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Social inequality in dropout rates in higher education: Denmark and Norway

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ABSTRACT

This article examines the association between students' social class background, their completion of higher education and transfer between research-intensive *universities* and vocational-oriented *university colleges* in Denmark and Norway. We analyse comprehensive register data on the entire student population of the two countries and employ the Oslo Register Data Class Scheme (ORDC) that distinguishes class fractions with different compositions of cultural and economic capital. The analyses show that dropout is considerably more widespread in Norway, and that students from the working class drop out more often than their fellow students. Although the general level of social disparities in dropout rates is similar in the two countries, the horizontal differences between class fractions with different compositions of cultural and economic capital are more pronounced in Norway, particularly in university colleges. At the same time, the social differences in transfer rates from universities to university colleges are considerably higher in Denmark, which indicates the importance of institutional characteristics, as the difference in academic orientation between universities and university colleges is considerably greater in Denmark than Norway.

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Student dropout; higher education; social class; cultural capital; economic capital; scandinavia

Introduction

This article examines social class disparities in higher education (HE) dropout and in transfer between universities and university colleges in Denmark and Norway. For society, dropout represents economic loss, reduced societal human capital and potential shortages of highly educated labour. For individual students, dropping out may have scarring effects on future earnings and well-being. Moreover, a social gradient in dropout will widen existing social inequalities in higher education (HE) attainment. Prior research has indeed found that a low socioeconomic position increases the risk of dropping out of HE (Aina 2013; Helland and Strømme 2024; Herbaut 2021; Li and Carroll 2020; Ortiz and Dehon 2013; Thomas and Quinn 2006; Thomsen 2022; Vignoles and Powdthavee 2009). Furthermore, a considerable proportion of the students who leave their initial institution without completing a degree do not leave HE but transfer to another institution (Hovdhaugen 2009; Ulriksen, Madsen, and Holmegaard 2010). Such transfers may also have a social gradient, which we examine in this paper.

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We make two contributions to existing literature. (1) Although differential access to economic and cultural resources has been suggested as an explanation for disparities in dropout (Berger 2000; Kuh and Love 2000; St. John et al. 2000; Thomas 2002), few studies have examined if dropout rates vary horizontally between class fractions with different compositions of cultural and economic capital. We add to these studies by applying the Oslo Register Data Class Scheme (ORDC) to HE dropout – a scheme that differentiates not only vertically but also horizontally between class fractions. We theorise vertical and horizontal social differences in dropout rates in HE by drawing on Bourdieu and Boudon (Boudon 1974; Bourdieu and Passeron 1990). While Bourdieu provides the theoretical foundation for the class scheme we apply, Boudon provides a theoretical explanation for class differences in educational transitions, net of students' qualifications. We link these approaches to Tinto's paradigmatic theory of student departure and argue that dropout can be understood as a class-specific lack of social and academic integration in HE.

(2) We contribute a cross-national comparative analysis on dropout, enabled by comprehensive register data covering the entire student population in Denmark and Norway.[1] We suggest that differentiating between class fractions with diverging capital composition may be particularly important in Nordic, social-democratic welfare-state regimes (Esping-Andersen 1990, 2015) sharing a Nordic model of HE (Ahola et al. 2014). Comparatively, students face relatively low economic costs in Denmark and Norway, and we may expect the impact of cultural capital on dropout to be particularly visible in this setting. Such societal similarities notwithstanding, the organisation of HE institutions in Denmark and Norway differ. The difference in academic orientation between universities and university colleges is considerably more pronounced in Denmark than in Norway. As studies have shown that working class students tend to opt for more applied and less academic educational institutions (Goyette and Mullen 2006; Lehmann 2009; Thomsen et al. 2013), this difference could indicate a more polarised class-gap in dropout between universities and university colleges in Denmark than in Norway, where universities and university colleges resemble each other more. As a significant percentage of students who leave a HE institution transfer to another institution rather than leaving HE (Goldrick-Rab 2006), we also examine whether transfers between universities and university colleges has a social gradient. We address the following research questions:

(1) How do dropout rates vary with the vertical and horizontal dimensions of social class in *universities* and *university colleges* in Denmark and Norway?
(2) How do transfers between *universities* and *university colleges* vary with the vertical and horizontal dimensions of social class in Norway and Denmark?We proceed as follows. First, we outline our theoretical framework, next, we present the educational context in the two countries, where after we describe data and methods. We then move on to our analysis and end the paper with a summary and discussion.

Theoretical framework

As we want to examine both vertical and horizontal class differences in drop out and transfer, we take our point of departure in cultural reproduction theory and the different forms of capital that individuals may possess (Bourdieu and Passeron 1990). Cultural reproduction theory posits that the educational system reproduces social inequalities in educational achievement because it expects and rewards cultural capital and because cultural capital is unevenly distributed by social background (Bourdieu and Passeron 1990; Sullivan 2001). Students endowed with large amounts of cultural capital achieve higher grades than their peers at all educational levels (Andersen and Hansen 2012; Hansen and Strømme 2021; Helland 2007; Hansen and Mastekaasa 2006) and are less likely to drop out of higher education. Central to this theoretical framework is the process of socialisation and the development of *habitus*, which represents the embodied dispositions for

action acquired through and continuously formed by experience. An upper- or middle-class habitus will imply a sense of entitlement (Kahn 2011) and facilitate effortless access to HE for upper and middle-class students (Reay, David, and Ball 2005). These students take access to HE for granted and the incongruence and unfamiliarity experienced by working class students (Reay, David, and Ball 2005), is largely absent for upper- and middle-class students (see also Berger 2000, 100–101; Lehmann 2007; Rendon, Jalomo, and Nora 2000).

Qualitative studies have emphasised the role of specific school cultures in constituting distinct conditions for students from differing class backgrounds (Calarco 2018; McDonough 1996; Reay, David, and Ball 2005), also labelled as a certain 'institutional habitus' (Thomas 2002). Arguably, the institutional cultures at universities will cater more to upper/middle class students, while the institutional cultures at university colleges, being more vocational, will be more familiar to working class students. In addition to the hierarchical differentiation between the upper, middle, and working classes, cultural reproduction theory posits that students with more cultural than economic capital will be more likely to excel in the education system. This argument is especially relevant in a Scandinavian setting, where the economic barriers in HE attainment are low. Indeed, Nordic studies have shown that students endowed with large amounts of cultural capital achieve higher grades than their peers at all educational levels (Andersen and Hansen 2012; Hansen and Mastekaasa 2006; Hansen and Strømme 2021; Helland 2007).

Some of the students who drop out do so because they find higher education too difficult (Tinto 1993, 45), and this is probably more widespread among those with poor grades from upper secondary school. Boudon (1974) distinguishes primary and secondary effects of social origin on educational attainment, where the *primary* effects are caused by social class differences in achievement in lower and upper secondary school. The *secondary* effects of social origin, on the other hand, are caused by class differences in choice based on varying costs and benefits of educational decisions, resulting in lower educational attainment for working class youth, even when their academic performance is similar to their middle-class peers'. This lower attainment will show itself primarily as not opting into HE, but it may also show itself as an increased risk of dropping out for those that have indeed enrolled in HE. Boudon (1974, 30) argues that the risks and *social costs* of embarking on a given education are contingent on social position. For individuals with working-class backgrounds, the pursuit of HE may be perceived as riskier and may entail a 'breakup' with family and friends, whereas *not* pursuing HE may result in similar distancing for middle-class individuals.

Tinto's (1993) model conceptualises student departure as a result of insufficient social and/or academic integration into the institution. Students enter college with varying levels of commitment, which are either reinforced or undermined in the processes of interaction between students and institutions. This understanding of the interaction processes is based on Spady's (1970) adaptation of Durkheim's (1951 [1897]) theory of social integration and suicide and van Gennep's (1960 [1909]) theory of rites of passage. The integration process is considered a transition from students' previous communities, which include family, friends, and school, to the communities of college. When the integration process is unsuccessful, students may leave. The decision to withdraw is influenced by various factors and events. Tinto (1993, 45) classifies such factors as social adaptation, academic or cognitive difficulty, social and academic isolation, and incongruence. While Tinto's theory does not include a social background component, we can view Tinto's model of lack of integration as an outcome of class-based levels of (un)familiarity with the HE system. All else equal, working-class students will, net of their scholarly qualifications, more often choose not to pursue a HE degree, and if they do, they will be at more risk of dropping out as they have entered a social setting that they are less familiar with than those with higher class parents.

Some of the students who drop out of an HE institution do not leave the system altogether but transfer to another institution. Such movements may also have a social gradient. Research examining transfer rates between two-year community colleges and four-year colleges in the

US has observed considerably lower rates of transfer from community colleges to four-year institutions among students from disadvantaged social backgrounds (Dougherty 1987; Dougherty and Kienzl 2006; Lee and Frank 1990; Velez and Javalgi 1987). On the other hand, transfers in the opposite direction are more prevalent among students from less privileged origins (Goldrick-Rab 2006; Goldrick-Rab and Pfeffer 2009). Similar patterns have been noted in Norway (Mastekaasa and Hansen 2005) and Germany (Tieben 2020). This suggests that application-oriented university colleges may be a better fit for working-class students than theoretical university studies.

It is plausible that the extent of cultural dominance held by privileged classes varies across higher education institutions, resulting in students from the working class more often feeling maladjustment and estrangement if they enrol into academic, research-intensive traditional university studies than students from the upper- and middle-classes, and possibly an opposite trend in the university colleges.

Higher education in Denmark and Norway

Both Denmark and Norway are Nordic social-democratic universalist welfare states (Esping-Andersen 1990), with generous social transfers and low inequality. Founded on egalitarian traditions, the two countries' HE systems represent the Nordic model, characterised by state-funded institutions, universal government grants and relatively accessible HE programmes devoid of elite establishments and tuition fees (Ahola et al. 2014). Admission to HE is centralised, and the grade point average (GPA) obtained in upper secondary school is the main sorting criterion when applicant numbers exceed the number of available places.[2] As discussed above, financial factors may have a lower impact on persistence and dropout rates in Denmark and Norway than in most other countries – and that the impact of cultural capital may be more visible.

Numerous similarities notwithstanding, there are organisational differences between the HE sectors in Denmark and Norway. Although both countries have a two-tier system, the divide between research-intensive universities and vocational and teaching-oriented university colleges is much more pronounced in Denmark than in Norway (Ahola et al. 2014). Whereas several Norwegian university colleges have been accredited to offer PhD programmes, Danish university colleges offer primarily welfare-state professional bachelor's degrees (e.g. school teachers, nurses, child care workers, social workers). Until 2013, faculty at Danish university colleges were not supposed to conduct research; since then, their focus is on practical and applied research, which differs from the research expectations in universities that pursue the highest international standards (Uddannelses-og Forskningsministeriet 2019). By contrast, the university college sector in Norway has undergone considerable academic drift and has been described as the most research-intensive in Western Europe (Kyvik 2007). Another difference lies in the type of degree programmes offered by the two kinds of institutions. In Denmark, university colleges primarily offer programmes that lead to welfare state professions, whereas Norwegian university colleges also offer programmes in engineering, humanities and social sciences, which are exclusively offered by universities in Denmark. The proportion of working-class students is considerably higher in the university college sector than in the university sector in both countries (Börjesson et al. 2014). The fact that the disparity in academic orientation between universities and university colleges is more pronounced in Denmark than in Norway, may lead to a steeper social gradient in transfer rates in Denmark than in Norway.

Hypotheses

From the above sketched theoretical framework and the description of the two higher education systems, we formulate the following hypotheses about social class differences in dropout and transfer:

H1: Dropout rates are highest among working-class students, and lowest in the cultural fraction of the upper- and upper middle-class.

H2: The social inequalities in dropout are larger at universities than at university colleges, particularly in Denmark.

H3: Students from the middle-classes (especially students from the cultural fraction) more often transfer from university colleges to universities than working-class students, who more often transfer in the opposite direction.

H4: The social inequalities in transfer propensity are larger in Denmark than in Norway.

Data and methods

We use administrative data from public registers for the entire student population, obtained from Statistics Denmark and Statistics Norway. An advantage of data from public registers is that the classifications used are developed to facilitate international comparison, and variables like occupation and education are coded in the same way, adaptable to ISCO and ISCED respectively. Our study includes all students enrolled in HE degree programmes (ISCED 2011 Levels 6 and 7).[3] We exclude students studying abroad, those solely enrolled in HE preparation courses and students signed up for single year studies or for further training.[4] We have also excluded students who were older than 25 years old at enrolment. The reason for this is that the grades register in Statistics Norway does not contain information about grades from upper secondary school before 2001, so older students who completed upper secondary school earlier are not included in our analyses. In order to compare similar cases, we have done the same exclusion in Denmark. Since older students both more often come from working-class origins (Klausen 2016) and drop out more often (Tinto 1993), our estimations of social disparities are probably quite conservative. We track students for a period of eight years after their initial enrolment, focusing on those who enrolled in the years 2005–2010. We examine (a) whether a student has not completed *any* HE degree within an eight-year period after their initial enrolment and (b) whether student departure is in fact transfer between universities and university colleges.[5] In the analyses of non-completion (a), we simply examine whether the students have completed any degree eight years after they enrolled in higher education for the first time. This measure then, includes both students who have completed the degree they initially signed up for and students who have transferred and completed another degree, compared to those that did not complete any degree within the same amount of time. The transfer variables on the other hand (b) measure if the students have discontinued their initial degree at either a university or a university college and enrolled in a different institution type.

Our key explanatory variable is class background, measured using the Oslo Register Data Class Scheme (ORDC) (Hansen, Flemmen, and Andersen 2009). Theoretically, ORDC is based on Bourdieu's theory about social space, and intends to distinguish between people with different volume and composition of economic and cultural capital.[6] This enables us to examine both the vertical and the horizontal dimensions of the class structure and whether students with more cultural than economic capital are less likely to drop out. In the operationalisation, we used information on parents' occupations when the students were 16 years old, along with information on parents' income, education, and welfare transfers (see Appendix Figure A1). The internal divisions between the economic class fractions are made according to the parents' relative income, and the top 10% earners in 'executive' occupations are considered the economic upper class, the people in similar occupations with incomes below the top 10% but above the median are considered upper-middle class, whereas people in such occupations in the bottom half of the income distribution are classified as economic lower-middle class. The occupations in the cultural fractions are sorted on education level and closeness to art production. Between the cultural and economic fractions, we find occupations with a more even capital composition like doctors, lawyers and

graduate engineers who have both high incomes and education at the MA level. Because we expect the importance of capital composition to be greater when the total capital volume is high, we aggregate the class variable to identify three fractions within the upper- and upper-middle classes combined, but do not distinguish between fractions within the lower-middle class or between the skilled and unskilled working class.

We run two models, one without controlling for upper secondary grade point average (GPA) and one with this variable. This means that we first identify the total effect of social class origin on dropout and then disentangle the primary and secondary effect of social origin by adjusting for GPA. We use logit models and report average marginal affects. In addition to GPA from upper secondary school (standardised as z-scores), we include control variables that are known to correlate with drop-out. More specifically, we control for gender, immigrant background (non-Western immigrants and descendants vs. Western or majority), institution type (university college or university (see note 5)), enrolment year (dummies), students age at enrolment, and study field (see Appendix Table A1 for classification). Study field is operationalised identically in the two countries, from the ISCED classification. In ISCED-fields where there are many observations, we use the detailed field (e.g. '0913 Nursing and midwifery'), in most cases we use the narrow three-digit groups, but in fields with few observations, we have grouped together all the sub-categories under the first two digits (e.g. '08 Agriculture, forestry, fisheries and veterinary'). While population-wide data from public registers have obvious benefits, they do not contain information on e.g. teaching methods, student motivation, etc., all of which may affect student retention. These variables are likely correlated with both social class, dropout, and transfer, and are integral to theories about student retention. Our primary interest here, however, is to examine how dropout and transfer vary according to students' social class background.

Results

Key descriptives

Tables 1 and 2 provide descriptive statistics for our key variables.

Table 1 shows key demographic figures in our sample with respect to enrolment in universities and university colleges in the two countries. Four things are worth noting from Table 1: First, the university college sector is larger in Norway than in Denmark, with 65% of all HE students attending university college. This is probably a reflection of the narrower range of educational programmes offered by Danish university colleges. A second reflection of this is that the share of women is larger in Danish university colleges than in the Norwegian (67% vs. 59%). Third, while the percentage of students from working-class backgrounds is considerably higher in university colleges in both

Table 1. Descriptive statistics.

	Denmark (enrolled 2005–2010, only 25 years or younger, no business academies)		Norway (enrolled 2005–2010, only 25 years or younger)	
	University college	University	University college	University
Number of students	55,717	85,673	96,905	54,911
Share (%) of students	41.4	58.6	63.8	36.2
ORDC classes (column percentages)				
Cultural upper/upper-middle class	12.8	21.1	11.1	18.9
Balanced upper/upper-middle class	15.0	22.7	21.3	28.6
Economic upper/upper-middle class	9.6	11.9	11.6	10.9
Lower-middle class	28.1	24.0	21.1	17.1
Working class	34.5	20.3	35.0	24.6
Share female students	70.0	54.7	61.0	56.8
Share non-Western immigrants	6.7	6.7	5.6	5.3

Table 2. Descriptive Statistics, row percentages. (Students enrolled 2005–2010, 25 years or younger).

	Share not completed any HE degree	Share transferred from UC to UNI	Share transferred from UNI to UC
DENMARK (no business academies)			
University	11.7		9.7
University college	13.7	12.0	
ORDC classes			
Cultural upper/upper-middle class	9.6	15.2	7.9
Balanced upper/upper-middle class	9.6	15.7	8.0
Economic upper/upper-middle class	9.9	13.2	9.2
Lower-middle class	11.6	11.5	11.5
Working class	15.8	9.1	13.6
Men	15.4	13.8	9.2
Women	10.4	11.0	10.2
Non-Western	18.0	13.6	7.7
Majority	11.6	11.7	10.0
NORWAY			
University	23.5		9.2
University college	27.2	8.6	
ORDC classes			
Cultural upper/upper-middle class	22.1	10.4	10.1
Balanced upper/upper-middle class	23.0	9.6	8.9
Economic upper/upper-middle class	26.2	8.4	7.5
Lower-middle class	25.7	8.1	8.6
Working class	29.7	7.5	7.4
Missing ORDC info			
Men	31.8	9.4	7.3
Women	21.7	8.0	9.1
Non-Western	37.7	9.2	7.6
Majority	25.2	8.5	8.4

Abbreviations: HE = Higher Education, UNI = universities, UC = university colleges.
N: Danish UNI: 85,673; Danish UC: 55,717; Norwegian UNI: 54,911; Norwegian UC: 96,905.

countries (35% vs. 20% in Denmark and 36% vs 25% in Norway), the share of lower-middle-class students is higher in Danish university colleges than in the Norwegian, likely reflecting the stronger vocational orientation of the university college sector in Denmark. Fourth, it is worth noting that the share of students originated from the cultural and balanced fractions of the upper- and upper middle-classes are considerably higher at universities than at university colleges, in both countries.

Table 2 show dropout and transfer rates in the two countries. Even though the differences in dropout rates between Denmark and Norway are smaller than they were at the turn of the century (OECD 2013, 71), they remain large. Non-completion is considerably more common in Norway in both universities and in university colleges, but the difference between the two types of institutions is smaller in Norway than in Denmark. Disaggregated by social class, dropout rates are generally about 10–15 percentage points higher in Norway than in Denmark, but in both countries, dropout rates are highest for working-class students (30% in Norway and 16% in Denmark). Table 2 also shows that in Denmark, transfers from university to university-college is more prevalent among working-class students (13%), whereas transfers in the opposite direction is more widespread in the upper- and upper middle-classes (15% in the cultural and in the balanced fraction). In Norway, this pattern is less pronounced. The control variables follow similar patterns in the two countries. Male students drop out more often than female students, and students with a non-Western immigrant background more often than other students.

Dropping out of HE altogether

Below, we present figures with average marginal effects from logit models separately for each country (see Allison 1999; Mood 2010; Norton, Dowd, and Maciejewski 2018). The figures present the difference in average probability of dropping out/transferring for students from different class backgrounds relative to the reference category: cultural upper class/cultural upper middle class. This allows us to disentangle differences between the three fractions of the upper and upper middle classes, as well as investigating the difference between the upper and upper middle classes and lower middle class and working class.

Figure 1 shows average marginal effects of social class on non-completion in Denmark and Norway with and without controls for GPA from upper secondary school. The difference in non-completion rates between working-class students and students from other social classes is substantial in both types of institutions in both countries, especially considering that we are dealing with a selected group of young people (only those who have entered HE). The average probability of not completing a degree increase by approximately 6 percentage points in Danish universities and 4 percentage points in university colleges for students with working-class backgrounds compared to students from cultural upper/middle-class backgrounds. In Norway, the social differences are bigger (8% in university colleges and 7% in universities).

In Norway, the economic fraction of the upper and middle class is at higher risk of dropping out of the university colleges than the balanced and cultural middle-classes. We can only speculate about this difference, but students from the economic middle class may feel more certain about securing a labour market position for themselves despite non-completion, than the other classes will. Another possible interpretation might be that being poorer on cultural capital may make students from the economic fraction experience larger incongruence at universities. The effects of GPA from upper secondary school (in model b), are highly significant (and negative) and when we control for grades, the social differences decrease substantially in both countries.[7] The horizontal differences between the cultural and economic upper/middle class fractions diminish but are still significant in Norwegian university-colleges.

When dropping out is transfer to another HE institution

Whereas the section above treated those students who dropout of HE altogether, this section focuses on those who drop out from university to transfer to a university college and those who move in the opposite direction.

Figure 2 shows how the likelihood of transferring from a university college to a university varies by social class with and without control for GPA from upper secondary school. As above, we use average marginal effects from logit models and control for gender, immigrant background, enrolment year and study field in all models, and GPA in model b. In both countries, we find that university college students from working-class backgrounds are less likely to transfer to universities compared to their peers from upper- and upper-middle-class backgrounds. The social gradient is more pronounced in Denmark than in Norway, in that working class students are more clearly different from other students in their reluctance to transfer from university college to university. We also find that students from the upper cultural and balanced class fractions are more likely to transfer than the economic upper-class. Interestingly, the pattern does not change very much when we control for GPA in models b.

Figure 3 shows the likelihood of transferring in the opposite direction, from a university to a university college by social class. Danish university students from working-class backgrounds in particular are more likely to transfer to university colleges than their cultural upper and upper-middle-class background counterparts. The difference between fractions is almost unaffected by controlling for GPA from upper secondary school. In Norway, the social gradient is less apparent, but the cultural and balanced fractions of the upper- and upper middle class transfer away from universities more

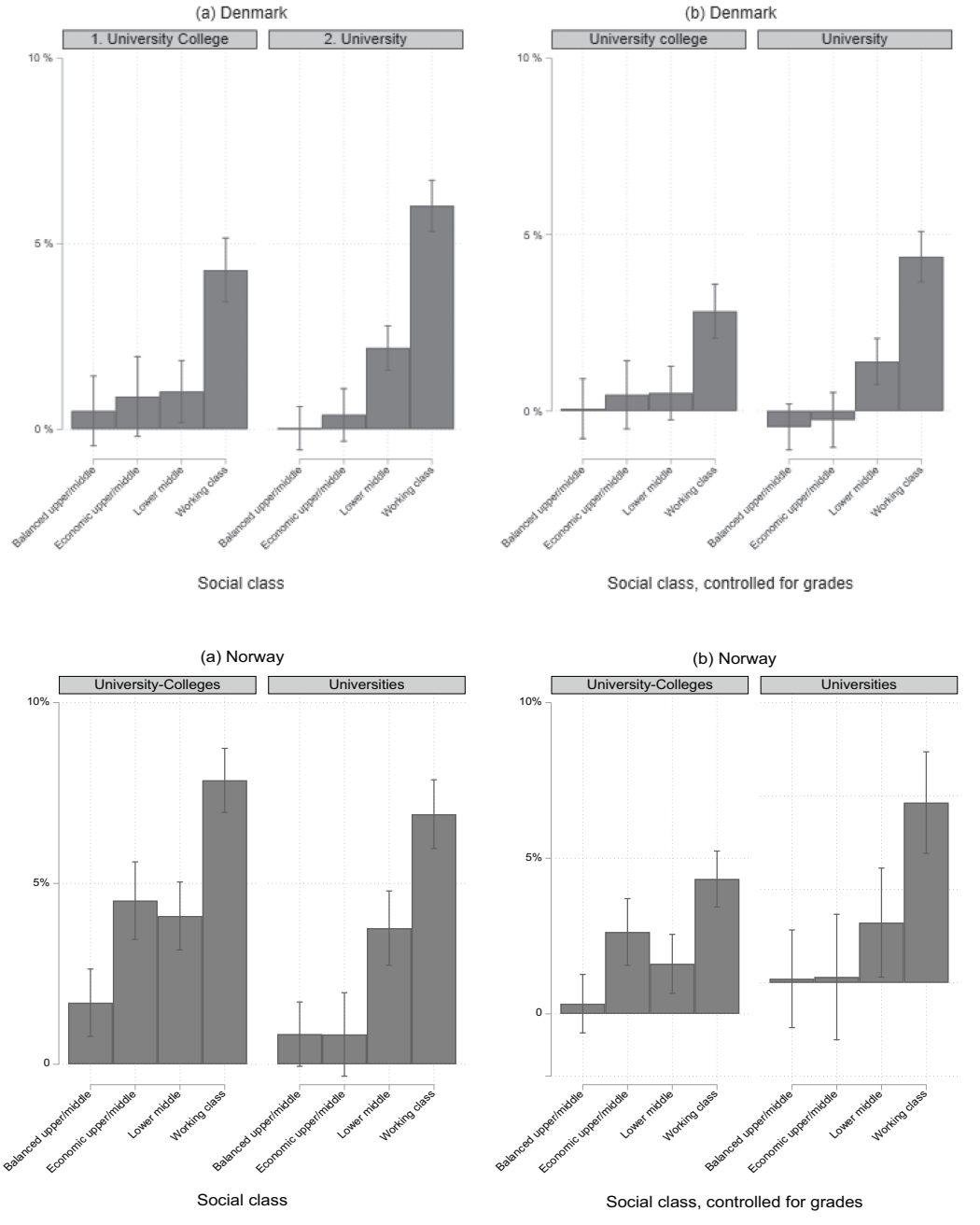

Figure 1. Denmark and Norway. Average marginal effects of not having completed any HE degree for HE enrolees by type of institution and class background, eight years after enrolment. Controlled for gender, grades, non-Western background, enrolment year, study field (a) and grades (b). Reference category: cultural upper/middle class background. Those starting an education before the age of 25.

Notes: Models the figures are based on are available in the appendix. Full models available upon request.N: Danish UNI: 85,673; Danish UC: 55,717; Norwegian UNI: 54,911; Norwegian UC: 96,905.

seldom than their fellow students from other backgrounds. The pattern does not change with control for GPA. The result that working class students seems to have a particularly strong preference for university college studies in Denmark may be due to the greater academic differentiation between the two types of institutions.

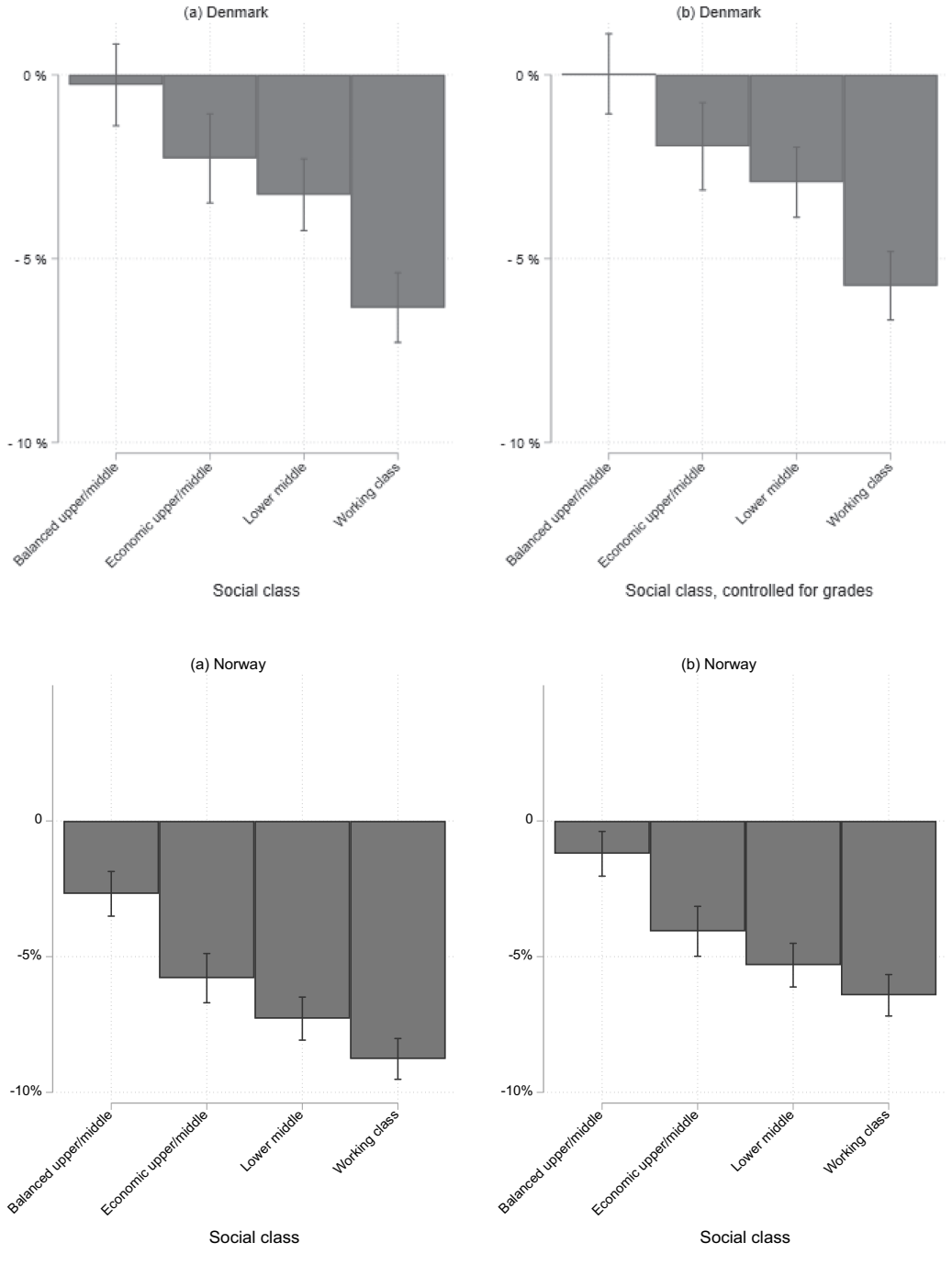

Figure 2. Denmark and Norway. Average marginal effects of transferring from university college to university by social class. Controlled for gender, non-Western background, enrolment year, field of study (a and b) and GPA (b). Reference category: cultural upper/upper middle class.

Notes: Models the figures are based on are available in the appendix. Full models available upon request. N: Denmark: 55,717; Norway: 96,905.

Discussion

Our four hypotheses about social class differences are to some extent supported by the analyses. Even in the comparatively egalitarian Scandinavian countries of Norway and Denmark, we find

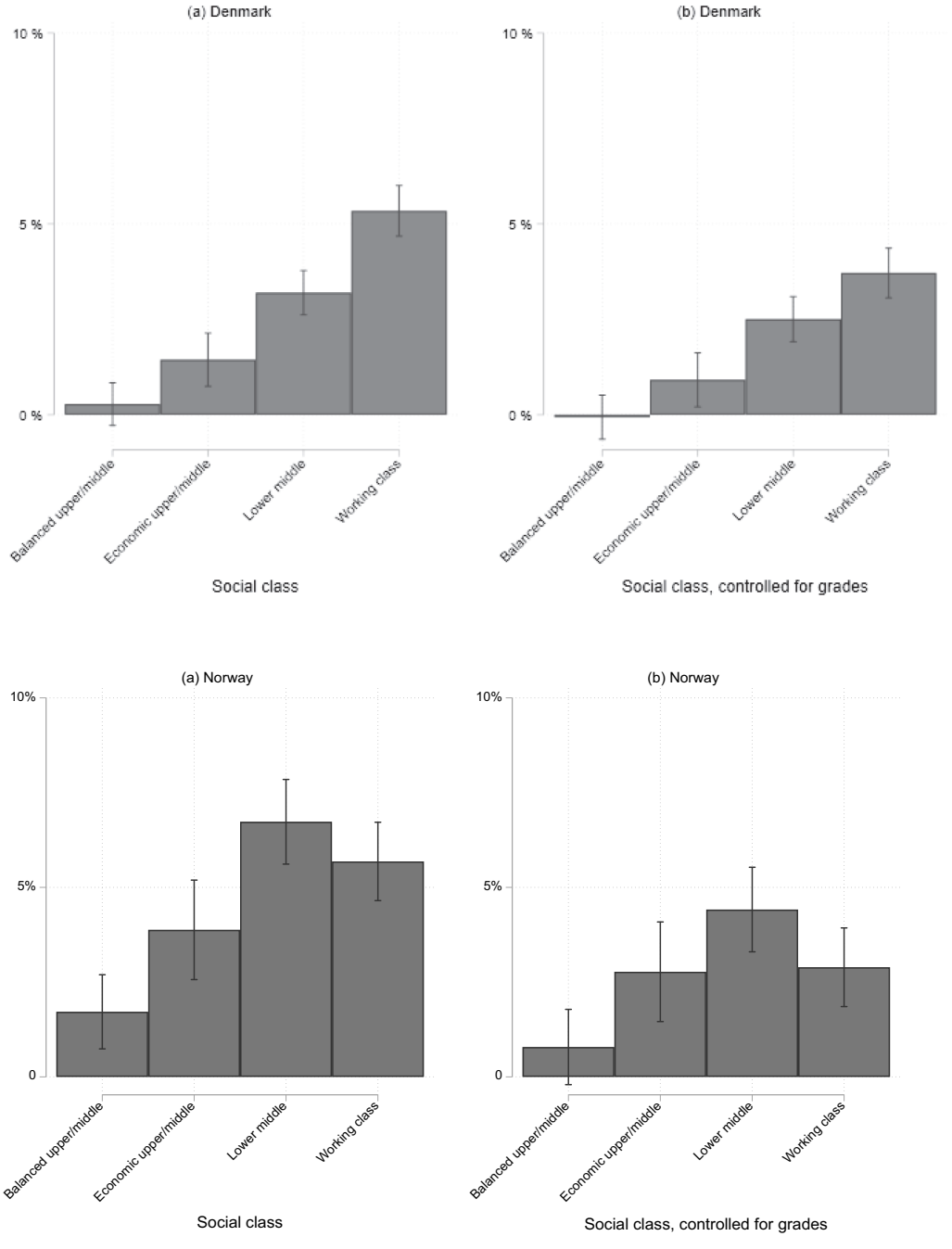

Figure 3. Average marginal effects of transferring from university to university-college by social class. Controlled for gender, non-Western background, enrolment year, field of study (a and b) and GPA (b). Reference category: cultural upper/middle class.

Notes: Models the figures are based on are available in the appendix. Full models available upon request. N: Denmark: 85,673; Norway: 54,911.

social gradients in HE dropout (H1 and H2). Across universities and university colleges in both countries, the dropout rate is higher for working-class and lower-middle class students relative to students from the upper- and upper-middle classes. These social disparities are more pronounced in universities than in university colleges (which supports our second hypothesis). In general, the

results indicate that upper- and middle-class students navigate HE with greater ease and encounter fewer obstacles in integrating into the university environment, even when we control for academic qualifications. One possible interpretation is that the experienced risks and the incongruence between an individual's habitus and the class-based culture of an institution is less pronounced for students from upper- or middle-class backgrounds compared to their peers from working-class backgrounds. In Boudon's terms, this may be understood as a result of social costs of studying being higher for working-class students. This is part of what Boudon terms secondary effects and leads to working-class students being more at risk of dropping out than their upper/middle-class peers even when they have the same scholarly qualifications.

While the vertical class dimension is relatively clear, the horizontal differences between class fractions are not as large and vary between the countries. In Norway, we found horizontal differences in university-colleges, but not at universities. In Denmark, we did not find horizontal differences between the cultural and economic fractions. The academic drift in Norwegian university colleges likely explains why possession of cultural capital is more important here than in Danish university colleges.

We find expected patterns of inequality among those who transfer from university college to university, as students from the middle classes are more likely to do this than working-class students, which supports our third hypothesis. In Norway, this only applies to students from the cultural middle-class fractions (cultural and balanced). As regards transfer in the opposite direction, from university to university-college, Danish working-class students are more likely to do so than upper- and middle-class students. In Norway the working-class students do not differ significantly from students who originate in the lower middle-class and in the economic fraction of the upper- and upper middle-class, in probability of transfers from universities to university colleges. Compared to Norwegian university colleges, the culture of Danish university colleges appears to be more congruent with the working-class preferences and habitus. The 'rites of passage' into HE may be easier for working-class students in vocationally oriented Danish university colleges, while transferring from university colleges to universities may be more attractive for upper- and upper-middle-class students in Denmark than in Norway. The social gap in transfer rates is consistent with previous research from Denmark (Thomsen 2022). Norwegian university colleges have moved towards resembling universities more than they used to, and this academic drift may likely explain the comparatively small social inequalities in transfer rates.

The results presented here do only partly support the application of a social class concept that incorporates both cultural and economic capital. We applied this concept as we speculated that differing between class fractions with diverging capital compositions may be particularly important in a system where students face relatively low economic costs and where admission to institutions is primarily determined by upper secondary school GPA.

While we have only found small evidence of differences at the universities in Norway, we have found that cultural capital is associated with less likelihood of dropping out in Norwegian, comparatively research-intensive university colleges, and greater likelihood of transferring from university colleges to universities in both countries. For university students, one's upper/middle-class fraction does not seem to matter much for the risk of dropout. This does not substantially support our first hypothesis, that dropout would be lowest among the cultural fractions of the upper/middle-classes. We should note, however, that university students are a highly selected group, a fact that may likely drive differences downward. For those students who drop out of university college only to *transfer* to university, we found that the cultural and balanced upper middle classes are more likely to do this than the economic upper middle class in both countries. This may be a sign of the cultural upper-middle class fractions using the university colleges as an alternative access way to universities.

Our results, together with related studies on the social class gap in dropout (Helland and Strømme 2024; Herbaut 2021; Thomsen 2022) suggests that Tinto's theory of student dropout would benefit from being extended to consider the social gradient in social and academic integration in HE. Such an extension would enhance our understanding of social inequalities in education by highlighting

Tinto's four factors affecting the decision to leave HE – namely *adaptation*, *difficulty*, *isolation,* and *incongruence* – and how these factors may affect students from distinct class backgrounds differently across various types of HE institutions.

Although Scandinavian register data is unique in capturing accurate information about the entire population, it still has important limitations. First, there are fortunately lots our governments do not know about us. The registers do not contain information about teaching methods, student motivation, work effort etc, which are integral to theories about student retention. How such factors are related to social class, we can only speculate here. In addition, we have been forced to narrow the data we do have to make country comparison possible. We thus, do not analyse the entire student population. We have excluded students that are enrolled in short programmes on the ISCED5 level, in HE preparation courses or who have signed up for single year studies or for further training. These students did not intend to complete a degree on BA or MA level and are thus excluded from our analyses of degree non-completion. A more serious limitation is that information on upper secondary GPA is missing for the older students in the Norwegian data, which made it necessary to exclude old students from the analyses in both countries. We know from previous studies that older students both more often come from working-class origins (Klausen 2016) and drop out more often (Tinto 1993). The social disparities in dropout could thus have been even greater if we had included the older students. Mixed methods studies of class-based integration in HE would be an interesting avenue for further research, as there are many aspects (e.g. teaching methods, disciplinary focus, etc.) that are not possible to cover with register data.

The costs associated with dropout are considerable both at the macro and the micro level, and, particularly in Norway, the level of non-completion is very high, particularly among working class students. There are, in other words, quite substantial possibilities of efficiency gains. In times of declining cohort sizes, the financial strain on higher education institutions is also increasing, and measures to reduce dropout, seems like a promising avenue for improving the institutions' sustainability. The differences between institutions, educational fields, and different student groups our analyses have demonstrated, seem vital to keep in mind when designing such measures. The mixed methods studies could help identify effective preventive measures. A reduction in the number of students that change their mind and transfers to another type of institution, would also imply efficiency gains both at the societal, and the institutional, and the individual level. Measures to strengthen the counselling of upper secondary students before their choice of tertiary education may be one possible way to go. Mixed methods studies could help identify additional effective preventive measures.

Notes

1. To the best of our knowledge, there are very few comparative works in sociology on this topic (with some important exceptions like e.g. Reisel and Brekke 2010).
2. In both countries there are alternative ways into HE, where a quota 2 is admitted based on a combination of GPA and other ways of admittance (age points, improved GPA, military points in Norway, work experience and voluntary work in Denmark). It is also possible to build on a vocational upper secondary education and enter HE in Norway.
3. Short programmes on the ISCED5 level are more present in Danish colleges than in Norwegian, so in order to compare similar cases, we have excluded ISCED5.
4. Since the number of students not pursuing a degree is larger in Norway than in Denmark, this exclusion reduces the data more in Norway, but increases the comparability.
5. The registers include annual information about the specific institutions in which the students are enrolled. In the Norwegian context, the classification of institutions as either universities or university colleges is not straightforward. During the observation period, the nominal status of some university colleges changed to university status, without major changes in institutional characteristics. We classify 'old', traditional universities in Oslo, Bergen, Trondheim and Tromsø and specialised universities (institutions offering education only in certain areas, such as architecture, music, or business administration) as universities, and the original university colleges as university colleges (although some obtained university status during the observation period). In Denmark,

there are universities, university colleges, and business academies. Business academies and university colleges are separate institutions but combined in our analyses to ease interpretation and comparability of the results.

6. As all available social class variables cross-country comparisons represents challenges (as e.g. discussed in Erikson and Goldthorpe 1993; Treiman and Ganzeboom 1990). We do, however, not consider them to be more severe in the case of ORDC. Bourdieu's theory is developed in France, but support for his model of social space have been found in both Denmark (Prieur, Skjøtt-Larsen, and Rosenlund 2008) and Norway (Flemmen, Jarness, and Rosenlund 2018). The variables used in the operationalisation are furthermore developed with the purpose of analysing cross-nationally comparable data.
7. Most of the AMEs of the class dummies are between 2 and 4 times smaller in the models that control for GPA.

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