

# PROGRESSION IN HIGHER EDUCATION: THE VALUE OF MULTI-VARIATE ANALYSIS

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While patterns of access to, and participation, in higher education are now well established in the Irish context, less is known about progression once students have entered the third level sector. For the first time, data gathered from all institutions funded by the Higher Education Authority allow us to examine the factors influencing student progression in Irish higher education institutions. Uniquely, these data track the full cohort of new entrants to higher education in 2007/08, to see if they progressed to second year in 2008/09. Drawing on these data, a recent study<sup>†</sup> examined student progression from first to second year across higher education institutions, sectors and courses. The study found that an average of 15 per cent of new entrants were not present one year later. Further, the results showed large differences across institutions – for example, the percentage of honours degree students not progressing ranged from 3 to 25 per cent across institutions.

What are the key factors accounting for this variation in progression rates? Are progression rates linked mainly to differences between the institutions themselves, differences in the difficulty of particular courses, or to differences in the characteristics of students enrolling in these institutions? Investigation of these issues requires an analytical approach going beyond simple descriptive statistics. Research findings based on a multivariate approach highlight the types of students most likely to struggle to progress, and illustrate the importance of taking account of the types of students enrolled in different courses and institutions in comparing progression rates. When results are adjusted to allow for such like-for-like comparisons of institutions, differences in student progression across the higher education sector are much smaller.

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## Student Progression

It is clear that academic preparedness plays a central role in student success in higher education. Leaving Certificate performance emerges as a strong predictor of successful progression within higher education, in line with research in a wide range of countries. Attainment in mathematics is a particularly important predictor – suggesting that students with poor mathematical skills, in particular, struggle to meet the academic demands of higher education. While at an overall level males are less likely to progress in their course, this reflects their greater entry into courses and fields of study

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which have higher dropout rates. Significant differences in progression are apparent across subject areas and fields of study - even when we take account of the types of students enrolled in different courses and institutions and their prior attainment. The results show higher levels of non-progression among students taking courses in computer science and greater levels of progression among students taking courses in the healthcare and education fields. Furthermore, the results show that students in receipt of a state maintenance grant display greater progression rates than those not in receipt of such support. This may be due to greater financial security for students in receipt of a grant, their reduced reliance on part-time work or simply students ensuring that they fulfil the requirements of their courses to retain grant eligibility (since students who fail their exams and are required to repeat the year lose their eligibility for a grant for that year).

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## **Institutional Variation**

The analysis highlights the importance of taking account of differences in the composition of student intakes in assessing the effectiveness of institutions in student retention. In examining institutional variation across the higher education sector, it is clear that wide overall differences across institutions to a large extent reflect differences in the types of students enrolling in different colleges. This provides some support for an argument that colleges cannot be held solely accountable for retention and graduation rates. Clearly, colleges vary widely in the 'quality' of students they enrol and hence taking account of student composition is of utmost importance in assessing variation in student progression. Taking such an approach, the picture that emerges is substantially different to that portrayed by unadjusted descriptive results. When results are adjusted to allow for like-for-like comparisons, differences across the whole higher education sector are substantially smaller. The main differences in progression rates emerge between the University, Institute of Technology and Other Colleges (predominantly Colleges of Education) sectors. Importantly, the research highlights that a simplistic focus on raw or absolute levels of progression/completion across institutions carries the danger of rewarding institutions with more selective student intakes.

† O. MOONEY, V. PATTERSON, M. O'CONNOR and A. CHANTLER, 2010. *A Study of Progression in Irish Higher Education*, Dublin: Higher Education Authority.