

STUDENT FINANCIAL AID AND STUDENT BEHAVIOR IN THE NORDIC COUNTRIES

Sammenfatning

Tænketanken DEA har lavet denne survey blandt knap 1.800 nordiske studerende for på tværs af landegrænser og forskellige studiestøttesystemer at blive klogere på, hvor forsinkede de er på deres studie, hvor meget de arbejder ved siden af, og hvor meget gæld de optager.

Surveyen kan således give input til debatten om det danske SU-system, som har verseret de seneste måneder. Her har det bl.a. været fremme, at der er stor forskel på de nordiske landes studiestøttesystemer. I Danmark har studerende relativt god adgang til stipendier, mens de studerende i fx Norge i højere grad må optage lån, som så delvist, og hvis studierne fuldføres på normeret tid, kan konverteres til stipendier. Norge har således et system, som har indbygget et kraftigt incitament til at fuldføre studierne hurtigt. En 'gratis' SU, som i Danmark, har imidlertid også fordele, som fx at sikre at økonomi spiller en mindre rolle for den enkeltes studievalg.

Men hvad betyder disse forskelle landene imellem for de studerende studiefremdrift, for hvor meget de arbejder ved siden af studierne og hvor meget de må gældsætte sig? For at finde ud af dette har vi spurgt studerende på videregående uddannelser i Danmark, Finland, Norge og Sverige, om de er på normeret tid, har gæld, og om de er i beskæftigelse ved siden af studierne. Samtidig har vi også spurgt om de vigtigste bevæggrunde for disse valg. Undersøgelsen er gennemført i perioden 23. oktober – 30. november 2015 blandt 18-30 årige med en adgangsgivende eksamen til videregående uddannelser, og den gav os 1772 besvarelser nogenlunde ligeligt fordelt mellem landene.¹ Surveyen er gennemført med brug af Userneeds paneler. Det er altså ikke en repræsentativ stikprøve af studerende i de pågældende lande, men data er indsamlet på samme måde, hvilket gør det muligt at sammenligne på tværs af landene.

Sammenfattende viser surveyen, at:

- De fleste studerende i undersøgelsen modtager studiestøtte i 2015. 7 pct. har fravalgt studiestøtten og 2 pct. har opbrugt hele deres studiestøtte. Norge har den største andel, 13 pct. af de studerende, som har fravalgt studielån i 2015, og Danmark har den mindste andel, 3 pct. Andelen, som har opbrugt studiestøtten er noget mindre, men størst i Finland, hvor det er 4 pct. og mindst i Sverige, hvor det er under 1 pct. Fravalget er stort i Norge, hvilket giver mening, da det er lånebaseret. Og at flest studerende har opbrugt deres SU i Finland stemmer med, at i Finland tildeles de studerende kun ét halvt års ekstra SU.
- På tværs af de nordiske lande er der ikke væsentlig forskel på, hvorvidt de studerende er på normeret tid. Det til trods for, at der er store forskelle på studiestøttesystemerne landene imellem. Det betyder også, at fx de danske og norske studerende har forskellige motiver til ikke at blive forsinket. I Norge nævner 38 pct. af de studerende, at én af de to vigtigste grunde til at være på normeret tid er, at de ønsker at undgå stor gæld. I Danmark angiver 16 pct. af de adspurgte, at gældsætning er årsag til at man ønsker at gennemføre på normeret tid. Omvendt nævner 30 pct. af de danske studerende, at 'forsinkelser gør det vanskeligt at tage kurser', som årsag til at man ønsker at være på normeret tid, hvilket kan skyldes fremdriftsreformen. Det samme gør kun 8 pct. af de norske studerende.
- Mht. gæld afspejler svarene meget klart de enkelte landes studiestøttesystemer. Når vi ser på andelen, som tager lån, så finder vi, at 55 pct. af de studerende svarer, at de har optaget studie­gæld

og at 48 pct. forventer at tage lån også i fremtiden. I Norge er det hele 90 pct., der har studiegæld, mens andelen i Danmark er nede på 25 pct. I Finland og Sverige er andelene hhv. 45 og 65 pct. Den rangering af landene går igen i spørgsmålet om, hvorvidt de forventer at tage yderligere studielån.

- Også når det drejer sig om størrelsen af gælden, så er der udtalte forskelle. De norske studerende er de mest gældsatte. I undersøgelsen har en medianstuderende¹ fra Norge, som har optaget lån, akkumuleret mellem Dkr. 150.000 og 300.000 i gæld. I Danmark og Finland er gælden lavere for dem som har optaget lån, da en medianstuderende har mellem Dkr. 15.000 og 75.000. I Sverige har en medianstuderende lånt mellem Dkr. 75.000 og 150.000.

Vi har gennemført en statistisk analyse af sammenhængen mellem gældssætning, beskæftigelse ved siden af studierne, og studiefremdrift.

- Resultatet er, at der forbliver store forskelle i gældssætning og beskæftigelse ved siden af studierne mellem de nordiske lande, men der er ingen forskel på, hvorvidt de studerende er på normeret tid. Det er næppe overraskende at netop forskellige regler i studiestøttesystemet giver anledning til forskelle i gældssætning og beskæftigelse ved siden af studiet.
- Hvis vi fokuserer på de studerendes sociale baggrund, som vi har målt ved at spørge til forældrenes højeste fuldførte uddannelsesnivea, så viser det sig, at indenfor landene, har forældres uddannelsesbaggrund ikke nogen større betydning for gældssætning og beskæftigelse ved siden af studiet. Den eneste forskel finder vi i Norge, hvor studerende med højtuddannede forældre i højere grad er på normeret tid. Vores analyse giver ikke svar på, om studiestøtte giver lige adgang til optag på de videregående uddannelser i de forskellige lande.
- Selvom de studerende har samme tilbøjelighed til at være på normeret tid i de 4 lande, så er motiverne meget forskellige. I Norge nævner 38 pct. af de studerende at de ønsker at undgå stor gæld, som én af de to vigtigste grunde til at være på normeret tid. I Danmark er den andel 16 pct. Omvendt er danskerne betydeligt mere tilbøjelige (30 pct.) til at optage studielån, fordi forsinkelser gør det vanskeligt at tage kurser. Dette er imidlertid ikke et problem i samme omfang i Norge (8 pct.). I Danmark nævner 22 pct. af de studerende, at frykten for at løbe tør for SU er en af de to vigtigste årsager til at være på normeret tid, hvilket ikke er tilfældet i Norge, hvor kun 7 pct. nævner dette.

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¹ En medianstuderende skiller de studerende i to lige store dele. Dem som har mindre gæld, og dem som har mere gæld.

1. Introduction

Denmark shares a similar approach to higher education finance with its Nordic neighbors. Higher education institutions in the Nordic region are primarily financed through public funds, students pay no tuition fees and have access to financial aid to cover their living costs. This setup is unique within the OECD and it “reflects these countries’ deeply rooted social values, such as equality of opportunity and social equity” (OECD, 2014). The high levels of public investment in education are partly made possible through the high levels of taxation that exist in the Nordic countries.

However, despite the similarities, there are significant differences in the way the student financial aid systems are structured within each of the Nordic countries. For instance, there are differences in the level of aid that students receive, the importance of loans relative to non-repayable grants or stipends, loan repayment conditions and requirements regarding study progress.

In this paper, we try to answer the question of whether these cross country differences in the systems of student financial aid lead to systematic differences in student behavior. We were also especially interested in knowing whether different student aid schemes have different effects in terms of social mobility, that is, if they lead to different behavior across groups of students from different parental background. To achieve this, we carried out a survey of young persons in four out of five Nordic countries (Denmark, Sweden, Norway and Finland) and asked questions about their decisions and motivations to enroll in higher education, to take up student loans and student jobs, and about their study progress.

Students do not make these choices in isolation, either they simultaneously decide on how much to study, work and borrow, or even more likely, the choices are not made simultaneously but affect each other throughout time. In technical terms, this is the same as to say that the choices are endogenously determined. We do not have enough data to explain how students take this set of choices (in technical terms, to estimate a structural model of student choice). But we use the survey data to estimate whether the overall cross country variation in which students operate (including for example student aid schemes, tax systems and labor market conditions) affect student choices, or in technical terms, to estimate the reduced form equations of the model.

Our results suggest that, although the different student aid schemes lead to significant differences in loan taking behavior and student employment, there is no significant difference in terms of study progress across the four countries. Also, within each country, we found no significant differences in the take up of loans and employment rate between students from different parental background. The only instance in which we find differences between students with different parental background is in Norway, where students whose parents have attained higher education are slightly more likely to be on time with their studies than students whose parents have no higher education.

Another interesting result from our analysis is that although there is no difference in study progress across the four countries, the motivations to avoid delays are different. These differences may arise at least partly from differences in student aid schemes, administrative requirements for students and/or on the way higher education programs are structured. For instance, Norwegian students are motivated to stay on track with their studies to avoid accumulating too much debt to a much larger extent than Danes. Moreover, Swedish and Norwegian students are very unlikely to be motivated to stay on track by fear of running out of student aid. This is not the case for Finns and Danes, who, apart from fearing running out of student aid, are motivated to stay on track to avoid complications in taking courses.

One important question that our analysis does not answer is whether the differences in student aid schemes lead to differences in terms of equity in enrollment in higher education. However, some of the studies that we refer to in the next section of the report can give some insight on how specific reforms have affected equity in enrollment and therefore social mobility.

The results of our paper are relevant also in a Danish context if considering switching from a largely grant-based student aid scheme to a loan based system with specific incentives for study progress, similar to the Norwegian system. It is important to have in mind that a change in the student financial system in Denmark will have implications on student's debt and hence other policy areas. For instance a move towards a more loan-based system could be accompanied by reforms that introduce more flexibility into the higher education system - for instance allowing for part-time students and making them eligible for student loans.

The rest of the paper is organized as follows. Section 2 provides a brief summary of related literature. Section 3 shortly describes student financial aid schemes in Denmark, Finland, Norway and Sweden. Section 4 describes the survey methodology. Section 5 presents the survey results in detail, focusing on the background characteristics of respondents, their behavior as students and the importance of financial factors in motivating their decisions to study, work and take up loans. Section 6 presents the results of the reduced form equations of a model of student behavior. Section 7 concludes.

Related literature

There is a growing literature on how student financial aid affects education outcomes such as enrollment, dropout, completion, choice of study as well as social mobility in education. Dynarski and Scott Clayton (2013) summarize the results of the research regarding student financial aid in the United States. One of their main conclusions is that aid availability can improve college access and completion, but that this effect has been diminished by the complexity of the system of financial aid in the United States. In contrast to the Nordic countries, financial aid in the United States is provided by a large number of actors and each program has different eligibility criteria. Research shows that this complexity makes it difficult for students to access information about the actual costs of higher education, leading to inefficiencies in college enrollment decisions.

Another second important conclusion of the review is that financial aid that is made conditional on academic achievement is more effective at improving outcomes such as persistence, grade point averages and timely completion than unconditional aid. Dynarsky and Scott Clayton, also point to the scarcity in the evidence on the effectiveness of student loans: most research regarding student aid effectiveness has concentrated in the effect of stipends. According to their review, the little evidence that exists suggests that debt aversion has an important role to play when considering the effectiveness on loan programs, that program design can mitigate the effects of debt aversion and that loans may have different effects on the choice of studies than grants.

A number of studies have looked into how reforms in the student aid systems of the Nordic countries affect students' behavior. As mentioned previously, the landscape of student financial aid in the Nordic countries is radically different than in the United States, which is probably why at times the conclusions from this research seem to point in the opposite direction that the researched summarized by Dynarsky and Scott Clayton.

For instance, in 1998 the Danish student aid system was extensively reformed. Means testing was eliminated, the level of grants increased by more than 25 per cent, the level of student loans available increased and the maximum annual earnings allowed to keep receiving the maximum student grant was lowered. Nielsen et al. (2008) found a positive effect of the reform on enrolment, however the effect was very small compared to estimates for the US. This is not so surprising when taking into account that the estimates from the US arise from reforms that compare situation in which students have access to some aid to situations where students have no access to aid.

An evaluation of the same reform by Krassel et al. (2010) found that the increase in the student grant increased the likelihood of choosing an education in humanities and the natural sciences, but decreased the likelihood to choose an education in social sciences and health sciences. Nielsen Arendt (2012) evaluated the effects of the Danish reform on dropout and completion rates and found that the reform significantly lowered the dropout rate of students from relatively disadvantaged backgrounds but had no effect on the dropout rates of students whose parents have higher education and/or private property.

One of the most interesting and newest papers within the literature of student financial aid in the Nordic Countries is the one by Joensen and Mattana (2014), as it provides some answers regarding the effectiveness of loans relative to grants. The authors use exogenous variation arising from a reform of the Swedish student aid system in 2001 to estimate a dynamic discrete choice model of joint education, employment and loan take up decisions. The reform increased the proportion of grants relative to loans, raised the maximum annual earnings allowed to keep receiving the maximum student grant, tightened the rules for repayment and reduced the possibilities to extend student aid for longer than 6 years. Their simulations show that when loans make up 50-85% of total financial aid the weight of loans does not matter for student choices and outcomes other than student debt.

Avdic and Gartell (2011) found a positive and significant effect of the Swedish reform on study efficiency, which was driven by students with strong academic backgrounds, while students with weak academic backgrounds were unaffected. However, it is not possible to disentangle which elements of the reform led to these effects.

Norway also reformed its student aid system in 1990 and 2002. The 1990 reform entitled students from certain graduate study programs to a restitution from the Norwegian State Educational Loan Fund if they completed their studies on stipulated time. The 2002 reform was part of a broader quality reform of the higher education sector, and it expanded the concept of loan restitutions to all higher education students. The total amount of financial aid was increased from 7000 to 8000 NOK /month, but whereas previous to the reform approximately 30% of aid was in form of grants, after the reform 100% of support was given out as loans. However, the reform enabled students to convert up to 40% of loans into grant each year upon timely completion of all credits.

These two reforms provided relevant opportunities to assess the effect of tying aid to performance. Results from three evaluations point in the same direction as the research from the US. Both Gunnes, et al (2012) and Gahmberg (2014) find that after the 1990 reform the treatment group experienced an increase in the probability of graduating on time and a decrease in the average delay.

An evaluation by Proba Samfunnsanalyse (2013) finds that study progression improved after the 2002 reform. On average, students completed 17 per cent more credits per semester after the reform and the share of students completing their bachelor degree within 3 years increased from 61 per cent for the cohorts starting their studies before the reform to around 66 to 68 per cent for those starting in the two-year period after the reform was implemented.

While it is not possible to disentangle the effects from changes in the student aid system from the effects of the broader quality reform, the report indicates that the student aid reform had independent effects on progression: students living with their parents are not eligible to convert their loan into stipend, and while this group also improved its progression, it did so at a significantly lower rate than the group of students living away from their parents.

This evaluation also finds that equity in access to higher education and in the uptake of student aid increased after the reform. In particular, while youth with strong academic backgrounds and/ or from more economically advantaged homes are more likely to participate in education, the differences in enrolment rates between the two groups became smaller after the reform. In terms of the use of student aid, the evaluation finds that students were more likely to take up student loans after the reform, and that this effect was larger for students from weak academic and socioeconomic backgrounds. These results might suggest that that the design of the program minimized the negative effects of debt aversion on loan take up.

Student financial aid in Denmark, Finland, Norway and Sweden

Student financial aid schemes in the Nordic countries are described in detail in the background report published in DEAs webpage (DEA 2015). In this section we elaborate on some of the most important similarities and differences.

In all four countries, access to student financial aid is universal for nationals. In Denmark, students have access to both student grants and student loans provided by the government. The structure of student financial aid in Sweden is similar, however, as table 3.1 shows, the basic grant is much smaller than in Denmark.

In comparison to Sweden and Denmark, Norwegian students must take up loans if they want to access student financial aid. However, up to 40 per cent of these loans can be forgiven if students successfully complete the coursework for which they received financial aid. This conversion happens once a year.

In Finland, as in Sweden and Denmark, part of student financial aid is given out as grants. Students may additionally decide to take up loans. As in Norway, part of these loans can be converted into grants. However, the conversion condition is the timely completion of the whole degree. Students completing their degree on time can get 40 per cent of the debt exceeding 2500 euros converted into a grant. The Finnish system is also different in that part of the grant is earmarked for housing expenditures (rent) and therefore the amount of grant for each individual depends partly on their rent expenses.

Table 3.1: Maximum grant and loan amounts per year and income limit (in DKK, 2015)

	<i>Denmark</i>	<i>Finland</i>	<i>Norway</i>	<i>Sweden</i>
Maximum amount of grants available per year	70.836	36.054	0	22.341
Maximum amount of loans available per year	36.240	26.856	82.754	56.248
Max amount of loan that can be converted into grant	0	10.742	33.102	0
Loans + grants available per year				
Before tax	107.076	62.910	82.754	78.589
After tax	96.930	62.910	82.754	78.589
Index	100	65	85	81
Income limit (Fribeløb)				
	142.140	88.401	133.471	136.196

Notes: In Denmark and Finland, grants are subject to income tax. This is not the case in Norway and Sweden.

Sources: SU.dk, KELA.fi, lånekassen.no, CSN.se

The length of time students can receive financial aid varies slightly across the four countries. Danish students can receive student aid for the stipulated duration of their program and for a maximum of 70 months in total for higher education. Students starting higher education within 2 years after finishing secondary education can receive student financial aid for the stipulated duration of the program plus 12 months. A distinctive feature of the Danish system is the existence of a loan meant for students that have used up all their student aid but have 12 to 24 months of study left. In Sweden financial aid is available for 240 weeks, which corresponds to 6 years of full time study, while in Finland aid is available for the stipulated duration of the program plus five months. Norwegian students can receive student financial aid for the stipulated program duration, however, they can receive up to 8 years of aid for higher education.

In all four countries, students are allowed to earn up to a certain amount of income before the amount of financial aid they are eligible to receive is reduced. This income limit is highest in Denmark and lowest in Finland.

Other notable differences that are not related to the level of financial aid available for students are the loan repayment conditions. Sweden has the longest repayment schedule with a maximum of 25 years. In Denmark, the length of repayment depends on the size of the loan and varies between 7 and 15 years, while in Norway repayment may take up to 20 years. In Finland, loan repayment conditions are agreed upon with the individual banks. Interest rates for student loans are also different across the four countries.

There are also variations in the eligibility criteria for financial aid. In Denmark and Finland, only full time students are eligible for aid, in Sweden and Norway part time students can access financial aid at reduced rates. Means-testing is an important component of the four systems, but in general, only the student's income and/or wealth impact the level of financial aid. Parental income is only considered for the means-testing for students who live with their parents. Except for in Sweden, students living with parents are not entitled to the full amount of financial aid.

Overall, the differences in student aid schemes reflect themselves in the loan taking behavior of students in the Nordic countries. For example, table 3.2 shows that Norwegian students are most likely to be indebted, and they also accumulate the highest levels of debt. Danish students are the least likely to be indebted and accumulate, on average, half the level of debt than Norwegians do.

Table 3.2. Student indebtedness (2013)

	Denmark	Finland	Norway	Sweden
Relative share of students receiving aid also taking out student loans (2013)	37%	42%	97%	73%
Average debt at graduation (EUR, 2013)	15.574	7.483	31.371 ¹	17.629

Notes: ¹2012

Source: Studiestöd i Norden. (2013) [Nordisk statistik om studielån och studieskulder](#)

Survey methodology

Survey respondents were recruited from user panels owned by the same company (Userneeds) from each of the four participating countries. Collection took place in Denmark, Finland, Norway and Sweden between October 23 and November 30, 2015. The following groups of respondents were screened out:

- Persons born before 1985 or after 1997
- Students not eligible for student aid
- Persons who do not have a qualifying exam for higher education²
- Persons who have already completed higher education ³
- Part time students
- Doctoral students
- Students enrolled in short higher education programs (Tertiary type-B programs)

The remaining respondents were divided into two groups: students and non-students. Students were asked more questions and it took them on average 7.5 minutes to answer the survey, compared to 3 minutes for the group of non-students.

To minimize variance, we aimed for a similar distribution across countries in terms of gender and whether respondents were students of higher education. We did this by continually monitoring the data collection and in periods screened out respondents of a particular gender or education status in individual countries. Norwegian males proved especially difficult to recruit, and this led to an overrepresentation of female respondents across countries.

The survey was structured around the following topics:

- Background information
- Information about current student status
- Choice of education
- Study Progress

²Translated as Gymnasiale uddannelse, gymnasial utbildning, utdanning fra videregående and lukion in Denmark, Sweden, Norway and Finland respectively.

³ Translated as Videregående uddannelse, högre utbildning, en høyere utdanning, yliopisto-/korkeakouluopintosi in Denmark, Sweden, Norway and Finland respectively.

- Debt
- Student jobs
- Attitudes towards the student financial aid system
- Labor market expectations

Survey results

a. Characteristics of respondents

In all, 1772 persons responded the survey, with approximately the same number of respondents from each country. The group of respondents consisted of both students and non-students aged 18 to 30 years. Between 61 and 67 percent of respondents in each country were enrolled in higher education at the time of the survey. Almost 8 per cent of respondents had previously been enrolled in higher education but dropped out before completing their program. Denmark had the lowest percentage of respondents that had never been enrolled in higher education, at 23 percent, compared to just over 30 percent in Sweden and Norway

Table 5.1 Education status at time of survey

Country	Enrolled	Never enrolled	Dropout	Total
Denmark	302	104	47	453
Sweden	274	137	38	449
Norway	275	131	14	420
Finland	300	113	37	450
Total	1151	485	136	1772

Tables regarding further characteristics of respondents are reported in Appendix 1. Here we review the key differences across countries. On average, students in our sample were turning between 23 and 24 years in 2015. Non-students were on average turning 24 years old in 2015. Danish non-students in our sample were on average younger than the rest of non-students. In all countries but Denmark, surveyed students were younger than non-students.

Gender-wise, three quarters of the sample of student respondents are female. This overrepresentation of females is due to the collection method used.

In terms of parental background, just over half of respondents come from a family where at least one parent has attained higher education. This varied between 46 per cent in Sweden and 55 per cent in Norway.

We asked non-students whether they had plans to enroll in higher education within two years from the time of the survey. In Denmark 70 per cent of non-students had plans to enroll in higher education compared to under 50 per cent in the rest of the countries. Danish respondents who had never been enrolled in higher education were especially likely to answer that they plan to enroll in higher education.

One of the questions of the survey asked students to choose which part of their education they were enrolled in. The options were:

- a) first part (bachelor or similar)
- b) second part (Master or similar)
- c) my education consists of one part only

Students who chose option c) then had to answer whether their program's stipulated length was between 3 and 4.5 years or longer than 4.5 years.

This question was designed like this to be able to differentiate the group of Danish students enrolled in a university bachelor degree from those enrolled in a professional bachelor degree. However, program categories are not exactly equivalent across the four countries, which leads to different distributions in the answers of respondents. For example, in Norway and Sweden, a number of long professional programs are not yet split into the 3+2 structure of the Bologna process, and this is reflected in that 11 and 5 per cent of Norwegian and Swedish respondents respectively are within the “long unsplit” program.

In Denmark, 57 per cent of students were studying a bachelor program, 29 per cent a master program and 14 per cent a professional bachelor degree.

When looking at the programs’ areas of study, 45 per cent of respondents were enrolled in a program within health, natural sciences or technology, 28 per cent were enrolled in humanities and 27 percent in social sciences. Around half of Finnish and Swedish students were within the areas of health, natural sciences and technology, which is more than the share of Danish and Norwegian respondents in these areas. The share of Swedish students within humanities was the lowest compared to the other three countries.

Student behavior

In the survey, students were asked about their study progress, their use of the student aid system and employment. In terms of study progress, a vast majority of respondents (82%) answered that they had followed their studies within the prescribed time up to the semester in which answers were collected. Thirteen per cent of respondents were delayed by up to 30 ECTS points and 6 per cent were delayed by more than 30 ECTS points. (See table 5.2)

Students were also asked about their expected future study progress. Students that were so far on time were less likely to expect future delays than students who were already delayed. 15 per cent of students that were so far on time with their students, expected future delays compared to 36 per cent of students that were already delayed. (Table 5.3 and 5.4)

At first sight there do not seem to be large differences in self-reported study progress across countries. In the next section we investigate further whether this result holds when using multivariate analysis, and whether other variables are important in explaining study progress.

Table 5.2 Up to this semester, had you followed your education in the prescribed time?

	Denmark	Sweden	Norway	Finland	Total
Yes	81%	85%	80%	81%	82%
No, I was delayed by 1 to 15 ECTS points	6%	5%	5%	8%	6%
No, I was delayed by 16 to 30 ECTS points	7%	7%	7%	5%	7%
No, I was delayed by 31 to 45 ECTS points	0%	2%	2%	1%	1%
No, I was delayed by 46 to 60 ECTS points	2%	0%	3%	1%	2%
No, I was delayed by more than 60 ECTS points	3%	1%	3%	4%	3%
n	302	274	275	300	1151

Table 5.3 Do you expect to complete your study program within the stipulated time?

	Denmark	Sweden	Norway	Finland	Total
Yes	87%	85%	88%	80%	85%
No	13%	15%	12%	20%	15%
n	246	233	219	242	940

Table 5.4 Do you expect further delays in your education?

	Denmark	Sweden	Norway	Finland	Total
No	64%	44%	66%	59%	59%
Yes	30%	56%	27%	38%	36%
No, I want to switch to another program	2%	0%	0%	3%	1%
No, I want to drop out	4%	0%	7%	0%	3%
n	56	41	56	58	211

Ninety percent of student respondents received student aid during 2015. This share varied between 84 per cent in Norway and 94 per cent in Denmark (Table 5.5). The share of respondents that opted out from receiving student aid was highest in Norway at 13 per cent. We did not ask students why they had opted out from receiving student aid. In Norway, the large share can be likely explained by the lack of a study grant. Another likely reason for opting out from student aid is having labor income that is too high to receive aid.

Table 5.5 Do you receive state student aid in 2015?

Country	Yes	No, I have opted out	No, I have used up all my student aid	Total
Denmark	94.4%	3.3%	2.3%	302
Sweden	92.3%	7.3%	0.4%	274
Norway	83.6%	13.1%	3.3%	275
Finland	90.0%	6.3%	3.7%	300
Total	90.2%	7.4%	2.4%	1151

Loan taking behavior varies widely across respondents in the four countries (Table 5.6, 5.7 and 5.8). Only 25 per cent of Danish respondents had taken out student loans, compared to 45, 65 and 90 per cent respectively in Finland, Sweden and Norway. Danish students were also the least likely to expect to take out student loans in the future, while Norwegian students were the most likely.

Finnish loan taking respondents had accumulated the lowest levels of debt compared to students in the other three countries. Only 2 per cent of loan-taking Finns owed more than DKK 150 000, compared to 12 per cent of Danes, 36 per cent of Swedes and 59 per cent of Norwegians.

Moreover, when asked about how much debt they expect to have taken out by the time they finish studying, Finns and Danes had significantly lower expectations than Swedes and especially, Norwegians. Almost 70 per cent of loan taking Finns and 56 per cent of Danes expect to have less than DKK 150000, while 54 per cent and 76 per cent of Swedes and Norwegians respectively expect to have taken up more than DKK 300 000 in student loans by the time they finish their studies. These expectations are in line with the level of loans and grants that students have access to in the four countries (see table 3.1).

Table 5.6 Loan take up

Country	Have you ever taken out student loans? Yes	Do you think that you will take out student loans in the future? Yes	Total
Denmark	25%	24%	302
Sweden	65%	57%	274
Norway	90%	69%	275
Finland	45%	46%	300
Total	55%	48%	1151

Table 5.7 How much student debt have you accumulated so far?

	Denmark	Sweden	Norway	Finland	Total
Less than 15.000 kr.	18%	8%	3%	21%	10%
15.000-75.000 kr.	41%	30%	14%	68%	33%
75.001-150.000 kr.	29%	28%	24%	9%	22%
150.001-300.000 kr.	9%	28%	37%	2%	24%
300.001-450.000 kr.	3%	7%	18%	0%	9%
More than 450.000 kr.	0%	1%	4%	0%	2%
n	76	178	246	134	634

Table 5.8 Current debt plus expected debt

Country	Up to 150K	150K-300K	300K-450K	450K-600K	More than 600K
Denmark	56%	23%	14%	5%	1%
Sweden	26%	20%	22%	19%	13%
Norway	9%	16%	22%	21%	33%
Finland	68%	29%	2%	1%	1%
Total	34%	21%	16%	13%	15%

In terms of student employment, half of students in the survey stated that they had a paid job alongside their studies at the time of the survey (See table 5.9). A lower share of Finns and Swedes compared to Danes and Norwegians were in the group of students with student jobs. This difference could arise from the fact that in the Swedish and Finnish student aid scheme, students receive aid only during the semester, while Danes and Norwegians receive aid also during the summer months. This could lead to Swedes and Finns taking more seasonal rather than year-round jobs compared to their Norwegian and Danish counterparts, which would then lead to differences in the way these two groups answer the question posed in the survey.

When looking at the combination of student jobs and student loans chosen by surveyed students, there appear to be large differences in behavior across the four countries (table 5.10). When looking at the four possible combinations of loans and jobs (No student job nor loans, job only, loans only and both loans and job), each country has the highest share of students in a different category. The most frequent category among Danes is "job only" and among Swedes "loans only". Norwegians are most frequently within the "loans and job" category and Finns are most frequently in the "no job, no loans" category.

Table 5.9 Do you have a paid job alongside your studies?

Country	Yes	No	Total
Denmark	54%	46%	302
Sweden	48%	52%	274
Norway	64%	36%	275
Finland	38%	62%	300
Total	51%	49%	1151

Table 5.10 Combination of student job/student loans

Country	Job only	No job, no debt	Debt and job	Debt only
Denmark	42%	33%	12%	13%
Sweden	17%	18%	31%	34%
Norway	7%	4%	58%	32%

Finland	19%	36%	19%	26%
Total	21%	23%	29%	26%

Student motivations

In the survey, respondents were also asked about the motivations behind their decisions regarding enrollment in higher education, study progress, loan taking and employment during their studies. We were especially interested in gauging the extent to which the different student aid schemes influenced these decisions.

We first asked the group of non-students about the main reasons for not being enrolled in higher education or, in the case of dropouts, the reasons for dropping out of higher education. Table 5.11 below presents the questions asked to the group of non-students and dropouts respectively. In the table, we highlight the reasons that were more frequently chosen as one of the two main reasons not to enroll or dropout by non-students in each country)

We want to focus on how student aid schemes influenced the decision not to enroll or dropout from higher education. Therefore, we focus on analyzing the share of students in each country who said that they did not enroll in or dropped out of higher education because they would have had low income while studying or because they had to take out student loans to be able to study. The results are reported in tables 5.12 and 5.13.

360 respondents were not enrolled in higher education at the time of the survey. 13 per cent of Danish and Norwegian non-students chose low income during the time of studies as one of the two main reasons not to be enrolled or to have dropped out compared to 26 and 27 percent of Swedish and Finnish non-students respectively. 16 per cent of non-students said that having to take out student loans was one of the two main reasons keeping them from studying, ranging from roughly 10 percent in Finland and Denmark to roughly 20 per cent in Norway and Sweden.

Although the sample size is quite small, it seems like the relative differences in the level of grants across the four countries are reflected in the answers of students. Finland and Sweden offer a significantly lower level of grants than Denmark, and Finns and Swedes seem to be more likely to choose low income while studying as one of the main reasons not to study. Also, Finns have access to relatively low levels of student loans, and this is also reflected in that few of them choose “having to take out student loans” as one of the main reasons not to study.

It is interesting to look at the difference between Norwegian and Swedish non-students relative to Danes. Norwegian students have access to a high level of student aid, which is given out as loans, but this does not make them more likely than Danes to choose “low income” as one of the reasons not to study. However, they are more likely to choose “having to take out loans”. Swedish students, on the other hand, have access to a non-repayable grant that is significantly lower than the Danish grant, so in order to achieve a level of income similar to the one of Danish students they need to take out loans. Swedish non-students are both more likely than Danes to choose “low income” and “having to take out loans” as the main reasons not to study.

Table 5.11 Survey questions regarding non enrollment/ dropout

What are the two main reasons why you are not enrolled in higher education?	What are the two main reasons why you did not complete the higher education program, you were enrolled in?
<ul style="list-style-type: none"> a. I would like to avoid having low income while studying (SE-34%) b. I would have to take out student loans c. I doubt whether I would be able to enter my desired education program d. I know very few people that have taken higher education e. I am tired of going to school (DK -39% and NO-39%) f. I am in doubt of whether I would be able to complete the program g. I am in doubt of whether it would lead to a more interesting job h. I am in doubt of whether it would lead to a higher future income i. I cannot combine studies and work j. I would rather work (SE-35% and FI-47%) k. My desired education program is only offered far away l. I feel like doing something else (DK-48%) 	<ul style="list-style-type: none"> a. I was tired of having low income as a student b. I would have had to take out student loans to continue c. I doubted whether I could complete the program (DK-36% and NO-36%) d. I doubted whether it would lead to an interesting job e. I doubted whether it would lead to higher future income f. I could not combine studies and work g. I could not fit in in the local area h. The social environment of the program was bad i. I became a parent j. I got a long term illness k. Someone in my immediate family got critically ill l. I started my own company m. I was tired of going to school (SE-34%) n. The study program did not fulfill my expectations (SE-37% and FI-32%) o. I felt like doing something else (DK-36%)

Table 5.12 Number and percentage of students choosing “low income while studies” as one of the two main reasons not to enroll or to dropout

Country	n	%	Number of non-students
Denmark	9	13%	70
Sweden	28	26%	109
Norway	11	13%	85
Finland	26	27%	96
Total	74	21%	360

Table 5.13 Number and percentage of students choosing “having to take out student loans” as one of the two main reasons not to enroll or to dropout

Country	n	%	Number of non-students
Denmark	8	11%	70
Sweden	25	23%	109
Norway	16	19%	85
Finland	8	8%	96
Total	57	16%	360

We turn now to describing the motivations of student respondents regarding study progress. We asked students to choose two out of seven possible reasons as the main reasons for wanting to stay on track with the stipulated time of their program. The possible choices were either financial incentives related to student financial aid, incentives imposed by the structure of study programs, external expectations or internal expectations.

The single most named reason across the four countries was wanting to finish quickly (internal expectations), with more than three quarters of respondents choosing it. However, when looking at the frequency at which students chose the other reasons, there is significant variation across countries.

Danes and Finns are more likely to answer that one of the main reasons for wanting to stay on track with their studies is that study delays can lead to complications in taking courses. A likely explanation is that in these countries there might be more restrictions as to how or when students have to pass a certain class.

When looking at the incentives created by the system of financial aid, Norwegian students seem specially motivated to stay on track in order to avoid getting too indebted, with almost 40 per cent of respondent choosing this motivation. This makes sense as, for students receiving student aid, delays lead automatically to higher levels of debt. Danes and Finns are especially likely to choose the fear of running out of financial aid as one of the main motivations to stay on track. This is also in line with the fact that Finns are Danes are subject to stricter rules in terms of the amount of time that they can receive student aid than Norwegians and Swedes.

Table 5.14 What are the two main reasons why you expect to complete your degree in the stipulated time/ do not expect to be further delayed?

	Denmark	Sweden	Norway	Finland	Total
Delays will make it difficult for me to take courses	30%	16%	8%	30%	21%
I look forward to having a higher income	27%	29%	26%	19%	25%
I want to avoid to getting (too) indebted	16%	24%	38%	27%	26%
My classmates are not delayed	16%	14%	11%	9%	13%
It is expected of me that I complete on time	31%	44%	50%	27%	38%
I fear running out of SU	22%	8%	7%	25%	16%
I want to finish quickly	74%	75%	79%	79%	77%
n	250	216	229	227	922

Lastly, we describe the survey results describing the motivations to take up a student job (table 5.15). We asked students who had a student job what was the most important motivation for having a student job. Almost 60 per cent of students answered that the main reason for having a job was to maintain their standard of living. One quarter said that gaining experience that will be valuable in the labor market was the most important motivation. Fifteen per cent said that they had a job to avoid accumulating too much student debt and only 3 per cent chose that they work to gain knowledge that benefits their academic performance. These four reasons are ranked in the same order across the four countries, however, Danes and Norwegians named the income reason more frequently than Finns and Swedes, who in turn named the debt aversion reason more frequently.

Table 5.15 What is your main motivation for having a job alongside your studies?

	Denmark	Sweden	Norway	Finland	Total
To gain experience that will help me find a job after completing my education	27%	27%	23%	26%	25%
To gain knowledge that benefits my academic performance	2%	2%	6%	1%	3%

To ensure that I can maintain a desirable standard of living	60%	52%	62%	52%	57%
To avoid taking out too much student loans	11%	20%	10%	21%	15%
n	163	132	177	114	586

Multivariate analysis

In this section we present the results of the reduced form regressions of a model of student behavior. We estimated one regression for each of the following variables:

- Whether the student has taken out debt
- Whether the student had followed their study program on time
- Whether the student has a paid job alongside his or her studies
- The amount of debt taken out by students

The first three regressions were fitted through a probit model using the entire group of students for whom we had complete background information (1092 observations). The regression on the level of debt taken out by students was fitted through ordinary least squares (OLS) and with the sample of students who had taken out debt at the time of the survey (606 observations).⁴ We included the same list of explanatory variables in all four equations, which was:

- background variables (age, gender and a binary categorical variable which is equal to one if one or both parents have attained higher education and zero otherwise)
- variables describing the program of studies (program level and area of study)
- country dummy variables (using Denmark as the reference category)
- four binary categorical variables that were equal to one if the individual had experienced the following events during his/her studies: chronic sickness, critical sickness or death in his immediate family, failed exam, study exchange abroad or internship.
- Interaction terms between the country dummies and the parental education dummy.
- A constant term

We were mostly interested in the estimated coefficients for each of the country dummies, the parental background dummy and the interaction terms. The full regression results are reported in columns 1-4 of Appendix 2. We also report the average country effects and the average marginal effect of the parental education dummy within countries in tables 6.1 and 6.2 respectively.

The estimated coefficients for the probit model for debt show that, all else equal, older students are more likely to take out debt and that students of long unsplit programs are more likely to take out loans than Bachelor students. It is slightly surprising that the coefficient on Master is not statistically significant. Also, there seem to be no significant differences in the loan taking behavior across gender or study areas. Having experienced one of the four events while studying does not have a significant effect on the probability of taking out debt.

Turning to the coefficients of interest, students in Finland, Sweden and Norway are, all else equal, more likely than Danish students to take out loans and the difference is statistically significant at the 99% confidence level. The average marginal effects show that the average probability of taking out debt is .25 for Danes, .47 for Finns, .67 for Swedes and .88 for Norwegians.

The average marginal effects of having at least one parent who has completed higher education, reported in table 5.3, show that within each country, there is no significant difference in the probability of taking out loans between students of different parental backgrounds. That is, students whose parents have no higher

⁴ To allow for heteroscedasticity, we also ran ordinary least squares regressions using clustered standard errors- this did not affect the results.

education are not more or less likely to take out loans than students with at least one highly educated parent.

The regression results for the amount of debt taken out by students (conditional on taking out debt) reinforce the probit results. Older students have taken out larger amounts of debt and students of Master and long unsplit programs have taken out more debt than Bachelor students. There is no significant difference in the levels of debt across gender and study areas. There is however, a positive effect of having failed exams or participated in an exchange program on the level of debt. An additional regression, in which we included the interaction of country and event dummies showed that these results were driven by Norway (in the case of failed exams) and Norway and Sweden (in the case of exchange programs).

The average country effects show that, conditional on taking out debt, Swedes and Norwegians take out significantly more debt than Danes. Norwegians take out more than 3 times and Swedes more than two times as much debt as Danes. However, within each country there is no significant difference in the level of debt taken out by students with different parental background.

Moving on to the regression on study progress, we find that older students are less likely to be on time and females are more likely to be on time than males. Compared to Bachelor students, students from Master programs are less likely to be on time and students from short unsplit programs are more likely to be on time. Also, students from health, natural science and technology are less likely to be on time than students of humanities. Chronic sickness, sickness or death in the near family and failed exams decrease the likelihood of students being on time, while having an internship increases the probability of being on time.

The coefficients on the country dummies confirm the findings of the survey results: there is no difference in the probability of being on time across the four countries. Moreover, the interaction terms between the country dummies and the parental background show that within the same country there is no significant difference in the probability of being on time between students with different parental backgrounds. The only exception is Norway, where students whose parents have higher education are around 7 per cent more likely to be on time than students whose parents have not attained higher education.

The regression results for whether students have a paid job alongside their studies show that, all else equal, older students and females are more likely to have jobs. Humanities students are more likely to have jobs than the rest of students, and we find no difference across students of different program types. Students that have failed an exam are also less likely to have a job.

The average country effects show that Norwegian students are more than 10 percentage points more likely than Danish students to have a paid job and Finns are more than 10 percentage points less likely to have a job than Danes. There is no significant difference between Swedes and Danes. Within countries, we find that parental background has no significant effect on whether a student has a job or not.

In addition to the regressions regarding student study progress, loan taking and employment, we also analyzed whether the cross-country differences in the reasons that motivate students to stay on track in their studies were still significant when we controlled for other background variables. As described previously, students were asked to choose two out of seven possible reasons as the main reasons that motivate them to stay on track. We generated seven categorical variables corresponding to each of the possible reasons. Each of this variable is equal to one if the student chose the corresponding reason as one of the two main reasons, and zero otherwise.

We then ran seven additional probit regressions, where the dependent variables were the motivation variables and the explanatory variables were age, gender, type and area of the study program as well as the levels and interaction terms of the country dummies and the parental background dummy. The results of these seven regressions are reported in Appendix 3.

For two out of the seven regressions, the ones corresponding to the reasons "My peers are not delayed" and "I want to finish quickly", we could not reject the null hypothesis that all regression coefficients are

equal to zero. We report the average country effects for the rest of the regressions in table 6.3, they confirm the results from the frequency tables in the previous section.

Swedish and Norwegian students are less likely to be motivated to stay on track by the fact that delays complicate taking courses in the future than Danish and Finnish students. Danes are motivated by debt aversion to a lesser extent than students in the other countries. The average probability that a Danish student chooses debt aversion as one of the main reasons to stay on track is 15 per cent, while it is almost 40 per cent for a Norwegian student.

Moreover, Swedish and Norwegian students are very unlikely to be motivated to stay on track by fear of running out of student aid. The average probability for this group is less than 10 per cent, compared to 20 and 30 per cent respectively for Danes and Finns.

Surprisingly, Finnish students are less likely to say that they are motivated by the expectation of higher future income than the rest of the students. This is somewhat unexpected, given that Finnish students have access to the lowest levels of student aid overall.

Table 6.1 Average country effects (and margins contrast with respect to Denmark)

	Debt (Yes/no)	Debt (amount)	On time (Yes/no)	Paid Job (Yes/no)
Denmark	0.25	62.61	0.82	0.52
Sweden	0.67*	147.28*	0.81	0.45
Norway	0.88*	208.50*	0.82	0.65*
Finland	0.47*	45.75	0.82	0.40*
N	1092	606	1092	1092

* indicates statistically significant difference in the contrast of margins using Denmark as the reference category at the 95 % confidence level.

Table 6.2 Average marginal effect of parental education within countries

	Debt (Yes/no)	Debt (amount)	On time (Yes/no)	Paid Job (Yes/no)
1.Denmark	-0.08	-14.56	0.01	-0.05
1.Sweden	0.01	-0.75	-0.03	0.04
1.Norway	0.04	2.24	0.07^	-0.03
1.Finland	-0.01	16.39	-0.00	0.07
N	1092	606	1092	1092

* indicates statistically significant difference in the contrast of margins using no higher education as the reference category for parental background at the 95 % confidence level.

^ indicates statistically significant difference in the contrast of margins using no higher education as the reference category for parental background at the 95 % confidence level, after a regression using clustered standard errors.

Table 6.3 Average country effects (and margins contrast with respect to Denmark)

	Complicates taking courses	Higher future income	Debt aversion	External expectations	Fear running out of aid
Denmark	0.312	0.278	0.152	0.301	0.209
Sweden	0.171*	0.269	0.251*	0.444*	0.080*
Norway	0.090*	0.261	0.385*	0.503*	0.058*
Finland	0.294	0.171*	0.261*	0.280	0.308*
N	876	781	789	786	781

* indicates statistically significant difference in the contrast of margins using Denmark as the reference category at the 95 % confidence level.

Conclusions

In this report we sought to answer the question of whether cross country differences in the systems of student financial in the Nordic countries lead to systematic differences in student behavior. Our main conclusion is that, while students in the four Nordic countries have different loan take up and employment behavior, there are no differences in terms of study progress. Also, we find that within countries, there are none or very few differences in the behavior of students with different parental backgrounds.

The results of our paper are relevant also in a Danish context if considering switching from a largely grant-based student aid scheme to a loan based system with specific incentives for study progress, similar to the Norwegian system. It is important to have in mind that a change in the student financial system in Denmark will have implications i.e. student debt and hence other policy areas. Also a move towards a more loan-based system could be accompanied by reforms that introduce more flexibility into the higher education system - for instance allowing for part-time students and making them eligible for student loans.

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Appendix 1: Characteristics of survey respondents

Gender and age

Country	Students		Non-students	
	Average age	Percentage female	Average age	Percentage female
Denmark	23.76	0.75	22.45	0.67
Sweden	23.64	0.75	25.25	0.62
Norway	23.60	0.77	23.86	0.70
Finland	23.42	0.72	24.27	0.74
Total	23.61	0.75	24.01	0.68

Parental background

Country	Percentage of students whose parents have not attained higher education	Percentage of students with at least one parent with higher education	Missing
Denmark	41%	51%	8%
Sweden	47%	46%	7%
Norway	36%	55%	9%
Finland	41%	52%	7%
Total	41%	51%	8%

Respondents that plan to start a higher education program within the next two years

Country	Percentage of those never enrolled	Percentage of dropouts
Denmark	78%	51%
Sweden	48%	50%
Norway	46%	50%
Finland	48%	41%
Total	54%	48%

Type of study program

Country	Bachelor	Master	Short unsplit	Long unsplit	Total
Denmark	57%	29%	14%	0%	302
Sweden	67%	17%	11%	5%	274
Norway	61%	24%	3%	11%	275
Finland	62%	15%	22%	1%	300
Total	62%	21%	13%	4%	1151

Study area

Country	Social sciences	Humanities	Health, natural sciences and technology	Total
Denmark	27.8%	32.8%	39.4%	302
Sweden	31.8%	19.3%	48.9%	274
Norway	29.1%	32.0%	38.9%	275
Finland	21.3%	27.0%	51.7%	300
Total	27.4%	27.9%	44.7%	1151

Appendix 2: Main regressions results

Model /Dependent variable	OLS Debt (amount)	Probit Debt (yes/no)	Probit On time	Probit Paid job
	b/se	b/se	b/se	b/se
Independent variables:				
Age	95.11*	0.95*	-0.66*	0.53*
	19.943	0.232	0.276	0.208
Age squared	-1.72*	-0.02*	0.01*	-0.01**
	0.405	0.005	0.006	0.004
Female	-2.62	-0.06	0.19	0.27*
	8.397	0.102	0.108	0.093
Parents higher education (reference: no higher education)	-14.56	-0.27	0.07	-0.13
	20.855	0.169	0.191	0.153
Program type (reference Bachelor):				
Master	51.60*	0.13	-0.24*	0.10
	9.335	0.119	0.118	0.106
Unsplit 3-4.5 years	14.34	-0.05	0.43*	0.07
	13.077	0.138	0.188	0.127
Unsplit more than 4.5 years	65.05*	0.62*	0.24	-0.30
	15.714	0.305	0.284	0.214
Study area: (reference Humanities)				
Social science	-12.71	-0.16	-0.08	-0.20
	9.882	0.119	0.135	0.107
Health, natural science and technology	-13.34	-0.09	-0.23	-0.37*
	8.937	0.108	0.122	0.098
Country: (reference Denmark)				
Sweden	76.37*	1.04*	0.06	-0.32
	18.323	0.184	0.224	0.172
Norway	135.79*	1.72*	-0.18	0.33
	17.829	0.212	0.207	0.178
Finland	-35.46	0.50*	0.02	-0.51*
	19.358	0.178	0.209	0.172
Country*parents education				
Sweden * parents_ higherED	13.81	0.30	-0.20	0.24
	25.044	0.239	0.284	0.223
Norway * parents_ higherED	16.81	0.52	0.25	0.04

Model /Dependent variable	OLS Debt (amount)	Probit Debt (yes/no)	Probit On time	Probit Paid job
	24.119	0.277	0.275	0.227
Finland * parents_higherED	30.95	0.25	-0.07	0.32
	26.449	0.233	0.272	0.222
Events experienced:				
Chronic sickness	18.46	0.03	-0.53*	-0.21
	11.907	0.144	0.138	0.130
Sicknes/death in family	1.02	0.11	-0.22	-0.07
	10.121	0.130	0.128	0.115
Failed exam	25.29*	0.05	-0.66*	-0.23*
	9.796	0.119	0.119	0.108
Study exchange abroad	36.59*	0.05	-0.13	-0.05
	10.983	0.139	0.145	0.123
Internship	-2.61	0.02	0.19*	-0.06
	8.114	0.102	0.114	0.091
Constant	-1226.09*	-13.19*	10.34*	-6.66*
	242.703	2.795	3.379	2.494
Number of observations	606	1092	1092	1092
R-squared	0.470	-	-	-
Pseudo R-squared	-	0.248	0.159	0.064
F-statistic	25.94	-	-	-
Chi squared		372.681	165.072	96.660
p-value	0.000	0.000	0.000	0.000

* p<0.05

Appendix 3: regression results for motivation questions

Probit model	Complicates course taking	Future income	Debt aversion	Peers not delayed	External expectations	Fear SU dryout	Finish quickly
Independent variables:	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Age	0.121	0.062	-0.069	0.456	0.067	-0.139	-0.069
	0.265	0.263	0.257	0.337	0.244	0.311	0.258
Age squared	-0.003	0.001	0.002	-0.010	-0.002	0.004	0.002
	0.006	0.005	0.005	0.007	0.005	0.006	0.005
Female	-0.101	-0.403*	0.004	0.107	0.091	0.054	0.159
	0.114	0.114	0.118	0.146	0.112	0.137	0.112
Parents higher education (reference: no higher education)	0.109	-0.091	-0.111	0.101	-0.089	-0.027	0.129
	0.102	0.106	0.103	0.125	0.097	0.121	0.100
Program type (reference Bachelor):							
Master	-0.087	-0.116	-0.179	-0.056	0.424*	0.122	0.125
	0.143	0.144	0.146	0.176	0.132	0.162	0.139
Unsplit 3-4.5 years	0.120	0.210	-0.287	-0.144	0.022	-0.634*	0.197
	0.138	0.146	0.153	0.181	0.139	0.189	0.146
Unsplit more than 4.5 years	-0.038	0.082	-0.468	0.370	-0.022	0.564*	-0.067
	0.287	0.251	0.266	0.270	0.237	0.286	0.246
Study area: (reference Humanities)							
Social science	-0.115	-0.171	0.180	-0.069	0.029	0.352*	-0.182
	0.137	0.137	0.133	0.161	0.124	0.153	0.130
Health, natural science and technology	0.128	-0.014	0.153	0.086	-0.043	-0.062	-0.062
	0.122	0.124	0.124	0.145	0.115	0.151	0.121
Country (reference Denmark):							
Sweden	-0.469*	-0.029	0.358*	-0.144	0.384*	-0.631*	0.019
	0.138	0.140	0.147	0.159	0.131	0.173	0.134
Norway	-0.865*	-0.053	0.743*	-0.318	0.536*	-0.810*	0.160
	0.154	0.144	0.144	0.171	0.133	0.184	0.138
Finland	-0.054	-0.385*	0.390*	-0.382*	-0.064	0.327*	0.188
	0.128	0.150	0.147	0.171	0.136	0.147	0.137
Constant	-1.536	-2.013	-0.236	-6.266	-1.100	0.128	0.810
	3.143	3.145	3.033	3.969	2.890	3.709	3.058
N	876	781	789	765	786	781	841
Pseudo R-squared	0.070	0.064	0.041	0.026	0.042	0.117	0.018
Chi squared	64.744	55.978	37.194	14.927	44.339	79.758	16.341
p-value	0.000	0.000	0.000	0.245	0.000	0.000	0.176
* p<0.05							

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