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Labour Market Dynamics: New Statistics and Analytical Approaches

**Young People. Use of Surveys of Individuals and Other Sources to Track
Education/Labour Market Transitions**

Submitted by Statistics Sweden ¹

Introduction

1. The need for statistics describing the transitions to and establishment of the labour market for young people has increased in recent years owing to the greater difficulty experienced by young people breaking into the labour market and finding any sort of work and the opportunity of supporting themselves. The statistics should describe, on a continuous basis, the trend in young people's transition from education to the labour market and also provide a basis for further analysis of various aspects within this area. This should increase the opportunities for society to take suitable action so that young people have the opportunity of having an independent adult life.

2. Statistics Sweden (SCB) has been carrying out research for many years, by means of a questionnaire studying the relationship between education and the labour market and young people's transition from education to work. As these questionnaire-based studies are an expensive method of gathering information,

¹ Prepared by Karin Arvemo-Notstrand, Department of Labour and Educational Statistics, 701 89 Örebro.

they have to be restricted to various samples of the qualified population, which means on the one hand that the number of reporting groups is limited and on the other hand that it is too costly to repeat studies on the same group each year in order to obtain a time series. In the system SCB has used for these studies, the samples have been rotated in alternate years so that in time a relatively comprehensive picture is obtained.

3. For the past few years, Statistics Sweden has also been producing register-based statistics on the transition from education to work. By jointly processing registers on education and on employment, annual statistics are obtained showing transitions from various parts of the education system to work and to certain activities other than work. As the registers data are merged, there is great scope for choosing reporting groups, e.g. reporting transitions in various regions.

4. Statistics Sweden is currently working on the further development of statistics on the transition from education to the labour market. The aim is, on the basis of register processing, to obtain better overall descriptions of entry into the labour market, obtaining time series and utilising modern computer technology in an efficient manner. The work also includes developing and adapting questionnaires for special studies to form a supplement to register-based statistics.

5. In this paper, we will review the opportunities, limitations and difficulties involved in register-based statistics concerning the transition of young people to the labour market, and we will also compare the results of them with equivalent data and supplementary information we have obtained from questionnaire studies. We will also present certain information about young people's establishment on the labour market from a study performed by SCB in 1994.

Part I: Register-based statistics

Advantages of register-based statistics

6. The possibility to link the register of employed persons and the register of the population's education offers extraordinary possibilities to study the entrance of young persons into working life. The evident advantages with register-produced statistics are:

- The register provides universal coverage of the population group in question. This gives good scope for describing, for example, education and reporting in various regions. The material in them also provides the opportunity to study flows over time.
- The register is updated annually, which makes it possible to conduct long-term studies where you can follow different activities during a long period of time.

- The register is based on a unique personal identity number. By means of the personal identity numbers it is possible to link various registers and other sources of data.
- It is a comparatively inexpensive form of statistics since the register-data is already being collected.

7. The drawback with register-based statistics is that the gathered variables and their definitions may not be the most suitable for the purpose in hand. It also requires an enormous amount of work to gather, register, check and correct the information that goes into the various registers, and this means it may take 1 - 1.5 years before the registers are ready for use.

Registers used for description of transition from education to the labour market

8. As already mentioned Statistics Sweden has various registers based on personal data that are updated annually. Each person in Sweden has a unique personal identity number that is used as an identifier in every register. Registers that are of special relevance for statistics on young people's transition to work are the register of employed persons (ÅRSYS), the register of the population's education and the registers of persons with university, college and sixth-form qualifications.

a) The employment register contains information for all persons employed, on employment etc. in November each year and information on income from employment and other income. The variables used to describe entry into the labour market are:

- branch of business concerning the main activity at the place of employment where the individual is gainfully employed in November.
- occupational status, employed or self-employed
- gainfully employed (this includes persons who had income-generating work for at least one hour during a particular week in November or who were temporarily absent from work during the week in question)
- income from work, consisting of annual pay, total annual income from agricultural property and business, total sickness benefit, parents' allowance and compensation for lost earnings
- sector, i.e. public or private.

b) The register on the population's education contains information on education completed for all persons 15-74 registered in Sweden. The variables used for describing entry into the labour market are:

- most advanced qualification, university degree or sixth form course
- place of education and year of qualification

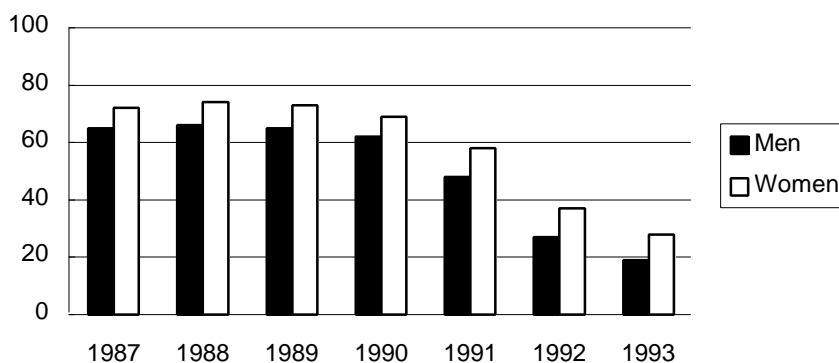
c) The university register and the register covering persons who graduated

from upper secondary school contain information on all registered and qualified students in first and second degree courses at universities and colleges and sixth-form pupils. The variables used for describing entry into the labour market are registered for university studies, i.e. whether a person is studying at a university during a particular term, completed upper secondary education, what course the person took, year of qualification.

Register statistics on young people's transition from education to work

9. The register-based statistics consist of a number of established tables on the employment of various qualified/leaver groups each year after the year of qualification/leaving, as well as average annual income from employment, branch of business and professional status for those in gainful employment. A diagram is presented below showing transition to work for six the form-leavers. Equivalent information is also available for persons with degrees, but in this paper, focusing on young people, we will satisfy ourselves with presenting and discussing results and measurements for graduates from upper secondary school.

Diagram 1. Transition to gainful employment after leaving upper secondary school 1986 - 1993.



10. The percentage of young people in gainful employment in November of the **same year** in which they completed their upper secondary education has decreased dramatically during the nineties for both men and women. The percentage gainfully employed after upper secondary school increases during the years following completion of upper secondary school, partly because those who look for work eventually find it and partly because those who

carried on studying also eventually enter the labour market.

11. Some young people continue studying at university level instead of venturing into the labour market. There is a great difference between young people with different specialisations in upper secondary school as regards how common it is for them to go straight into working life or to continue their studies.

12. Some young people are reported as both university students and gainfully employed persons in the register-based statistics. In this case they have been registered for university studies at some stage during the year and been in gainful employment in November the same year.

13. The severe recession at the beginning of the nineties is clearly visible among the young people who left upper secondary school in 1992. There are considerably lower percentages gainfully employed directly after leaving school among these young people than among those who graduated a few years earlier. Diagram 1 shows how few people obtained work directly after upper secondary school during the first years of the nineties. The table below shows exit from studies two years after leaving for young people who left in 1992, broken down into the various kinds of study in upper secondary school.

Table 1. Gainful employment and university studies 1992-1993 for the young people who left upper secondary school in 1991/92. Percentage

Courses	Gainful employment only		Employment + university studies		University studies		Miscellaneous	
	1992	1993	1992	1993	1992	1993	1992	1993
All courses								
- men	27	30	2	3	12	19	59	48
- women	37	37	3	5	12	23	47	35
3-4 year theoretical								
- men	22	18	5	5	26	40	48	37
- women	30	24	5	8	21	39	44	30
2-year vocational								
- men	30	40	0	1	1	2	69	57
- women	44	52	1	2	4	6	51	40
3-year vocational								
- men	38	42	0	1	1	2	60	55
- women	62	60	2	3	6	10	30	27

14. Some of the young people in the two-year courses supplemented their sixth-form education with an extra year of study. In this report they are

counted in the "miscellaneous" column the year they graduated from upper secondary school. Miscellaneous covers all forms of study (except university study), employment measures, military service, periods abroad and work in the home. Unemployment is also part of the miscellaneous category.

Branch of business

15. Persons in gainful employment in November 1993 are reported by branch of business in the register-based statistics. The diagram below shows young people who left upper secondary school in 1992 according to the branch of business they worked in.

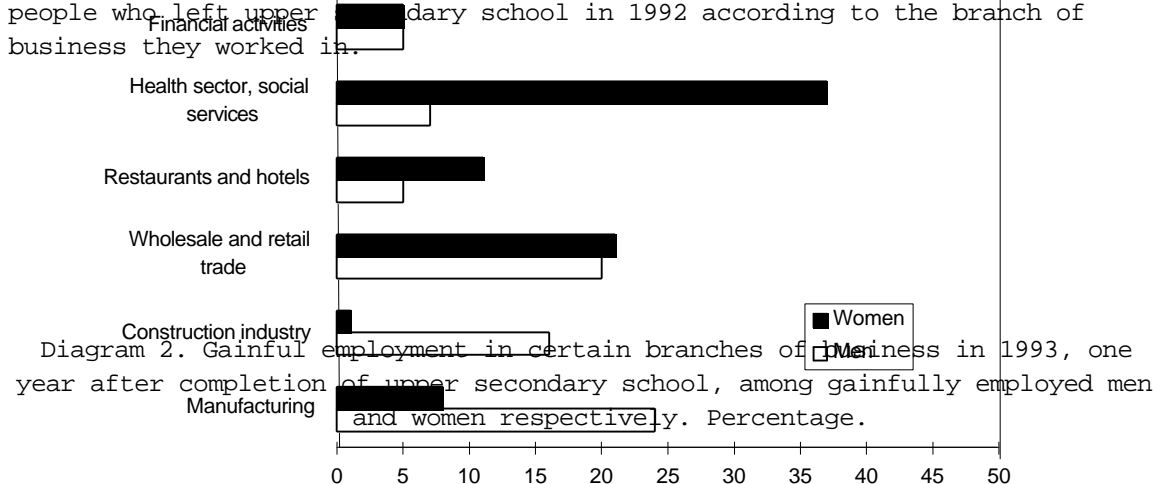


Diagram 2. Gainful employment in certain branches of business in 1993, one year after completion of upper secondary school, among gainfully employed men and women respectively. Percentage.

16. The women worked largely within the health sector and social services and within the wholesale or retail trade while men worked within production, construction and the wholesale or retail trade. The large proportion of women in the public sector is one explanation as to why they have found it easier to find work. In 1992 - 1993, this sector had not yet been so hard hit by cutbacks.

Part II. Questionnaire follow-up 1994 - Transition from education to labour

market.

17. In spring 1994, a questionnaire follow-up was carried out among those pupils who had left upper secondary school in 1991/92. In total, 91,000 pupils completed their studies in upper secondary school that year and the study included a selection of 7,600 persons. In the questionnaire study, young people were asked about their main activities each quarter during the years since they left upper secondary school. They were also asked to answer questions on what type of activities they had mainly been involved in, e.g. employment measures of various kinds, permanent or temporary gainful employment, form of study, unemployment, etc. The young people who were in gainful employment in February 1994, also had to state their occupation, form of employment, branch of business, whether the work suited their qualifications, etc.

Table 2. Activities October - December 1992 and 1993 for the young people who graduated from upper secondary school in 1991/92. Percentage.

Courses	Gainful Employment		Employment measures		Unemployed		University studies		Other studies		Miscellaneous	
	4th quarter		4th quarter		4th quarter		4th quarter		4th quarter		4th quarter	
	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993
All courses												
men	19	22	17	16	7	11	14	20	23	6	19	24
women	26	30	23	18	6	9	17	27	21	11	5	4
3-4 year theoretical												
men	14	16	14	10	6	8	27	37	11	5	27	24
women	22	21	21	11	4	6	28	48	16	10	8	4
2-year vocational												
men	23	27	20	25	8	13	2	2	42	8	1	24
women	28	43	27	22	7	12	6	8	27	12	4	2
3-year vocational												
men	29	35	23	22	11	14	1	2	9	5	27	22
women	46	45	31	20	6	12	7	11	7	7	3	4

18. After leaving upper secondary school, many young people continued into university studies, especially those young people who opted for the 3-4-year theoretical courses. In July 1991, the government decided to subsidise a third "voluntary" year in upper secondary school to give young people with a 2-year education the opportunity of supplementing their education. Many young people used this opportunity and the percentage that continued studying almost tripled among young people who had taken 2-year courses from upper secondary school. Many of the men went on after the third "voluntary" year to

do their national service.

19. Continued studies and national service are factors that influence entry into the labour market and complicate the comparison between various groups during the first few years after leaving upper secondary school. The table shows that young people from the 3-year vocational courses were those who to the greatest extent were at work after leaving and that women were working to a greater extent than men. These differences may be explained largely by the varying behaviour patterns of young people after they have finished their education.

Entry into the labour market 1984 and 1992

20. In diagrams 3 and 4, entry into the labour market is shown for the two years immediately after leaving upper secondary school for those young people who left in 1991/92 and 1983/84. The diagrams are broken down into those who completed 3-4-year theoretical courses and 2-year vocational courses. Both groups entered the labour market during recessions, but the employment situation was much worse in 1992.

21. The percentage of young people graduated from 3-4 year theoretical courses who entered the labour market was the same in autumn 1992 as in 1984. There was, however, a great difference in the form of employment between the two groups. In autumn 1992, the percentage of young people working in employment measures had almost tripled, as had the percentage of unemployed persons. One year after leaving upper secondary school, the percentage of young people on the labour market had increased among persons who graduated in 1983/84 while a large proportion of the young people who finished in 1991/92 had started studying. The percentage in manpower had decreased.

22. Similar proportions of the two leaver groups from 2-year vocational courses performed their military service directly after upper secondary school while the proportion of students almost tripled in autumn 1992. The difference in entry into the labour market is explained by the fact that many of those who graduated in 1991/92 studied for a third "voluntary" year of upper secondary school. One year later, the difference in the percentage in the labour market had decreased but the forms of employment were still very different.

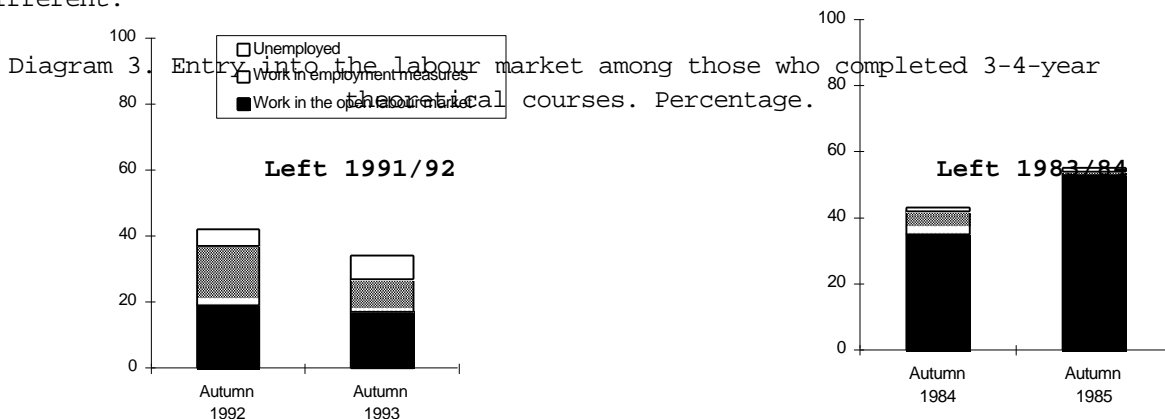
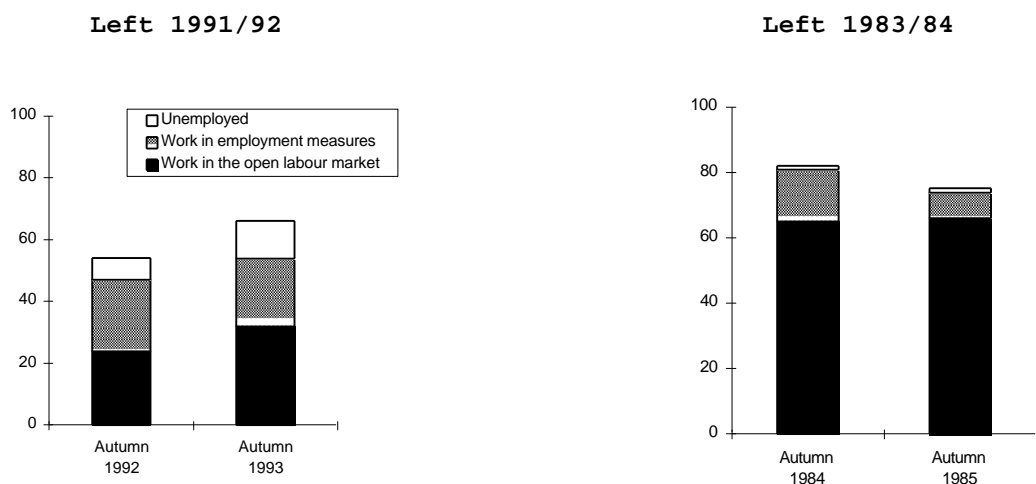


Diagram 4. Entry into the labour market among those who completed 2-year vocational courses. Percentage.



Variations in the proportion in gainful employment and in employment measures during the year

23. The category "mainly gainfully employed" includes young people who stated that they had a permanent or temporary job (stand-in, trial period, project employment or similar) for most of the quarter. Those who worked within the framework of various employment measures are not included among persons gainfully employed.

24. Young people who completed a 3-4-year theoretical upper secondary course constitute the category with the lowest proportion of mainly gainfully employed after completing upper secondary school. This is due to the large transition to higher studies for this group.

25. For all groups of persons completing upper secondary school, the percentage in gainful employment is greatest during the summer quarter. This is when it is easiest to get temporary work, jobs as stand-in etc. In the third quarter of 1993, over three quarters of all persons gainfully employed had temporary employment and among all gainfully employed persons in the fourth quarter of 1993 there were 60 percent who had temporary work.

26. The percentage involved in employment measures varies substantially between the quarters and between different groups of persons leaving upper secondary school. During the summer months, the percentages fall which is due to a conscious reduction in the provision of measures by the employment office. The idea is to avoid the temporary work available at that time being exploited for various employment measures.

Diagram 5. The percentage of persons mainly gainfully employed, according to the individuals concerned, five quarters after they completed upper secondary school in 1991/92.

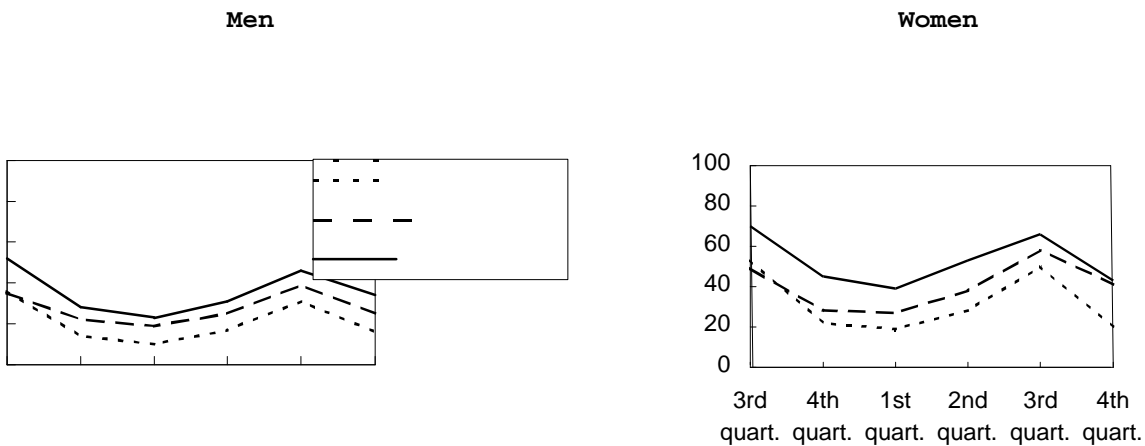
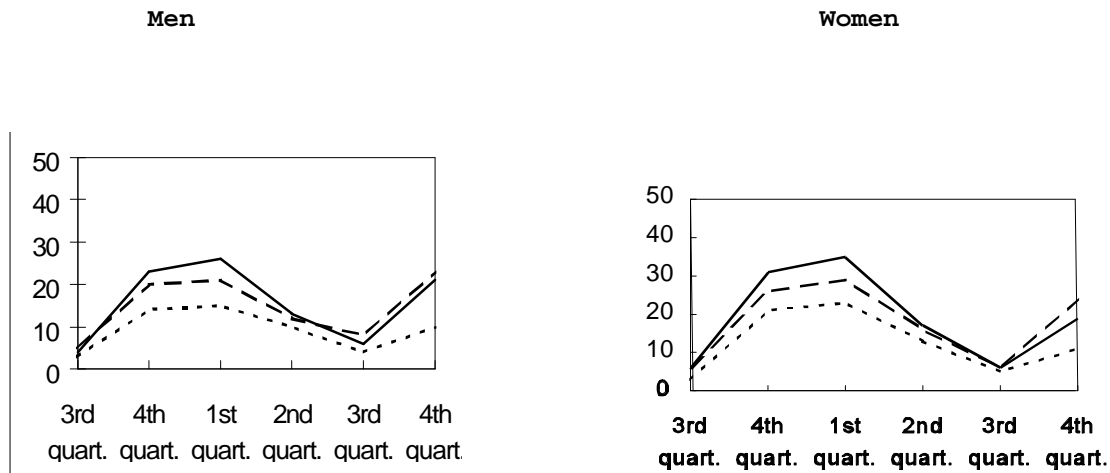


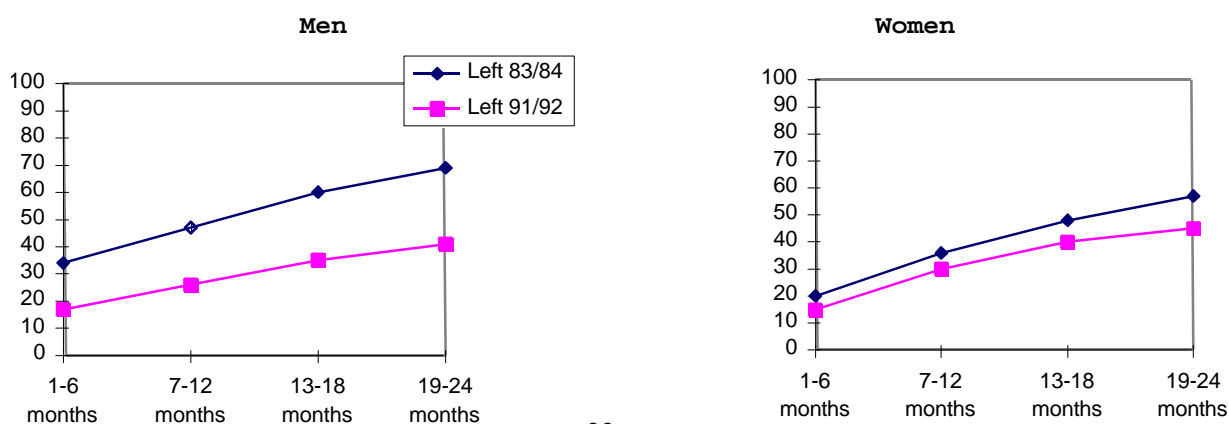
Diagram 6. The percentage in employment measures, according to the individuals concerned, five quarters after they completed upper secondary school in 1991/92.



Establishment in the labour market

27. In the questionnaire follow-up the young people were asked about the length of the period before they got their first lasting employment. The term lasting employment refers to a permanent position or a temporary one lasting longer than 6 months. The result is reported in the diagram below.

Diagram 7. Establishment in the labour market for the young people who graduated from upper secondary school 1991/92 and those who graduated 1983/84. Percentage.



28.

Comparison of this particular year's crop with those graduated in 1983/84 reveal that the fall in employment hit all upper secondary school courses which was not the case in 1984.

29. Young people who graduated in 1991/92 had achieved the same level of establishment after 18 months as the 1984 graduates had within a month. 43 % of the graduates from food technology course for example had lasting employment after 18 months as opposed to 47 % within the first month amongst those who graduated in 1983/84.

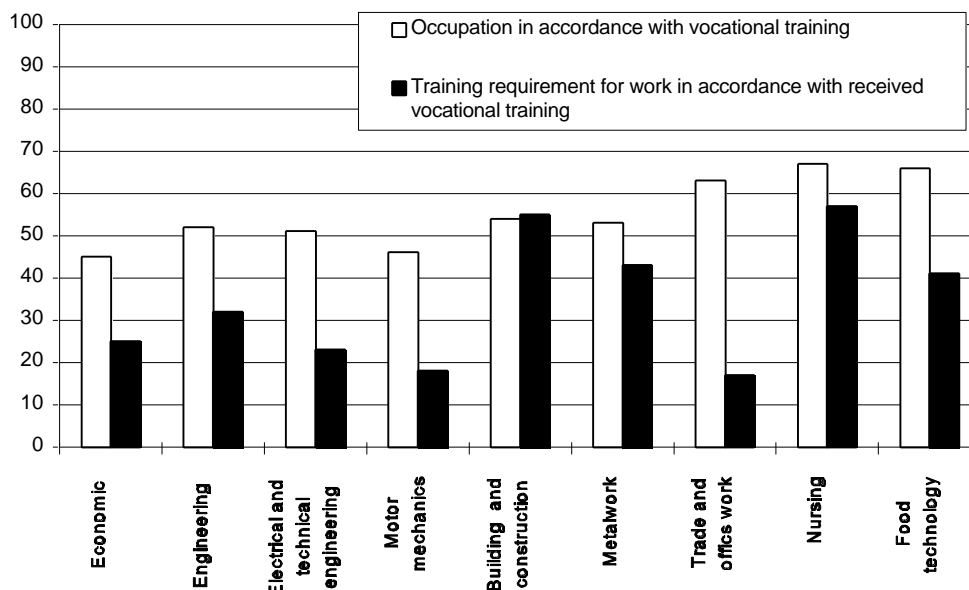
30. Previously there were striking differences between male and female establishment in the labour market. Men found it considerably easier to gain permanent employment, whilst women often held temporary position and did not establish in the labour market for some while. The situation encountered by those graduating from upper secondary school in 1991/92 was different. Unemployment had hit male dominated sectors such as the manufacturing- and construction industries and male establishment now occurs as slowly as that of women.

Occupation according to qualifications

31. In the questionnaire follow-up, young people were asked about how well

their occupation in February 1995 suited their vocational education. They were also asked the training required for getting the job. The result is reported in the diagram below.

Diagram 7. Percentage of persons who worked in February 1992 in a job in accordance with their vocational training and percentage of those who work in a job where the training they had received was explicitly required.



32. An individual may have gained employment within their professional sphere without their job necessarily having required the precise training the individual have received. The strength of the link between profession and training varies.

33. Over half of the young people working in the "right" profession in February 1992 had a job where the training they had received was required and 1/3 had a job with no specific training requirements. The link between training and profession was the greatest amongst those young people who had taken building-and construction courses or nursing courses.

Part III. Comparison of register-based statistics and results from the questionnaire study

34. The purpose of the 1994 questionnaire follow-up was not to evaluate variables in the register statistics. We have however compared two variables, gainful employment and university studies from the register statistics and the questionnaire follow-up. In future work on development of statistics

concerning the transition from education to the labour market, we will carry out specific studies for evaluating the most important variables.

35. Information about gainful employment in the register-based statistics is taken from the employment register which has its measuring month in November. The nearest comparable measuring periods in the questionnaire follow-up are October - December 1992 and 1993. The fact that the measuring periods are different probably contributes to the results obtained in the questionnaire follow-up differing from those in the register. The measuring periods are, however, so close to each other that only a small part of the differences in results is explained by November being compared to the fourth quarter.

36. The questionnaire follow-up distinguishes between more types of activity than the register statistics. It is possible to group the activities in the questionnaires so that they can be more easily compared to those in the register statistics, where all activities except for gainful employment and university studies are regarded as miscellaneous. Unfortunately, it is not possible to sort out in a satisfactory manner those persons who are in gainful employment and at the same time university students, as those who have filled in the questionnaires only had the opportunity to state one option in response to the question concerning main activity in the fourth quarter of 1992 and 1993.

Table 3.

	Gainful employment		Gainful employment + University study		University study		Miscellaneous	
	Questionnaire	Register	Questionnaire	Register	Questionnaire	Register	Questionnaire	Register
1992								
Men	19	27	-	2	14	12	67	59
Women	26	37	-	3	17	12	57	47
1993								
Men	22	30	-	3	19	19	58	48
Women	30	37	-	5	27	23	42	35

37. The percentage of persons gainfully employed in the register statistics is around 10 percentage points higher than the estimated proportion from the questionnaire follow-up, for both men and women in 1992 and 1993. The difference is probably due to the fact that the definition of gainful employment in the questionnaire follow-up is not the same as in the register-based statistics. Gainful employment in the register statistics is based on a lower limit of 4 hours per month counted on the basis of income from gainful employment in November. There were probably some respondents who met the

criteria required for being regarded as employed in the register but who didn't consider themselves gainfully employed for most of the measuring period.

38. There is a larger proportion of university students in the estimates from the questionnaire studies than in the register statistics. The percentage of university students in the register-based statistics is estimated on the basis of information covering the whole year, while the result of the questionnaire follow-up is based on the fourth quarter only. By correcting the results of the questionnaire with information on university studies from register-based statistics for the whole year, the comparison becomes more correct. The total proportion of university students, including those who are also gainfully employed, in the register was 14 and 15 percent for men and women respectively in 1992, and 22 and 28 percent respectively in 1993. The equivalent estimated proportions from the questionnaire follow-up are, following correction, 14 for men and 17 percent for women in 1992, and 22 for men and 32 for women in 1993.

39. The significant deviations are probably due to errors of measurement. The proportion of female university students in the questionnaire follow-up is incorrectly estimated owing to the fact that they are overrepresented among respondents.

40. The comparison of registers and questionnaire follow-up indicates some of the issues in the course of continued work on further development of statistics on the transition from education to the labour market. The reference period for gainful employment will be one. This is, in the register-based statistics, employment in November each year (combined with income). The questionnaire follow-ups indicate the variation that exists in work during the year and the reference period will consequently be of great importance for a fair estimate of the annual value. It is also necessary to analyse the significance of the various definitions of gainful employment in the questionnaire follow-ups and the register report. Finally, there are at present considerable difficulties associated with obtaining detailed information such as temporary work, employment measures and unemployment from registers. Supplementing register data with data gathered by questionnaire in the analyses is of necessity.

Conclusion

41. The education and training system constitute the basis for the youth transition process. Its design, features and performance determine what skills and experiences young people bring with them at the labour market entry as a foundation for employment or for further education and training.

42. Linking the registers of education and employment offers very good opportunities to develop statistics to describe the transition from education to the labour market. Statistics have also been produced in this field for the last couple of years. Every possibility has, however, not been used in the best possible way to describe the transition process and even if it is a

difficult task there are many reasons for doing this to maintain a better picture of the process.

43. When describing the process of transition, the register-based longitudinal data will be of great importance. The transition of youth is a continuous process but may, in general terms, be divided into phases as exit from education, entry into the labour market and establishment in the labour market. These can be described by means of various variables such as unemployment, work, occupation, income, how well occupation suits qualification etc.

44. Supplementing register data with those gathered by questionnaire is an important contribution to describe the process of transition as there are considerable difficulties associated with obtaining detailed information from registers. It is necessary to make use of the possibilities and the advantages of questionnaire follow-ups.