

Student flows and employment opportunities before and after implementation of a third year in vocational programmes at upper secondary school

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SUMMARY

The present study describes students flows before and after the latest reform of upper secondary school in which a third year as well as a new grading system and new entrance requirements were introduced in vocational programmes. Published and unpublished data on student flows through upper secondary school before and after implementation of the reform form the basis of the study.

Results show that after implementation of the reform the number of students who left upper secondary school without completing their education increased dramatically. However, most dropouts left upper secondary school late in their third year. Employment opportunities were much better for this group than for those who had left school in their first or second year, but not as good as for those who had completed a vocational upper secondary education.

Introduction

Great changes took place in the Swedish school system during the last century. The decision on compulsory schooling for all children was taken in 1842, but it was not implemented until the turn of the century (Marklund, 1980). At that time only 1 or 2 % of an age cohort enrolled in upper secondary educa-

tion (Erikson and Jonsson, 1993). Today almost all young people continue their studies at upper secondary school after nine-year comprehensive, compulsory school (98% in 2004) (National Agency for Education, 2005). This dramatic change did not take place continuously. Most changes took place in the 1950s and afterwards. Reform of upper secondary school started in the 1960s. Schools of technology (four years) and schools of commerce (three years) were integrated at upper secondary level with academic upper secondary education (three years) in 1965. A few years later in 1971 vocational training was also integrated in two-year programmes with some general education included. In addition several vocational courses were created, which usually lasted one year. A few other programmes which were neither vocational nor strictly for preparing for higher education also became two-year programmes. The aim of this reform was to create more equality in educational opportunities (Härnqvist and Svensson, 1980). Another aim was to raise the competence of the labour force and ease job changes due to technical developments (Olofsson, 2005).

At the beginning of the 1990s a reform of upper secondary education was implemented in which all programmes became three-year programmes. Soon afterwards upper secondary schools were considered antiquated and new changes were proposed and discussed. The proposed changes were much criticised and never decided on in parliament. Instead the government presented a bill for gradual reform in 11 steps (Government Bill 2003/04:140), which would have been implemented in 2007 had the government remained unchanged after the election in September 2006. The new government stated that it wanted a more extensive reform of upper secondary school than the 11 steps and therefore stopped this gradual reform. They will carry out a new study of upper secondary school.

Thus, school policy is a constant political debate and of vital importance in a fast changing economy and labour market. In this debate it is interesting to investigate what happened after the last reform of upper secondary school when a third year in vocational programmes and a new grading system was implemented. It is important how student flows through upper secondary school and how employment opportunities for young adults developed after implementation of the reform.

Aims of the study

The aim of this study is to investigate the flows of pupils/students through upper secondary school before and after the most recent reform of the Swedish upper secondary school in 1991. We investigate whether the number of young people without an upper secondary education increased after the reform. Flows through upper secondary school will go back as far as the 1960s to show the changes over a longer time, rather than just prior to implementation of the reform. Another aim of the study is to investigate employment opportunities for young adults who completed new vocational upper secondary education after the reform and for those who did not complete it. Have these groups more difficulties in getting a job than before the reform?

Method and data

Flows of pupils/students through the Swedish school system are quite well documented in a longitudinal project (evaluation through follow-up) in which a sample of an age cohort of pupils are followed through the school system every fifth year (Härnqvist, 1998). The sample size is about 10 000 pupils for every cohort under study. The first cohort was born in 1948 and the latest in 1987. Statistics from this project are taken or calculated from published reports.

Flows of students through upper secondary school have also been documented in follow-up studies of school leavers from nine-year comprehensive school. They have been investigated at age 23, by Statistics Sweden, on their educational attainment and occupation after leaving school. The first cohort was investigated in 1978 (Statistics Sweden, 1980). They left comprehensive school in 1971, when they were 16 years old. They were also the first to attend integrated upper secondary school (*gymnasieskolan*) created following changes introduced in 1971. This type of follow-up study of school-leavers seven years after leaving comprehensive school was also carried out in 1986 and 1995 (Statistics Sweden, 1987; 1996). These studies were based on large samples of young adults (12 800 – 16 000 persons).

The statistics on educational attainment from these studies presented in this article are calculated from published reports. The statistics on employment status are unpublished data from separate research projects based on the above-mentioned follow-up studies (Murray, 2000). However, these follow-up studies ceased in the 2000s. Instead, Statistics Sweden linked data from registers on educational attainment to registers on employment in a database for the National Agency for Education for the year 2002 (National Agency for Education, 2005). The registers have data for the whole population, some

of which have been published in a Swedish report (National Agency for Education, 2005). Thus, both earlier published statistics and unpublished data will be presented in this study.

Implementation of comprehensive school and integrated upper secondary school

At the beginning of the 1950s, when a pilot scheme for comprehensive and compulsory nine-year school started, only 10 % of an age cohort enrolled in upper secondary education (Erikson and Jonsson, 1993). Compared to other countries in Europe, Sweden had a rather old-fashioned school system (Marklund, 1980). Seven years of compulsory education had just been implemented at that time.

The decision to implement nine-year comprehensive education was not taken until 1962 by parliament. At that time, about 50 % of the municipalities in Sweden participated in the pilot scheme for nine-year comprehensive education. Implementation of nine-year comprehensive education continued during the 1960s up to 1970. After the decision on nine-year comprehensive education, reform of upper secondary education followed. During the 1970s new integrated upper secondary schools were built all over the country and enrolments of students increased, probably improved by increasing unemployment rates among young people. In the 1980s the political goal of enrolling all young people in upper secondary school was launched by the government. Ordinary education for young people should include upper secondary education (Dahlgren, 1985).

Student flows in the 1960s and 1970s

Even before integrated upper secondary education was introduced in 1971, the number of young people continuing to study after compulsory education increased dramatically (Table 1). Nine-year comprehensive school was compulsory to the age of 16.

Table 1: Young people attending school at age 17, (one year after compulsory education) as a percentage of the age cohort

| Year of birth | 10th year in school | Percentage of 17 year olds still in school | Percentage having attended nine-year comprehensive school |
|---------------|---------------------|--|---|
| 1948 | 1964/65 | 41 | 33 |
| 1953 | 1969/70 | 63 | 80 |
| 1958 | 1974/75 | 73 | 100 |

Source: Own calculations of data taken from Härnqvist and Svensson, 1980, pp. 17-19.

Table 1 shows that a few years after the decision on nine-year comprehensive school was taken, 41 % of an age-cohort was still at school at age 17, which means after compulsory education. Only a third had attended new comprehensive school. In 1969/70, five years later, about 80 % of those aged 17 had attended this form of school. In that year a most of those aged 17 were still at school. This was an increase of 22 percentage points in five years. In 1974/75, after another five years, all those aged 17 had attended nine-year comprehensive school. During this period, there was also a great increase but only half that of five years earlier. Thus, the great increase in participation in further education and training occurred before integrated upper secondary education was introduced in 1971 all over the country. The increase occurred during implementation of nine-year comprehensive education.

There was probably widespread suppressed demand for further education and training among large numbers of the population. The economy was expansive and demand for skilled labour was increasing. With nine-year compulsory education, the step to continue to upper secondary school for another couple of years was much smaller than before. It was particularly so for young people in the countryside. Before nine-year comprehensive school, parents had to send their children away from home to lower secondary education at the age of 11 to 13, a prerequisite for continuing to upper secondary education. After implementation of nine-year comprehensive school, continuing to upper secondary school was an easier decision to make. It was a smaller step to take when children were 16 instead of only 11 to 13 years old.

The latest reform of upper secondary school

After many years of pilot schemes, another reform of upper secondary education was introduced at the beginning of the 1990s. All programmes at upper secondary school were turned into three-year programmes. The core subjects Swedish or Swedish as a second language, English and mathematics became compulsory in all vocational programmes. This meant that vocational programmes were extended by another year and other two-year programmes turned into the not strictly academic three-year arts programme. The aim was to prepare young people for higher demands of competence in working life and a better base for further education and lifelong learning. Another aim was to make vocational programmes more equivalent in status to academic programmes (Olofsson, 2005). Still the goal was also, as earlier in the 1980s, to enrol all young people at upper secondary school. The three-year programmes were implemented in all upper secondary schools in 1993. Students who enrolled in upper secondary school that year had only three-year national programmes to choose from. Another change implemented after the three-year programmes was a new grading system at comprehensive school and at upper secondary school. It was implemented in 1994 for those beginning their studies at upper secondary school that year. The new grading system was and still is criterion-referenced in four steps: fail, pass, good and very good. The former grading system was norm-referenced with five steps, a 5 meaning excellent and a 1 very limited achievement. Pupils did not fail if they got a grade at any level in all subjects. There were still no formal qualifications for continuing to upper secondary school. If pupils had a leaving certificate from comprehensive school they could continue to upper secondary school. However, the number of programmes to choose from was limited for pupils with low grade-point-average.

In 1998, new entrance requirements to upper secondary school were introduced. Pupils leaving comprehensive school had to pass Swedish or Swedish as a second language, mathematics and English in their leaving certificate to enrol in a national programme, or they had to upgrade their competence in the so-called 'individual programme' (a preparatory programme for national programmes).

Decentralisation of upper secondary school

Upper secondary schools were formerly run by the State, but in 1991 the municipalities took over. Municipalities became the employers of teachers instead of the State. They could start new schools and special programmes adapted to local demands. This change did not increase the variation in resources to schools between municipalities as expected (Ahlin and Mörk, 2005). The supply and availability of upper secondary education increased through

the reform but mainly academic programmes became more available. Most upper secondary schools built were small with only a few programmes. Vocational programmes were too specialised and expensive for small municipalities. Thus, availability of many vocational programmes became more restricted after the reform, particularly in some regions (National Agency for Education, 2002). Another change for students of vocational programmes was that they were compared not only to students in their own programme as before but also to students in academic programmes in subjects such as Swedish, English and mathematics. It meant that students in vocational programmes on average got low grades compared to students in academic programmes.

Student flows before and after implementation of the third year in vocational programmes

It is interesting to investigate student flows after implementation of the third year in vocational programmes, before the grading system and new entrance requirements were introduced. The cohort that enrolled in upper secondary school in 1993 attended upper secondary school with three-year programmes but with the old grading system and entrance requirements. This cohort was studied in 1997 at age 20 in the above-mentioned longitudinal project 'evaluation through follow-up' (Härnqvist, 1998) and can be compared to two older and one younger cohort at the same age. For the youngest cohort, both the new grading system and the new entrance requirements were implemented. Educational attainment at age 20 in the four cohorts is presented in Table 2.

Table 2: Educational attainment at age 20 in four cohorts. Percentages of the age cohorts

| Men / Educational level | 1987 | 1992 | 1997 | 2002 |
|--|-------------|-------------|-------------|-------------|
| Completed upper secondary education | 81 | 85 | 82 | 69 |
| Dropped out of upper secondary education | 8 | 8 | 12 | 27 |
| Still attending upper secondary school | - | - | 3 | 2 |
| Not enrolled in upper secondary school | 10 | 7 | 3 | 2 |
| Total | 100 | 100 | 100 | 100 |
| Women / Educational level | 1987 | 1992 | 1997 | 2002 |
| Completed upper secondary education | 82 | 84 | 84 | 76 |
| Dropped out of upper secondary education | 10 | 9 | 10 | 21 |
| Still attending upper secondary school | - | - | 4 | 1 |
| Not enrolled in upper secondary school | 8 | 7 | 3 | 2 |
| Total | 100 | 100 | 100 | 100 |

Source: Statistics Sweden, 2003, p. 7.

Table 2 shows that the transition to upper secondary school became more frequent for every cohort presented. Further, Table 2 shows that the proportion of 20 year-olds with completed upper secondary education did not change much between 1992 before the reform was implemented and 1997 when the three-year programmes were implemented. But the proportion with completed upper secondary education decreased dramatically both among men and women in 2002, when the new grading system and entrance requirements to upper secondary school were implemented. The dropout rate among young men was particularly high.

Extending vocational programmes to three-year programmes was perhaps not the main cause behind the drop in the percentage of 20 year-olds completing upper secondary education. Other changes must be considered such as the new grading system and new criteria for enrolling in a national programme at upper secondary school, etc., which were both implemented somewhat later than the three-year vocational programmes.

Student flows before and after the third year and the new grading system

Follow-up studies of school-leavers from comprehensive school at age 22/23 include the first cohort who entered integrated upper secondary school in 1971, so we can see development of educational attainment of 22/23 year-olds from the 1970s. Data for 2002 are also more detailed than in Table 2. We can see if the dropouts left school during the first two years or in the third year. However, the cohort investigated in 2002 at age 22 did not experience the new entrance requirements. They enrolled in reformed upper secondary school in 1996 with three-year vocational programmes and a new grading system, but the new entrance requirements were not yet in place.

Table 3 presents the educational attainment of four cohorts at age 22/23 according to follow-up studies by Statistics Sweden (Statistics Sweden, 1980, 1987, 1996) and data on educational attainment from the National Agency for Education database.

Table 3: Educational attainment at age 22/23 in four cohorts. Percentages of the cohorts

| | 1978 ⁽¹⁾ | 1986 ⁽¹⁾ | 1994 ⁽²⁾ | 2002 ⁽²⁾ |
|--|---------------------|---------------------|---------------------|---------------------|
| Men / Educational attainment | | | | |
| Completed 3- 4-year or a new 3-year programme | 25 | 25 | 40 | 72 |
| Completed 2-year programme | 33 | 43 | 41 | - |
| Completed a programme at upper secondary school | 58 | 68 | 81 | 72 |
| Vocational course (1 year) | 7 | 4 | 3 | - |
| Dropped out in year 1-3 | 12 | 8 | 10 | - |
| Dropped out in year 3 | - | - | - | 17 |
| Dropped out in year 1 or 2 | - | - | - | 11 |
| Not enrolled in upper secondary school | 24 | 20 | 7 | 1 |
| Total | 100 | 100 | 100 | 100 |
| Women / Educational attainment | | | | |
| Completed a 3- or 4-year programme or a 3-year new programme | 20 | 25 | 46 | 78 |
| Completed a 2-year programme | 35 | 43 | 36 | - |
| Completed a programme at upper secondary school | 55 | 68 | 82 | 78 |
| Vocational course (1 year) | 11 | 7 | 3 | - |
| Dropped out in year 1-3 | 12 | 7 | 9 | - |
| Dropped out in year 3 | - | - | - | 12 |
| Dropped out in year 1 or 2 | - | - | - | 10 |
| Not enrolled in upper secondary school | 21 | 17 | 7 | 1 |
| Total | 100 | 100 | 100 | 100 |

Source: Statistics Sweden 1980, 1987, 1996 and data from the database of the National Agency for Education on pupils and students for year 2002.

(1) Data from questionnaires at age 23.

(2) Data from registers of upper secondary schools at age 22.

Table 3 shows, just as Table 2, that more young people enrolled in upper secondary school and those not enrolling fell from 21 to 24 % in the 1970s to only 1 % in the late 1990s. Although the proportion of young people continuing to upper secondary school increased, the proportion of young people dropping out of upper secondary school did not increase, except in the last cohort as in Table 2. The percentage completing an upper secondary education decreased from 81 to 72 % among men and from 82 to 78 % among women. At the same time the percentage of dropouts increased, particularly in year three. However, many dropouts in year three left school late in their third year,

often at the end of the school year. They did not pass all their courses and are therefore classified as dropouts (National Agency for Education, 2002). Before the reform, if students had grades in all subjects, they completed upper secondary education although they had low grades. This meant that students with low grades did not really fail.

The dropout rate varies between different national programmes and is highly related to the grade-point-average in the leaving certificate from comprehensive school of students attending the programme. In the science programme in which the students have highest grade-point-average, around every 10th student drops out but in the vehicle engineering programme every third student drops out. For most national programmes the dropout rate of upper secondary school is around 20 to 25 % (National Agency for Education, 2002).

Comparing men and women in Table 2 we find that men were slightly better educated than women in the first cohort. More men had upper secondary education than women and more often over three years. This advantage disappeared among 23 year-olds in 1986. In 1994, 22 year-old women surpassed men of the same age. A greater proportion of them than of men had three-year upper secondary education. In 2002, when two-year programmes were replaced by three-year programmes, the educational advantage of young women compared to young men widened, because the dropout rate was higher among men than among women.

Thus, the upward trend of an increasing number of young people completing upper secondary education came to an end after three-year vocational programmes and the new grading system was implemented at upper secondary school. However, many young people enrolled in upper secondary school after the reform and most dropouts left school in their third year. They had at least two years of upper secondary education, which was the educational attainment of those who completed a vocational programme at upper secondary school before the reform, and many dropouts even had three years of upper secondary education although they had not passed all their courses. This could mean that their attainment level was not so different from those who had completed upper secondary education in former years. Young women, more of whom attended an academic three-year programme before the reform than the young men, seem to have adapted better to reformed upper secondary school. There were fewer dropouts among women than among men, 22 % compared to 28 %.

Educational level in other European countries

A comparison of the educational level of the population of working age (16 to 64 year-olds) was conducted in the late 1990s in France, the Netherlands, Portugal, Sweden, the UK and the former West Germany. Results showed that the proportion without further education and training (below level 3 of Unesco's International Standard Classification of Education - ISCED) varied much

more between countries than the proportion with higher education. The former West Germany and Sweden had the smallest proportion of the population of working age without further education and training. This was also the case for younger groups of the population. Only 14 % of 25 to 27/28 year-olds were without further education and training in these countries compared to 21 % in France and 43 % in the UK (Murray and Steedman, 2001).

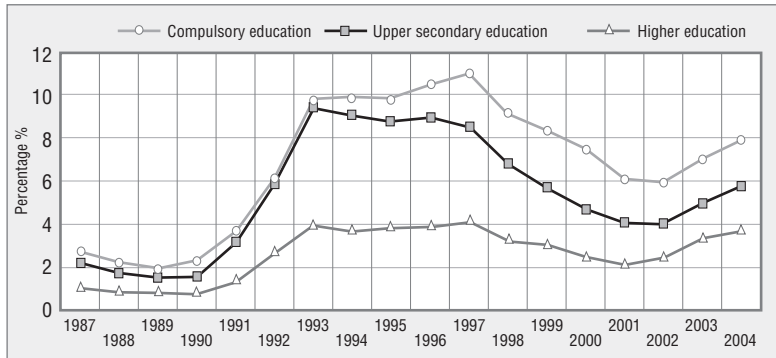
However, in a later comparison of educational attainment of 25 to 28 year-olds in 1994, 1998 and 2003, Steedman, McIntosh and Green (2004) found that the differences between France, the UK and the former West Germany, had decreased substantially from 1994 up to 2003. Thus, other European countries are expanding their upper secondary education and their younger groups of the population will probably soon reach a similar educational level to the former West Germany and Sweden.

The change in the position of Sweden relative to other countries and political criticism of the high dropout rate has focused policy-makers' attention on improving retention of students at upper secondary school so as not to fall behind other European countries. Some of the 11 steps proposed for developing the quality of upper secondary education (Government Bill 2002/04) were to combat high dropout rates at upper secondary school. Teaching in core subjects should adapt better to the content of vocational programmes. Another step was courses could have been substituted by subjects so grades could have been improved in subjects which is not possible once a course is finished. Vocational programmes in the form of apprenticeship training could have been introduced and finally more resources were promised to individual programmes. These measures would probably have made it easier to complete a programme to some extent. However, the new government will not implement the 11 steps. They want to make greater changes but later on, after a new study. What effect these changes will have on student flows in upper secondary education is unclear. It will probably depend on how academic demands at upper secondary school will change.

Employment among young adults with and without further education and training

The following section investigates how employment opportunities for young adults with and without vocational upper secondary education have developed before and after the reform of 1991. An indicator of the employment situation on the labour market are unemployment rates. However, young people and young adults are hit more during a recession (Wadensjö, 1987). In Figure 1, unemployment rates for the labour force (aged 16 to 64) are presented by educational attainment.

Figure 1: **Unemployment in the labour force (age 16 to 64)**



Source: Labour force survey, Statistics Sweden.

Figure 1 shows that unemployment was very low in the late 1980s, but grew dramatically from 1991 to 1993 particularly for groups without higher education. Not until 1998 did unemployment rates decrease. They continued to go down until 2001 and 2002. After 2002, they increased again. Thus, unemployment was very high in 1994 but much lower in 2002. Comparing unemployment rates for 1988-90 with those for 2002-03 we find that the rates for 2002-03 are higher. There is also a greater discrepancy between groups with varying educational attainment. In 1988, unemployment varied by educational attainment between 0.9 and 1.9 %; in 2001, between 2.2 and 6.1 %.

The group for which employment opportunities before and after the reform will be explored is young adults without further education and training, comprising those who did not enrol in further education and training and those who dropped out of upper secondary school. To compare, we have selected men and women from the same cohort with low marks from comprehensive school who completed a vocational programme at upper secondary school. How they were selected is described in Appendix 1.

Table 4 presents percentages of gainfully employed young adults in four cohorts. They have employment as their main occupation. All participants in the follow-up studies were asked about their main occupation every autumn since they left school. The statistics in Table 4 concern the autumn when they were or became 22 years old. For 2002, employment status was collected from employers for income tax purposes.

Table 4: Percentage of 22 year-olds gainfully employed by educational attainment

| Men / Educational background | 1977 | 1985 | 1994 | 2002 |
|---|------|------|------|------|
| Not enrolled in upper secondary school | 89 | 82 | 70 | 49 |
| Dropped out of upper secondary school | 85 | 74 | 53 | 61 |
| Completed a metalwork programme | 91 | 91 | 70 | - |
| Completed a vehicle engineering programme | - | - | 67 | 90 |
| Completed a child care programme | - | - | - | 76 |
| Women / Educational background | 1977 | 1985 | 1994 | 2002 |
| Not enrolled in upper secondary school | 69 | 67 | 45 | 30 |
| Dropped out of upper secondary school | 62 | 66 | 44 | 55 |
| Completed a home economics programme | 63 | 73 | 49 | - |
| Completed a child care programme | - | - | - | 74 |
| Completed a nursing programme | 72 | 76 | 60 | 81 |

Source: Statistics Sweden 1980, 1987, 1996 and data from National Agency of Education database on pupils and students for 2002.

Table 4 shows employment rates for the group who did not enrol in upper secondary education and the group who had dropped out of upper secondary school decreased both among men and women before implementation of the 1991 reform. After the reform it continued to decrease in the very small group of those who did not continue to upper secondary school (1 % of the cohort). Among the much larger group of dropouts it increased but not to the same levels of 1977 and 1985.

Employment rates of young adults with two-year vocational upper secondary education, generally, were higher than those for groups without. Employment rates in 2002 for those with three-year vocational upper secondary education were much higher than comparable groups in 1994. The 2002 levels were similar to those of 1977 and 1985. This indicates that after reform of upper secondary school the gap of employment opportunities between those with and those without vocational upper secondary education widened, even if the groups of comparison were young adults with completed education from programmes with the lowest entrance requirements.

For 2002, we have more detailed information on employment than in earlier cohorts. There are employment rates both for those who dropped out in year one or two and for those who dropped out in year three of the specific programmes we investigated which are presented in Table 5.

Table 5: Percentage of 22 year-olds gainfully employed in 2002 by educational background

| Men / Educational background | Vehicle engineering programme N=2270 | Child care programme N=974 | Nursing programme N=352 |
|---------------------------------------|---|------------------------------------|---------------------------------|
| Dropped out in year 1 or 2 | 63 | 48 | 40 |
| Dropped out in year 3 | 83 | 73 | 80 |
| Completed a national programme | 90 | 76 | 80 |
| Women / Educational background | Vehicle engineering programme N=46 | Child care programme N=3428 | Nursing programme N=2111 |
| Dropped out in year 1 or 2 | 58 | 52 | 40 |
| Dropped out in year 3 | 63 | 70 | 80 |
| Completed a national programme | 76 | 74 | 81 |

Table 5 shows that the earlier students left school the lower their employment rates. Young adults who dropped out in the first or second year employment rates than those who dropped out in year three. As expected, those who had completed their programme had the highest employment rates. However, the greatest difference in employment opportunities is not between those with and those without a completed programme but between those who dropped out in year one or two and those who dropped out in year three. The reason is probably that many left school at the end of the third year but without having passed all their courses. The very small difference in employment rates between those who had left school in year three and those who had completed a child care or nursing programme can be explained because some 6 to 9 % were enrolled in higher education. In the vehicle engineering programme this difference was not so small because only 0.5 % were enrolled in higher education.

Conclusion and discussion

As soon as nine-year comprehensive school was introduced in Sweden, an increasing number of young people continued to upper secondary education. The fastest expansion of further education and training took place during the final years of implementation of comprehensive school in the latter part of the 1960s. After new integrated upper secondary school (including two-year vo-

cational programmes) was introduced at the beginning of the 1970s the number of young people enrolling in upper secondary school continued to increase. In 2004, only 2 % of comprehensive school-leavers did not continue directly to upper secondary school. However, 9 % of school-leavers did not enrol in a national programme but in an individual programme, a preparatory programme for national programmes (National Agency for Education, 2005).

The proportion of young people completing their upper secondary education increased in the 1980s and 1990s until reform of upper secondary school was implemented. Introducing a third year in vocational programmes did not change the proportion of young people completing their upper secondary education much; only to a small degree among young men. But later, when the new grading system and new entrance requirements to a national programme were introduced, this proportion decreased while the dropout rate increased dramatically. However, most dropouts left school in their third and last year of upper secondary education. Many left at the end of the third year but had not passed all their courses and had therefore not completed their upper secondary education.

Men and women

We found men had a slight advantage in educational attainment in the 1970s. They had more often an upper secondary education and more often an academic upper secondary education than women. This difference disappeared in the 1980s and at the beginning of the 1990s the percentage of young women with an academic upper secondary education surpassed that of young men. After the latest reform, the educational advantage of women increased even more. The number of men leaving upper secondary school without completing their education was higher than among women. Thus, young women seem to have adapted better to reformed upper secondary school than young men. Educational attainment increased faster among women than among men and this trend started in the 1970s.

In summary, the effects of reform on student flows seem to have made great changes but after scrutinising the flows, the changes are not so great. Before the reform of 1991; slightly more than 80 % of a cohort received upper secondary education, of which almost half had no more than a two-year education. After the reform, around 70 % received upper secondary education, of which all had three-year education. In addition, 12 to 17 % attended upper secondary education for at least two years and many even for three years, which together with the percentage completing three-year education makes more than 80 %, the percentage receiving upper secondary education before the reform. Altogether the reform increased the educational level of young adults aged 19 to 20. They had more years in education than the cohorts before the reform. On the other hand, more young adults can feel they were not successful

at school as they have not got a leaving certificate for complete upper secondary education.

The reason for high enrolment in upper secondary school after the reform is diminishing labour market opportunities for young people aged 16 to 19. Very few young people can get a job as an alternative occupation to going to school which was the case in the 1970s and 1980s. For young people who do not qualify for a national programme the alternative is the so-called individual programme. However, enrolling in the individual programme prolongs three-year vocational programmes by another year. Compared to the former two-year programmes the three-year programmes plus an additional year in the individual programme makes quite a difference, not least for young people tired of school, and leads to increased dropout. But there are also other factors which can explain increased dropout rates. Reformed upper secondary school has become more academic in several ways. Decentralisation of upper secondary schools to municipalities has made them more available to young people outside large cities but vocational programmes which are more expensive have become less frequent in many regions. For young women, vocational programmes with a female profile have become fewer (National Agency for Education, 2002). Introducing of academic subjects, so-called core subjects (Swedish or Swedish as a second language, English and mathematics), in all vocational programmes is another change that has made vocational programmes more academic, as has the content of vocational subjects which have more theoretical profiles. The reason behind the large proportion of students who continue their education during the third year but do not complete their programme can probably be explained by introducing core subjects in vocational programmes. Students fail in some of these courses but pass the vocational ones.

Another change which might explain the higher dropout rate after the reform is that instead of subjects in which students can improve their grades during their school years, reformed upper secondary school has courses where the grades are definitive for every course in year one and year two and cannot be improved. Only in another form of school, in adult upper secondary education, can young people improve their grades. This has probably a negative effect on motivating students who have failed in some of their courses to complete upper secondary education.

Finally, the labour market improved at the end of the 1990s and at the beginning of the 2000s, which meant better possibilities to get a job for students tired of school, particularly for 18 or 19 year-old students than in 1994.

Proposed measures to combat high dropout rates

Some of the 11 steps proposed for developing the quality of upper secondary education (Government Bill, 2002/04) mentioned in the introduction are to combat high dropout rates at upper secondary school. Teaching core subjects should adapt better to the content of vocational programmes. Another step was that courses could have been substituted by subjects, which means that grades could be improved in the subjects were they cannot once a course is finished. Vocational programmes in the form of apprenticeship training could have been introduced and, finally, more resources were promised for the individual programme. These measures would probably have eased completing a programme to some extent. However, the new government will not implement the 11 steps. They want to make greater changes to upper secondary school but later on.

Changes in employment opportunities

Studying employment of young adults with and without a complete upper secondary education, we find that the groups with a completed vocational programme from upper secondary school generally had higher employment rates than those without in all cohorts, with a few exceptions. After the reform this gap increased, but a closer look at employment rates shows that the group who left school in their third year had not much lower employment rates than the group who completed their programme. The great difference was found among those who dropped out of upper secondary school in year one or two and for the small group who did not enrol at all in upper secondary school. If the vehicle engineering programme and the child care programme with the lowest entrance requirements after the reform have given their students more benefits on the labour market than the metal work and home economics programme is hard to say, as the labour market situation was so different for those aged 22 in 1994 from those aged 22 in 2002. However, in a comparison of employment rates between young adults with a two-year to young adults with a three-year vocational education at the same period of time, those with a three-year education had a minor advantage (Murray and Skarlind, 2005). The labour market situation generally shows a greater discrepancy between those with an upper secondary education and those without (see Figure 1). Young adults with a completed vocational programme at reformed upper secondary school are also a more select group, as the group without a completed upper secondary education increased after the reform compared to the groups with a vocational upper secondary education in the 1990s before the reform.

In reformed upper secondary school a new group seem to have appeared, those who dropped out in their third and last year of upper secondary school. They have employment rates rather close to those with a completed programme, which indicates that many left at the end of the third year. Thus, for the large

group of young adults without a completed vocational upper secondary education but with three years of upper secondary schooling employment opportunities seem to be fairly good, almost at the level of those with a completed programme. How their careers will develop in the long run is another question. It might be a greater disadvantage not to have completed the programme.

The real losers in reformed upper secondary school are those who leave in year one or two. Compared to men with very low employment rates before the reform (those who did not enrol and those who dropped out) it has increased in size by two percentage points. On the other hand the groups of young women with very low employment rates after the reform have decreased by five percentage points.

Results show that staying in school and attending a national programme, even if not completing it, is valued by employers. Perhaps many students have failed only in academic subjects which are not important in the jobs they are looking for. It could also be interpreted in another way. Those students who stay in school have better prerequisites for staying in school and also for getting a job on the labour market. Young people without further education and training have on average more school difficulties than those who complete a programme, even if it is a programme with low entrance requirements (Murray, 1997).

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Appendix 1

Selected programmes and classification of dropouts

To investigate the employment status of young adults without further education and training, students from special programmes were selected for comparison. One criterion for this selection was that the programme should be large and representative of vocational programmes leading to the labour market without much further education and training. Another criterion was that it should be a possible alternative for young people with low grade-point-average from nine-year comprehensive school. The metalwork programme was one of the three largest vocational programmes among men in the first, second and third cohorts. It also had the lowest entrance requirements (Murray, 1997). However, in reformed upper secondary school this programme no longer exists and the nearest corresponding programme is rather small. Instead the vehicle engineering programme was selected which, at the time of the investigation, was the second largest vocational programme for men. The men in this programme also had the lowest entrance requirements of all national programmes.

For women the home economics programme was selected for the first three cohorts. It encompassed many female students and had the lowest entrance requirements of all female-oriented programmes (Murray, 1997). The largest female-oriented programme, the nursing programme, was also selected although the grade-point-average of female students were higher than in the home economics programme. In 2002, the home economics programme had ceased and the nursing programme was divided into two programmes, a nursing and a childcare programme. The childcare programme selected in the fourth cohort is today a large programme with the lowest entrance requirements of female-oriented programmes.