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ABSTRACT

The effects of the financial aid reform introduced in Sweden in the mid-1960s were assessed, with emphasis placed on possible effects on young people from lower socioeconomic strata. The study group is a nationally representative sample of persons born in 1948, who were also studied in 1961 in relation to background, interests, aptitudes, and school grades at the age of 13. Nearly 2,000 out of the 12,000 subjects have entered universities or colleges. It was found that social background strongly influences participation in higher education. For individuals from homes in which one of the parents has a university degree, the likelihood of beginning a postsecondary education is seven times greater than for individuals from working-class homes, and the likelihood of completing a university degree is as much as 10 times higher. However, the national financial aid system has been influential: 40 percent of those from farms and working-class homes indicated that they would not have entered postsecondary studies without the financial aid. The corresponding percentage for the higher socioeconomic strata is 12 percent. The national financial aid system is also important to completion of a degree program. In addition, women have benefited from the national financial aid system more often than men, and they have also been able to finance their studies to a larger extent through this system. The aid system has been particularly important in recruiting women to professional programs of long duration. (Author/SW)

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FINANCIAL AID AND CLASS BIAS IN HIGHER EDUCATION

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Abstract

The reforms which have been carried out within the Swedish school system during the last thirty years have been the object of intense research. Yet, with few exceptions, researchers have neglected one aspect of these reforms, i.e. the importance of national financial aid for recruitment to and success in higher education.

This is the first in a series of investigations planned with a view to studying the effects of the financial aid reform which was introduced in Sweden in the mid-1960's. Special attention is paid to the possible effects of this reform on young people from lower socio-economic strata.

The group under investigation consists of a nationally representative sample of persons born in 1948. A large amount of data were collected in 1961 on the background, interests, aptitudes and school-grades of the subjects at the age of thirteen. It has also been possible to gather information about them throughout their school careers from various data files and through questionnaires. Nearly 2000 of the 12 000 subjects who are included in the sample have entered universities or colleges.

In the investigation it is shown that social background is a strongly influential factor in higher education. For individuals from homes in which one of the parents has a university degree the likelihood of beginning a post-secondary education is seven times greater than for individuals from working-class homes, and the likelihood of completing a university degree as much as ten times higher. This class bias would have been far greater, however, if it had not been for the national financial aid system. Forty per cent of those from farmers' homes and working-class homes state that they would not have embarked on a post-secondary education without the financial aid. The corresponding percentage for the higher socio-economic strata is only twelve per cent.

The national financial aid system is not only important for recruitment but also for the possibilities of the students to complete a degree program. This is particularly the case for those from lower socio-economic strata.

The results also show different tendencies for men and women. Women have benefited from the national financial aid system more often than men and they have also been able to finance their studies to a larger extent through this system. Furthermore, the national financial aid system has been of particular importance in recruiting women to professional programs of long duration (e.g. medical, dental and engineering training) i.e. those fields where, by tradition, men have been in the majority. This tendency is particularly strong for women from farmers' homes and working-class homes.

In Sweden, since 1918, there has been a national system of financial aid, aimed at improving the chances for individuals from lower socio-economic strata to receive education at post-secondary level. From the beginning, this financial aid was very limited in character, and consisted entirely of interestfree loans. In the late 1930's, a limited number of State scholarships were added, but the main expansion of the system did not occur until 1950. Then a few new types of loans were added, but the major change was an increase in the annual sum budgeted for financial aid.

Despite the expansion, however, only a minority of the students had access to this type of aid. Therefore high demands were placed on achievement in studies, and the student's need was also examined, in relation to his own financial situation as well as his parents.

This expansion of the financial aid system contributed to somewhat increased social equality. To further this development, additional improvements in the system were considered essential. Opinions varied, however, as to how the system should be developed. Some political groups supported financial aid in the form of loans, while others maintained that support should be in the form of grants.

In 1959, a national commission was appointed with the purpose to investigate the possibilities for a new system of social benefits for students at universities and other institutions of higher education. The recommendations of the committee were accepted in 1964, and form the basis of the present financial aid system. The financial aid consists of a combination of loans and grants. The total aid was fixed at an annual sum which was considered sufficient to cover the student's living expenses during a ten-month academic year. In order to give these benefits real value, the annual sum is indexregulated to the cost of living. The part of

the total aid which is raised is, however, mostly the loan. This means that the grant portion has fallen from twenty-five per cent in 1965 to about nine per cent in 1981.

There is no longer any examination of need in relation to the income or private means of the student's parents. However, the total financial aid is reduced if the income or private means of the student exceeds certain limits.

Any student who meets the financial requirements has a right to receive financial aid when he has entered a program of post-secondary education. Whether or not the student is likely to succeed in his studies is not a factor at this point. But in order to renew his aid, the student must have passed a certain number of courses by the end of his first academic year. A student is eligible for financial aid for a maximum of eight years, and up to the age of forty-five. Exceptions may be made to both these limitations.

Repayment of the loan portion may be spread over a long period, but it is to be repaid before the recipient reaches the age of fifty. The loans are interestfree, but both the amount to be amortized and the remaining debt are regulated by the cost of living index. To avoid the negative consequences of rapid inflation, however, there is at present a limit of 3.2 per cent a year on these amounts.

If the recipient's income is very low, he is granted a respite for repayment, or a reduction in amortization. If the recipient reaches the age of sixty-five, or dies before that age without having completed repayment, his remaining debt is cancelled.

In 1975, a new national commission was appointed to review the financial aid system. The directives to this commission state that one of the most important

aims of the financial aid system is to further equal social recruitment to higher education. Although some equalization had already occurred before 1975, rather little was known about the significance of the system in this respect. For this reason, the commission was requested to analyse in detail the use of financial aid by different groups of students, as well as its significance for recruitment to higher education. The study described below was carried out at the request of that commission.

The Project 'Financial Aid and Post-Secondary Education'

This study is the first in a series of studies planned for this project. The aim of the project is to elucidate the significance of financial aid in post-secondary education. The most important questions in the project are:

- 1) To what extent is financial aid used by individuals of each sex, from different social classes and in various programs of post-secondary studies?
- 2) How has the opportunity of receiving financial aid affected the decision of the individual to enter a program of higher education and his chances of completing it successfully?
- 3) Has the national aid system increased or decreased in importance during the approximately fifteen years that it has existed in its present form?

Sample and Variables

The group studied was taken from the Individual Statistics Project. This project started in 1961 and then included all Swedes born on the 5th, 15th and 25th of any month in 1948. This sample includes a total of some 12 000 individuals, about ninety per cent of whom were in the sixth grade within the compulsory school system on the first occasion when data were collected.

The basic data collected on the first occasion consist of:

- I Information from the school records, e.g. class, type of class and school marks.
- II Information on personal background, such as parents' occupations and education.
- III Scores on three intelligence tests: verbal, spatial and reasoning.
- IV Scores on standardized achievement tests in Swedish, mathematics and English from class six.
- V Replies to questionnaires on the pupils' attitudes to school, their spare time interests, and plans for study and work.

This basic information was subsequently supplemented on an annual basis with data as to the educational status of the individuals through 1969.

In 1966, the same type of data collection started for pupils born on the 5th, 15th and 25th of any month in 1953, and this information was supplemented annually through 1974. This sample contained a total of some 10 000 individuals. Additional information on this project may be found in Härnqvist & Svensson (1973).

Of the individuals born in 1948, nearly 2 000 had entered post-secondary education by the end of 1971. These 2 000 individuals formed the basis for this study.

The information collected in the Individual Statistics Project has been supplemented with information from various registers as to course of study, year of registration, degree awarded, plus information as to the amount of financial aid received.

During the spring of 1980, in connection with the 'Ling' project (see Christianson & Härnqvist, 1980), a questionnaire was distributed to the individuals who had entered a course of higher education. This questionnaire contained some questions as to the importance of financial aid for the individual's decision to enter post-secondary education and the extent to which he found it possible to finance his studies with this aid.

Before we account for results of the study, some of the variables will be defined in greater detail:

The social background of the individuals is classified with the aid of information about the education and occupation of the father. Five groups are distinguished:

- A) Academic professions. Persons with management positions in civil service and industry.
- B) Civil servants and white-collar workers in lower positions with a theoretical education beyond compulsory schooling.
- C) Civil servants and white-collar workers in lower positions without a theoretical education beyond compulsory schooling.
- D) Farmers.
- E) Laborers.

The students were also divided according to course of study:

- 1) Open admissions courses (Faculties of Arts and Sciences).
- 2) Closed admissions courses (Other faculties).
- 3) Certain short post-secondary programs.

Our criterion for successful studies was a completed academic degree before the age of twenty-six. This is, of course a rather rough measure of academic success, but more detailed information is not available at this time.

Results

As may be seen in table 1, there is a very clear relation between social background and higher education. This is proved by the fact that an equal number of individuals completing an academic degree come from academic families as from working-class families although the working class is ten times as large.

Table 1 - Socio-economic group affiliation in different categories of the sample investigated.

Socio-economic group	Total number		Studies entered by 1971		Degree completed by 1974	
	No	%	No	%	No	%
A	625	5	362	17	197	23
B	1111	10	457	23	193	22
C	2343	21	467	23	195	23
D	1557	14	188	11	75	9
E	5712	50	503	25	198	23
Total	11348	100	1977	99	858	100

An examination of these results provokes the following question: 'Has the national system of financial aid made any contribution at all to equalizing higher education?'

The Importance of Financial Aid for Recruitment to Higher Education

The questionnaire study made in 1980 included one question as to the importance of the financial aid in the decision to enter higher education.

The question reads as follows:

If there had been no financial aid available when you entered higher education, would you have begun to study at all?

Yes, definitely ()

Yes, probably ()

No, probably not ()

No, definitely not ()

In order to facilitate an understanding of the results, the two 'yes' alternatives have been combined, as have the two 'no' alternatives. For the same reason, only the percentage answering with 'NO' alternatives is stated.

Table 2 Percentage of students who probably not have entered higher education, if no financial aid had been available: comparisons between degree programs and sexes (given in % of total number of students in each group).

	Arts & Sciences	Other faculties	Short courses	Total
Men	29	18	25	24
Women	30	27	16	26
Total	30	21	18	25

The table shows that financial aid has a positive effect. Twenty-five per cent of the students would probably not have entered higher education, had the

aid not been available. This proportion is greatest among Arts and Science students, which is natural since these programs generally have open admissions.

On the whole, financial aid seems to be of equal importance to both sexes. An examination of the differences between the sexes within each educational program, however, indicates some interesting results. Among students in closed admission programs, where men are in great majority, the aid has had the most positive effect for women. In shorter educational programs, in which women are in majority, the aid has been of the greatest importance to men. The results, then, indicate that the financial aid system has had something of an equalizing effect on sex role differences in the choice of program. Table 3 below shows these results when the material is divided into socio-economic groups.

Table 3 Percentage of students who probably would not have entered higher education if no financial aid had been available: comparisons between socio-economic groups (given in % of total number of students in each group).

Socio-economic group	Arts & Sciences		Other faculties		Short courses		Total
	Men	Women	Men	Women	Men	Women	
A+B	14	18	6	7	(33)*	5	12
C	29	30	21	45	(27)	11	27
D+E	48	46	35	49	(20)	24	40
Total	29	30	18	27	25	16	25

* () = number of students less than 25.

Table 3 displays that the aid has had an equalizing effect on social differences as well. Among farmers and laborers (group D and E), four students out of ten would probably not have entered higher education without the availability of financial aid. The corresponding proportion in the upper socio-economic

groups is only one out of ten. The table also shows the equalizing effect to be strongest among women students in closed admissions programs - i.e. the group where social differences are greatest. (cf Svensson, 1980)

Like Levin (1978), one might ask whether recruitment to an educational program is the most relevant criterion against which to evaluate a measure of educational policy. This criterion gives us no idea of what happens during the actual course of the individual's education. We must not disregard the fact that some students, thanks to the availability of financial aid, may be lured into entering an educational program which, for various reasons, they will not be able to complete.

The analyses we have made, however, indicate that this is not the case. The results show that students who probably would not have entered higher education without the availability of financial aid have completed their degrees to as great an extent as those students who would have begun the educational program regardless of the availability of economic support. In both groups, the frequency of degree completion is about sixty per cent.

To demonstrate the significance of this change to a more demanding criterion on the social equalization effects, table 4 presents the proportion of students completing a degree program who would probably not have entered a higher education without the availability of financial aid.

Table 4 Percentage of individuals completing degrees who would probably not have entered higher education if no financial aid had been available; comparisons between socio-economic groups (given in % of total number of students in each group).

Socio-economic group	Arts & Sciences		Other faculties		Total
	Men	Women	Men	Women	
A+B	6	5	5	6	6
C	19	16	17	41	20
D+E	24	17	23	44	24
Total	15	12	13	24	15

The social equalization effects of financial aid do not appear to be quite as strong when we follow the students all the way to degree completion, as when we only study its importance in recruitment to higher education. Still, the results in table 4 show that student benefits have been very important in equalizing social differences even when using the more demanding criterion.

Table 4 also shows that the greatest importance of financial aid has been in recruiting students who have subsequently completed degrees in closed admissions programs. The total recruitment effect, however, was found to be greatest in the Arts and Sciences. One important reason for this discrepancy in results is that many students in Arts and Sciences entered higher educations without the intention of completing a degree program.

In summarizing the results discussed thus far, it may be stated that without the financial aid:

- One out of four students would probably not have entered higher education - and nearly one out of three in Arts and Sciences.

- The number of students completing degrees would have dropped by fifteen per cent of all students which corresponds to a quarter of those students who complete their degrees.

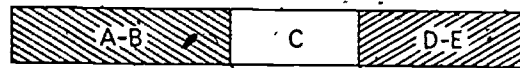
The importance of financial aid for equalization of social differences can be seen in the figure below, which describes both the real social composition and the composition which would have existed without the availability of the aid.

Open admissions courses:

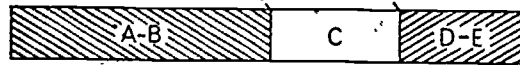
Recruitment:



real

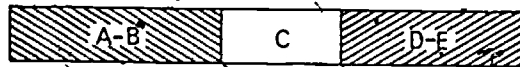


without financial aid

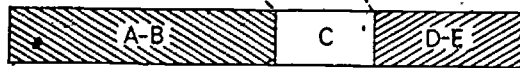


Degree completion:

real



without financial aid



Closed admissions courses:

Recruitment:

real

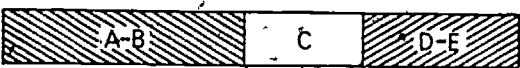


without financial aid



Degree completion:

real



without financial aid

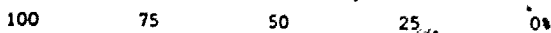


Figure 1 The real social distribution of the student group and the social distribution without financial aid.

Finally, it should be noted that these positive effects have been achieved without any indications of negative consequences in the form of students being lured into an educational program for which they were not suited.

The Importance of Financial Aid in defraying Living Costs

Both central registers and the questionnaire study show that eighty-seven per cent of the students received financial aid during their post-secondary education. The results of the questionnaire study also show that nearly as many students (eighty-two per cent) state financial aid to have been their major source of funding for their education.

Before going into the extent to which post-secondary studies have been funded with financial aid, we will show, in table 5, the number of terms the aid was received, and the amounts paid out as loans and grants.

Table 5 Number of terms for which financial aid was received and the amounts paid out as loans and grants. Averages.

	No. terms	Loans (Sw Crs)	Grants (Sw Crs)
Arts & Sciences	6.8	23 400	5 900
Other faculties	8.6	29 000	7 300
Short courses	4.7	15 400	4 000

The differences in number of terms are in fairly good agreement with the actual length of the different educational programs. The differences in amounts paid out are also mainly an effect of the varying length of educational programs.

In the questionnaire study, one item focussed on the extent to which the aid contributed to financing the individual's education. The question reads as follows:

To what extent have you been able to defray your studies by financial aid?

Entirely ()

To a great extent (about 75 per cent) ()

To some extent (about 50 per cent) ()

Very little (about 25 per cent) ()

Not at all : Received no financial aid..... ()

The alternative 'very little' was selected by only five per cent of the respondents, so this group has been included here in those who answered 'to some extent'. From this point, the group will be referred to as 'to moderate extent'.

The extent to which the aid contributed to the financing of an individual's studies can be seen in tables 6 and 7 on the next page.

The tables show that only every fifth male student and every third female student states that it was possible to finance their studies entirely with the aid. This may appear to be a low proportion, considering the fact that financial aid was originally fixed at a level which was to cover all costs of living during the academic year. There are two separate explanations for this. First, the amount of financial aid has not actually increased in full step with inflation. Second, the questionnaire study shows that a large number of the students were able to contribute to the financing of their education with an income of their own, money from parents and relatives, and in other ways. Probably, they have found it possible to maintain a somewhat higher standard of living during their study period than the aid was originally meant to cover. Consequently the importance of the aid has been somewhat undervalued by the respondents in our study.

Table 6 To what extent did the aid contribute to financing studies?
Comparisons between degree programs. Men (in per cent).

	Entirely	Great extent	Moderate extent	Not at all	Total
Arts & Sciences	19	39	23	20	101
Other faculties	22	47	21	10	100
Shorter courses	24	27	8	41	100
Total	21	40	21	18	100

Table 7 To what extent did the aid contribute to financing studies?
Comparisons between degree programs: Women (in per cent).

	Entirely	Great extent	Moderate extent	Not at all	Total
Arts & Sciences	32	40	13	15	100
Other faculties	35	50	9	5	99
Shorter courses	39	34	10	17	100
Total	34	41	12	13	100

Tables 6 and 7 also show that students in closed admissions programs used the aid to a greater extent than other students; they were also the students who were most frequently able to finance their studies 'entirely' or 'to a great extent' through the system.

Finally, the results of tables 6 and 7 show that although financial aid has been important to most students, it has been especially so for female students, who have both taken advantage of the aid more often than male students and have also been able to finance their studies through it to a greater extent.

The calculations on which the results in tables 6 and 7 are based were also repeated after a division into socio-economic groups. The differences in this case were found to be quite small and to vary irregularly from one program to another.

The results of this section can be summarized as follows: most students received financial aid during their post-secondary studies, and the majority of them were able to finance their studies 'entirely' or 'to a great extent' through this aid. Financial aid is also shown to have been of the greatest significance to students in closed admissions programs, and of greater significance to female than to male students.

In the next section, we examine the significance of financial aid for successful studies, the latter being defined as the completion of a degree program before the age of twenty-six. The presentation is limited to all students in open and male students in closed admissions programs, since other groups contain too few students for this type of analysis.

The Significance of Financial Aid for Successful Studies.

Table 8 on the next page shows the frequency of completed degree programs among students, divided according to the extent to which they found it possible to fund their studies through the financial aid system.

Table 8 Frequency of degree completion among students who were able to fund their studies to different extents with financial aid.

		Entirely	Great extent	Moderate extent	Not at all	Total
Arts & Sciences	Men	60	52	33	15	42
	Women	45	42	33	10	37
Other faculties	Men	89	81	63	55	76

The results in table 8 and figure 2 (fig 2, next page) show a very clear relationship between successful studies and the extent to which the aid was used to finance the studies. Among Arts and Sciences students the frequency of degree completion was four times as high for students who were able to finance their studies 'entirely' as for those who did not take advantage of financial aid at all. Among male students in closed admissions programs there is a lower correlation, which may in part be explained by the high frequency of degree completion as a whole in these programs.

In order to study this relationship within different socio-economic groups we have calculated contingency coefficients (Siegel, 1956). As can be seen in table 9 on the next page the relationship is strongest in the lowest socio-economic groups. These results indicate that financial aid is of the greatest importance to students from the working classes.

How is the relationship between financial aid and successful studies to be interpreted? One easily-grasped interpretation, of course, is that those students who have found the aid to be a relatively secure income have thus been able to concentrate entirely on their studies and have been able to complete their degree programs.

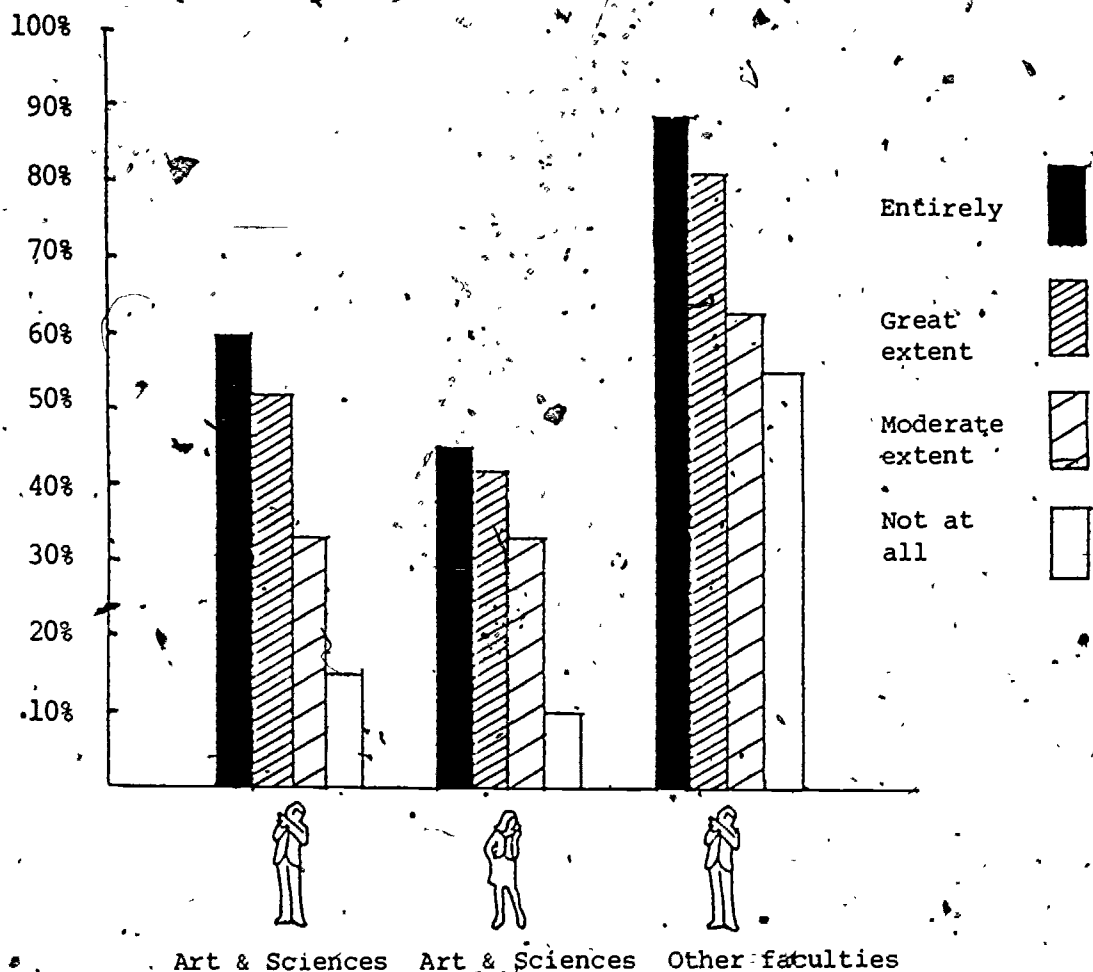


Figure 2. Frequency of degree completion among students who were able, to differing extents, to fund their studies with financial aid.

Table 9 Relationship between frequency of degree completion and funding studies via financial aid. Contingency coefficients.

		Socio-economic group		
		A+B	C	D+E
Arts & Sciences	Men	0.29	0.35	0.39
	Women	0.21	0.29	0.31
Other faculties	Men	0.25	0.28	0.33

Naturally, the causal relationship may be the reverse. We have stated earlier that successful studies are a prerequisite for renewing financial aid. At least to some extent, then, the relationship discovered here is due to the fact that students who do not complete their courses on schedule do not continue to receive the aid and then also have to discontinue their studies.

The relationship between successful studies and financial aid is also affected by a number of factors which could not be controlled in this study.

Some examples may be mentioned:

- The financial situation of the student and his family.
- The student's intentions as to degree completion.
- The student's aptitude.

At this stage it is not possible to determine the significance of any of the above mentioned interpretations to the relationship discovered, nor is it possible to study the influence of these other factors. This is the type of analysis which will be one of the central tasks of the future work of this project. The fact that degree completion gradually increases with increased financing through the aid indicates, however, a positive effect of the aid on successful studies.

Discussion

If we summarize the results of this study, we can state that:

- The national financial aid system has been the most important source of financing a higher education for the individual student.
- The majority of students have been able, entirely or to a great extent, to finance their studies through this system.

- The system has had a considerable recruitment effect, primarily upon students from the lower socio-economic groups.
- There is a clear relationship between use of the system and successful studies.

After examining this positive picture, the question arises as to whether these results are still valid, or whether any decisive changes have occurred since the early 1970s. In order to investigate this, we plan to make comparisons with the university students from the other sample of the Individual Statistics Project who were born five years later, in 1953 (see page 5). These comparisons are of interest since the older group mostly used the financial aid system when it was relatively new, while the younger group began to use the system after it had existed for some time, and had been the subject of some criticism, among other reasons because the grant portion had been greatly reduced. Another difference between the groups is that considerably fewer of those individuals born in 1953 entered higher education. This applies particularly to young people from working class families.

In addition to the planned comparison described above, it would be interesting to study the significance of financial aid for individuals who have recently entered higher education. Those individuals born five additional years later, in 1958, might be used, since the Central Bureau of Statistics has already collected some data on them which was used, to study social selection to secondary school (Härnqvist & Svensson, 1980). This material would provide information on those individuals now studying in programs of higher education, who all began their studies after the Swedish higher education reform in 1977.

There are, however, other ways of acquiring increased knowledge about the financial aid system than investigating younger students. More detailed analyses of the data used in this report would also provide information. As has been shown, there are a number of questions which have not been possible for us to answer entirely satisfactorily. One such question is why some students have not applied for, or have not received financial aid. Another is why some individuals who have amassed considerable financial aid debts, have not completed a degree program. A third question is the extent to which studies have not been completed because financial aid was cut off. A fourth question which has not been touched on at all in the present paper, but which is of definite interest in this context, concerns those individuals who would have wanted to enter higher education but who have not done so for financial reasons. A fifth question, also left untouched here, relates to repayment of the loan and how it affects the standard of living of the individuals after they have completed their studies.

These are questions which we will attempt to answer in the next phases of the project. Some of them can be answered with existing data, but some new facts will have to be collected.

We would like to conclude this report by once more considering the relationship between financial aid and successful studies. It has been stated at several points that this relationship is a positive one, since students completing a degree program have received aid to a far greater extent than those who have not completed degrees. However, we must not disregard the fact that there are many other differences between these two groups than simply the receipt of financial aid. Among other things it has been shown that those who completed degrees showed indications as early as the age of thirteen, of a greater aptitude (Svensson, 1980, p 89). Therefore, we plan, with the help of statistical methods, to attempt to eliminate the differences between the groups, or at least to control some of

the most important differences, in order to achieve more finely nuanced results.

This might be a difficult task, but since we have access to such a unique research material as the Individual Statistics Project, we hope to succeed.

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