

# Educational choice, labor market entrance, and family career – in that order?

by

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## Short Abstract

Few people get children while enrolled in higher education. However in Sweden we observe a strongly increasing share, in 2005 around 25 percent of female university students, who have children. In Sweden as in many other countries more women than men attend higher education; individuals are enrolled for longer periods and allocate these studies to later parts of life. In this paper we explore the composition of students with respect to parenthood, investigate allocation of studies and the study length, and examine potential outcomes after studies have ended. We use a large longitudinal register micro data set containing information about individuals' background characteristics, incomes, and educational achievement. Somewhat surprisingly we find indications that female students with children are on average more efficient in their studies and tend to have faster wage growth also when conditioning on type of exam.

## Extended Abstract

Postponement of first births has been a trend in many populations leading to very low TFRs. There is a very substantial literature around this demographic phenomenon, discussing many different factors. Increasing female enrollment in education has been seen as a key factor, since it has been assumed that the chain of life events should follow the pattern, education, labor market entry, family formation and only then children. In Sweden we now observe a very strong trend where family formation and children come first and education only after that. It is mainly a female trend where many females study with children. Although few people get children while enrolled in higher education we observe a strongly increasing share, around 25 percent of female university students in 2005, who have children, see Figure 1. Obviously only a little more than half of those registered are financing their studies within the system of study allowances and study loans. The share for males is around 10 percent, thus although considerably lower still not negligible. In Sweden as in many other countries more

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women than men attend higher education; individuals tend to be enrolled for longer periods and increasingly allocate these studies to later parts of life.

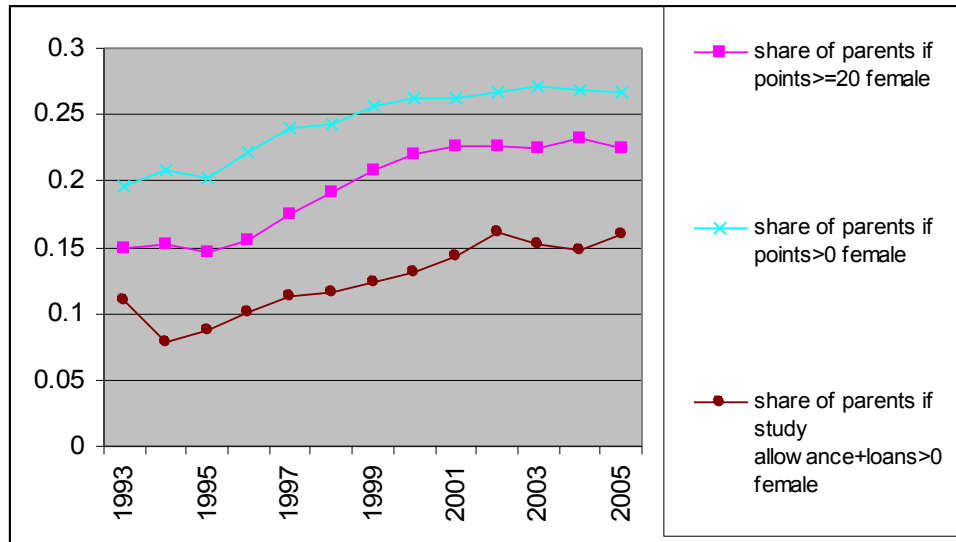


Figure 1 Share of students with children, females

Using a three percent longitudinal sample of the total Swedish student population 1993-2004 from comprehensive register data we explore the composition of students with respect to parenthood, investigate allocation of studies and the study length, and examine potential outcomes after studies have ended. We use a large longitudinal register micro data set containing information about individuals' background characteristics, incomes, and educational achievement. Somewhat surprisingly we find indications that students with children are on average somewhat more efficient in their studies also when conditioning on type of exam. They also tend to have faster wage growth after completing studies.

One might argue that studying with (small) children should result in lower study performance because of a prolonged educational period, especially if studies have to be combined with low-qualification jobs in order to support the children. However it is also reasonable that students with children may be more inclined to finish initiated studies earlier because they are in greater need to improve their economic situation. This in fact seems to be the case in our data.

The potential effect of studying with children has conventionally been assumed to be deleterious and, in fact most education systems are organized under the presumption that students do not have families. The potential effects on studies and subsequent outcomes from studying with children have however not really been investigated.

Thalberg's (2009) study about the childbearing of Swedish students in tertiary education provides direct evidence that the economic conditions for students have significant impact on students' childbearing decisions, and the effect is stronger among younger

students. But when income is controlled for, students above age 30 have similar risk of first birth as non-students. In couples where the woman is studying the risk of having a child is significantly lower compared to other couples where none is studying, whereas if the man is studying the risk is unaffected compared to other none-student couples. The observation of more than 25 percent females studying with children appears enigmatic against this background.

In 2004 between 23 and 27 percent of female students had children, depending on how student is defined in terms of university points taken. Parenthood among those that has student financing (through student allowance and loan) is less frequent probably indicating that mother students have alternative sources of income (older with previous labor market history, hence eligible for income related benefits, and may have a partner with more substantial incomes).

But older students that have children are different in many ways compared to “normal” students. Students with children are clearly more directed towards educations for the pedagogical or health professions than other students. From a pure income-consumption view it would be irrational to plan to start education after first having children.

## **Results**

### **Who are the students that study with children?**

First we present descriptive evidence of distinguishing features of students with children as opposed to students without children. Student is defined in two ways. As indicated in the previous figure it is mainly females that study with children.

Among students above 30 there is a positive association between parenthood status and the incomes of one’s parents. Among students below 30 this association is negative. First, parental income might substitute for own income during student years or when one’s children are small since parents often help out with transfers to their children. Second, for younger students the income of one’s parents might reflect some sort of study tradition within a family; since higher income is associated with higher education there will be a correlation between the income level of the parents and the university choice the young adult. In families with stronger study traditions children before studies may be discouraged.

### **Parents are more motivated?**

As we proceed to estimating fixed effects models relating the pace and success of studies to background controls and individual effects the conclusion is that female student parents on average seem more efficient. Conditional on educational field and level they take more points inside their educational field and spend less time in

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university. They achieve their diploma faster than non-parents. Thus the motivating effect of parenthood to faster achieve labor market entry seems to be dominating.

Also with respect to post-education outcomes during a five year period female student parents are more successful in having a faster wage growth.

There are some caveats to observe. The data on student status does not exclude that the person is at the same time employed or unemployed. The fact that academic years does not match calendar year data causes some further problems in determining whether registered students are in fact studying. Cohabitation households where the partners do not have children in common cannot be identified. We do not know whether work is full-time or not. This is especially troublesome since the Swedish parental leave insurance can be combined with part time studies in very flexible ways. The span of data limits our possibilities to examine a longer period of post-education outcomes as parenthood prior to enrolment in higher studies must be identified.

Notwithstanding these sources of vagueness in our information set our conclusion is that we have identified a new phenomenon where women who intentionally or unintentionally have children before higher education seems to have found a working strategy to combine education and family. This strategy only to a minor extent rely on the public study financing system but nevertheless produce good results both in terms of educational achievement and in terms of post-education labor market outcomes.

Our results support Gustafsson's (2001) suggestion that government should consider political measures to facilitate the combination of being a student and a mother because this will have a tendency to decrease age of maternity and thus avoid that postponement leads to involuntary childlessness. Our findings hint that a further reason for such policy measures may well be that both educational outcomes and post-education outcomes improve at the same time as the time in education becomes shorter.

Further research is necessary, however, in order to determine exactly what strategies that has allowed the rather sensational increase in female students with children in Sweden.