | 0.45 | 2.41 | 0.00 | 2.35 | 0.00 | 2.52 | 0.00 |
| Acc. couple income |  |  |  |  |  |  |  |  |
| -11.9 | 1.50 | 0.00 | 1.21 | 0.08 | 1.14 | 0.17 | 2.30 | 0.00 |
| 12.0-23.9 | 1.52 | 0.00 | 1.35 | 0.00 | 1.34 | 0.00 | 2.01 | 0.00 |
| 24.0-29.9 | 1.26 | 0.00 | 1.12 | 0.03 | 1.11 | 0.02 | 1.35 | 0.00 |
| 30.0-35.9 | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| 36.0-41.9 | 0.82 | 0.00 | 0.86 | 0.02 | 0.94 | 0.25 | 0.85 | 0.11 |
| 42.0-47.9 | 0.76 | 0.00 | 0.88 | 0.17 | 0.81 | 0.04 | 0.95 | 0.74 |
| 48.0- | 0.69 | 0.00 | 0.81 | 0.07 | 0.41 | 0.00 | 1.04 | 0.81 |
| Age |  |  |  |  |  |  |  |  |
| Man's age | 0.95 | 0.00 | 0.97 | 0.60 | 0.84 | 0.00 | 0.70 | 0.00 |
| Man's age sq. | 1.00 | 0.01 | 1.00 | 0.06 | 1.00 | 0.00 | 1.00 | 0.00 |
| Woman's age | 0.98 | 0.09 | 0.72 | 0.00 | 0.82 | 0.00 | 0.78 | 0.00 |
| Woman's age sq. | 1.00 | 0.00 | 1.01 | 0.00 | 1.00 | 0.22 | 1.00 | 0.22 |
| Country of birth |  |  |  |  |  |  |  |  |
| Swe - Swe | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |
| Swe - Nordic | 1.03 | 0.20 | 1.48 | 0.00 | 1.37 | 0.00 | 1.75 | 0.00 |
| Swe - Eur/N.Am. | 0.80 | 0.00 | 1.29 | 0.02 | 0.90 | 0.37 | 1.62 | 0.00 |
| Swe - Rest | 0.70 | 0.00 | 1.32 | 0.01 | 1.07 | 0.47 | 2.15 | 0.00 |
| Nordic - Nordic | 0.81 | 0.01 | 1.15 | 0.65 | 0.93 | 0.79 | 2.84 | 0.00 |
| Nordic-Eur/N.Am. | 0.91 | 0.54 | 1.22 | 0.78 | 2.83 | 0.01 | 2.51 | 0.20 |
| Nordic - Rest | 0.88 | 0.30 | 3.65 | 0.00 | 1.56 | 0.26 | 4.03 | 0.00 |
| Eur/N.Am. - Eur/N.Am. | 0.39 | 0.00 | 0.31 | 0.00 | 0.15 | 0.00 | 0.54 | 0.01 |
| Eur/N.Am. - Rest | 0.67 | 0.00 | 1.58 | 0.14 | 0.60 | 0.15 | 1.18 | 0.72 |


| Rest -Rest | 1.08 | 0.00 | 0.62 | 0.00 | 0.31 | 0.00 | 2.84 | 0.00 |  |
| :--- | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Civil status |  |  |  |  |  |  |  |  |  |
| Cohabiting | 1.00 |  | 1.00 |  | 1.00 |  | 1.00 |  |  |
| Married | 1.54 | 0.00 | 0.89 | 0.00 | 0.93 | 0.05 | 0.78 | 0.00 |  |
|  | 70,088 |  | 2,782 |  | 3,569 |  | 1,530 |  |  |
| Births | 353,773 |  |  |  |  |  |  |  |  |
| N | 26,888 |  |  |  |  |  |  |  |  |
| LR chi2 | 0.0000 |  |  |  |  |  |  |  |  |
| Overall p |  |  |  |  |  |  |  |  |  |

