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PROJECTIONS OF DEMAND FOR FULL-TIME THIRD-LEVEL EDUCATION, 2013 - 2027

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Table of Contents

List of Tables

List of Graphs

Introduction

This document provides the latest set of projections of demand for full-time third–level education for the period 2013-2027. It should be noted that these are projections of likely demand for Department of Education-aided institutions only. Actual enrolments in each year may not always equate with projected demand, as demand is constantly fluctuating in response to the changing economic situation and resulting shifts in students' options and preferences. A separate release on first- and second-level projections is available. This release discusses third-level full-time projections only.

Migration is a factor when producing third-level projections. Trends in migration of school-going aged children will have a cumulative effect on the underlying population available to take up third-level education. As these projections follow directly from the recently published first-and second-level projections, the third-level projections reflect the assumptions on migration that were made in the first- and second-level projections. The median assumption, M2, is chosen as the most likely.

The methodology for producing the projections was reviewed in 2012, and the underlying population data has been updated to take account of information available from Census 2011. The assumptions have also been updated to take into account the CSO's new population projections, published in April 2013.

These projections cover the next 15 years. For third-level projections this timeframe is chosen as, unlike the first and second-level projections, fertility factors do not generally play a role over the next 15 years in projecting entrants to third level, as future Irish entrants to third-level education over the period 2013-2027 have already been born.

The second level projections of enrolment show that the numbers enrolled are expected to rise continuously until around 2026. This rise is underpinned by demographic factors, annual numbers of births increased significantly in Ireland between 2000 and 2010 and there was a corresponding increase from the mid-2000's onwards in primary level enrolments, which will feed into second level enrolments in future years and also increase demand for third level education in Ireland as the numbers completing second level education rise in future years.

The projections show that demand for third-level full-time education is expected to continue to rise every year over the period 2013-2027, reaching 213,500 by 2027, an increase of over 45,000 on the estimated 2012 enrolment levels.

In addition to higher education, many school leavers avail of opportunities in the further and adult education sector, however it is more challenging to project demand in this area into the future, see Appendix A for a further discussion.

Overview of Methodology

The main proportion of entrants to third-level education each year come directly from the second-level system, with a further proportion entering third level within a few years of leaving second-level education. A data-matching exercise is carried out to arrive at an accurate transfer rate from second- to third-level education, for those students that had not yet reached the mature student age (those aged 23 or more prior to entering a full-time undergraduate course).

Separately, mature entrants are calculated as a proportion of the underlying projected population of those aged 23 and over.

International entrants and entrants from non-HEA DES-aided institutions are also included in the model, although these have a smaller impact than direct and mature entrants. These cohorts are projected using recent trend data to make an assumption about the likely figures going forward.

Projected Demand for Full-Time Aided Places at Third Level, 2012-2027

An estimate of 2012 enrolment based on provisional entrants data as at November 2012, and the projected demand for full-time third-level education over the period 2013-2027, is shown in Table 1 below, under each of the CSO migration assumptions M1, M2 and M3, where:

M1: Net migration will return to positive by 2016 and rise steadily thereafter to plus 30,000 annually by 2021.

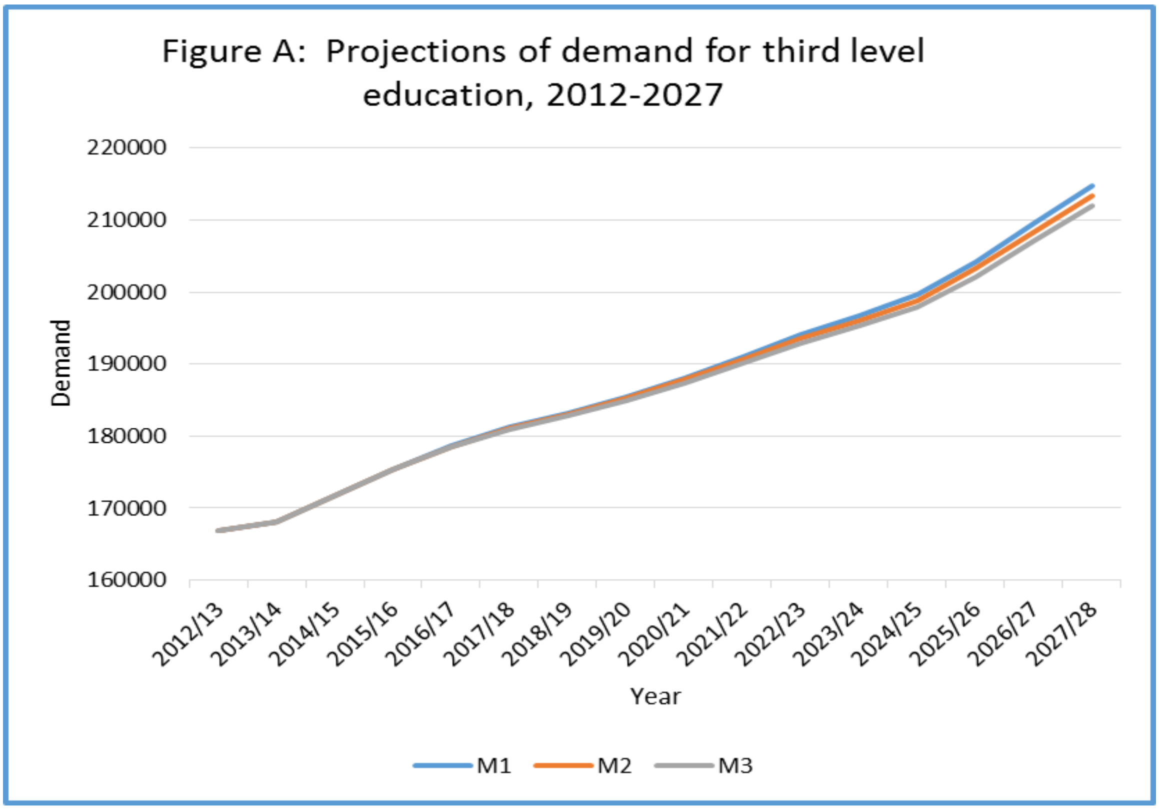
M2: Net migration will return to positive by 2018 and rise thereafter to plus 10,000 annually by 2021.

M3: Net migration will remain negative for the whole period of the projections.

It should be noted that each year refers to the beginning of an academic year. Hence, the year 2012 refers to the academic year 2012/13.

Table 1: Projections of Demand for Full-Time Education in DES-Aided Third-Level Institutions, 2012-2027

	M1	M2	M3
2012	166906 (*estimated enrolment*)		
2013	168,139		
2014	171,671	171,671	171,671
2015	175,424	175,388	175,352
2016	178,626	178,553	178,463
2017	181,207	181,090	180,930
2018	183,273	183,095	182,863
2019	185,429	185,207	184,886
2020	188,073	187,799	187,370
2021	191,048	190,712	190,168
2022	194,107	193,657	192,988
2023	196,665	196,072	195,269
2024	199,633	198,880	197,936
2025	204,177	203,253	202,161
2026	209,540	208,416	207,150
2027	214,822	213,468	211,991



Key points to note:

- Focussing on the immediate three years ahead, full-time enrolment is projected to increase by approximately 8,500 by 2015, under the preferred assumption M2.

- Beyond 2015, under all migration scenarios, the demand for third-level full-time education is projected to increase to roughly between 212,000 and 215,000 by 2027, depending on the migration assumption chosen. This is a direct result of increases in births in recent years and the relevant underlying populations at first and second level.

- Under the median preferred migration assumption, M2, enrolments will reach 213,468 by 2027.

- As the projections of demand for third-level education cover the next 15 years only, they depend only on variations in migration assumptions; fertility is not a factor. Therefore the range of projected values is narrower than that shown for the projections at first and second level.

Projection of Entrants to Third-Level Education

The projection of entrants to third-level education involves three separate components:

1) Calculation of a transfer rate from second- to third-level education
2) Projection of numbers of mature entrants
3) Projection of numbers of international students

1) Calculation of a Transfer Rate from Second to Third Level

In order to arrive at an accurate rate of transfer of non-mature students from second to third level, a data-matching exercise was conducted to estimate the proportion of final-year second-level students that transfer to third level in the ensuing five years.

The data-matching exercise was conducted using Higher Education Authority 2011/2012 Student Records System data for entrants to third-level HEA institutions, and second-level final-year data from the Department of Education and Skills Post-Primary Pupils' Database five academic years previous to 2011/2012.

The results of the matching exercise are as follows:

- **45.51%** of the 2010/2011 final-year second-level cohort were new entrants to third level in 2011/2012

-**11.15%** of the 2009/2010 final-year second-level cohort were new entrants to third level in 2011/2012

-**3.16%** of the 2008/2009 final-year second-level cohort were new entrants to third level in 2011/2012

- **1.45%** of the 2007/2008 final-year second-level cohort were new entrants to third level in 2011/2012

- **0.94%** of the 2006/2007 final-year second-level cohort were new entrants to third level in 2011/2012

Adding these results together implies that, if similar trends were to continue for future years, 62.2% of any final-year second-level cohort will transfer to a HEA-funded third-level institution before reaching the mature student age. These transfer proportions are broadly similar to those which resulted from the data-matching exercise for the 2012 projections (43.7%, 10.9%, 3.1%, 2.1% and 2.1% respectively which gives an overall transfer rate of 61.9%).

Given the underlying demographics, even if this rate is to remain constant into the future, increases in new entrants to third-level education will be seen. The overall numbers enrolled in second-level education are projected to rise from 327,320 in 2012 to 416,262 in 2026 under preferred scenario M2F2, and this increase will therefore lead to increased domestic demand coming from the second-level sector for third-level education.

An extra adjustment is also made to take account of those who enter institutions that are aided by the Department of Education and Skills but not those funded by the

Higher Education Authority. This adjustment is of the order of 1.5%, which gives a total estimated transfer rate from second to third level of approximately 63.7% in 2011/2012; in other words, 63.7% of final-year second-level students in any given year are likely to make the transfer to publicly-aided third-level institutions before reaching the mature student age of 23.

For the purposes of the projections, the path taken to third-level education is irrelevant when calculating the transfer rate from second to third level. Students who do not make the transfer directly to third level may repeat the Leaving Certificate to get more points, pursue a Post-Leaving Certificate course, enter employment, be unemployed for a period of time, or travel abroad for a "gap year" before entering the third-level system. Whichever path is taken to third level, this data-matching exercise ensures that students who enter third level before the age of 23 after a period of other activity, are included in the transfer rate for projections purposes.

Mature Entrants

A significant proportion of entrants into the third-level sector are mature entrants. These are entrants which are over the age of 23. Applicants over the age of 23 are entitled to be assessed for financial supports independently of their parents, therefore the data shows a surge in entrants to third level at the age of 23 and 24, with a gradual levelling-off after those ages.

In recent years the numbers of mature students were on the increase, possibly as the lack of employment opportunities in some sectors has made returning to third-level education a more attractive prospect, and because unemployment supports allow for a return to education while retaining benefits. The most recent data available suggests that this increase has now levelled off, and given that the surge was most likely in response to a particular economic shock, it is assumed that the most likely scenario going forward will be a retention of mature entrants at the same proportion of the underlying population.

International Students

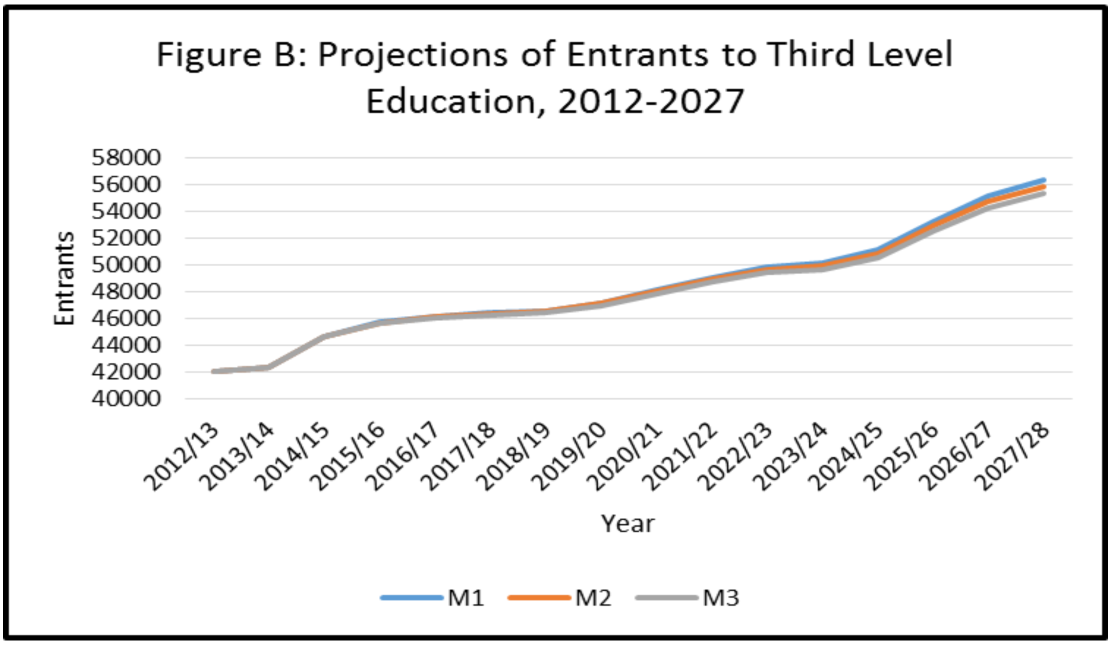
Trends in international student entrants, particularly those from non-EU countries are, in general, not dictated by Ireland's economic or demographic profile of the moment, but rather by events and policies in their home countries. Ireland has seen a gradual increase in international students in recent years, however the most recent data available from the HEA shows that the numbers of international students enrolled fell between 2010 and 2011, suggesting that the number of entrants may be falling and lower than previously projected. This fall is composed of a reduction in the numbers of EU students and a slight increase in the numbers of non-EU students. This new lower base has been reflected in the 2013 projections model. Given that many third-level Irish institutions are aiming to attract a larger number of international students to their campuses, an assumption is built into the model that numbers of international students will very gradually increase over time, albeit from a lower base than assumed in previous projections.

Projections of New Entrants to Third Level, 2011-2026

Based on the factors considered above, the following Table shows the projected third-level entrants under each migration assumption, M1, M2 and M3.

Table 2: Projections of New Entrants to Third Level, 2012-2027

	M1	M2	M3
2012	42,049 (*estimated*)		
2013	42,331		
2014	44,631	44,631	44,631
2015	45,695	45,663	45,632
2016	46,145	46,104	46,048
2017	46,397	46,341	46,259
2018	46,590	46,507	46,405
2019	47,178	47,096	46,961
2020	48,134	48,034	47,862
2021	49,075	48,954	48,747
2022	49,884	49,701	49,459
2023	50,204	49,969	49,688
2024	51,193	50,908	50,587
2025	53,294	52,959	52,597
2026	55,127	54,726	54,305
2027	56,383	55,906	55,410



Under all migration scenarios, the numbers entering third level are projected to rise continuously between 2012 and 2027. This is a direct result of the underlying demographic profile of the population.

Rate of Undergraduate Turnover (ROUT)

In addition to projecting the number of entrants, a projection needs to be made of the likely level of continuing enrolments. The rate of undergraduate turnover is the proportion of total higher education undergraduate enrolment which is "turned over" into the following academic year. It is calculated as follows:

Rate of Undergraduate Turnover = ROUT = $(Stock^{t+1} - Entrants^{t+1}) / Stock^{t}$

Where:

$Stock^{t}$ = total enrolment in full-time undergraduate courses at higher education in year T.

$Stock^{t+1}$ = total enrolment in full-time undergraduate courses at higher education in year T+1.

And $Entrants^{t+1}$ = total intake to full-time undergraduate courses at higher education in year T+1.

This measure gives an indication of those who continue each year in higher education. If one takes the total stock enrolment in one year, then those remaining the following year are those that have either not graduated or dropped out of college. Although no analysis is made of the proportion of graduates and dropouts each year, the ROUT gives an implied figure for combined turnover in the sector year-on-year due to both graduation and dropout.

Using the latest data available, from 2010 to 2011 academic year, the ROUT is calculated as follows:

Stock 2011:	*143,676*
Entrants 2011:	*41,765*
Stock 2010:	*142,592*
ROUT =	*(143,676 – 41,765) / 142,592*

This gives a rate for the sector as a whole of 71.5%, which is slightly down on the ROUT of 72.3% used in the previous set of projections. The figure of 71.5% is carried throughout the model.

Postgraduate Enrolments

The final component in the third-level projections model is a projection of postgraduate enrolments as a proportion of total full-time enrolment.

In recent years there has been a gradual increase in the proportion of postgraduate enrolments, from 12.5% of total full-time enrolment in 2005 to a peak of 14.5% in 2009. The proportion of postgraduate enrolments fell slightly to 13.3% in 2011, down from 13.7% in 2010, as undergraduate enrolments increased while postgraduate numbers recorded a slight decrease. This shows a continued levelling-off of the increases recorded in recent years, and so the model has accordingly been adjusted slightly to take account of the lower proportion of postgraduates.

Comparison with Previous Projections

The following table shows the third-level projections of full-time demand, as published in July 2012.

Table 3: Projections of Demand for Full-Time Education in DES-Aided Third-Level Institutions, 2011-2026

	M0-Net outward migration increasing gradually	M1-Net migration stabilising at 0	M2-Return to net inward migration by 2016
2012	170,607		
2013	173,907		
2014	177,768		
2015	181,126		
2016	184,317	184,339	184,253
2017	186,886	186,852	186,814
2018	188,850	188,782	188,862
2019	190,860	190,785	191,117
2020	192,955	192,948	193,662
2021	195,056	195,290	196,428
2022	196,861	197,551	199,125
2023	198,153	199,607	201,678
2024	200,225	202,285	204,884
2025	202,736	205,370	208,932
2026	205,902	208,961	212,745

The most notable differences are in the projections in the years up to 2018, where projected demand has been adjusted downwards by approximately 3%. The reasons for this are as follows:

1) The latest data from HEA for 2011 and provisional entrant data for 2012 show a levelling-off of the increases in full-time undergraduate enrolment seen in recent years. Full-time undergraduate enrolment increased by just 1.4% between 2010 and 2011, which is lower than the increases recorded in previous years, and reflects an emerging trend of flattening full-time enrolments. This levelling-off seems to be driven by a significant drop-off in enrolments of international students and also by a possible replacement of demand for full-time education with part-time third-level reskilling courses (part-time enrolments have seen an increase of 6.5% between 2010 and 2011). These emerging trends have been accounted for in the model.

2) New information showing a further levelling-off of the proportions in postgraduate education has led to a slight reduction in the projected proportion of postgraduate students.

3) Changes to the data in any particular year have a compound effect on data in subsequent years, due to the use of the Rate of Undergraduate Turnover (ROUT) in projecting year-on-year figures.

4) Changes to the underlying second-level migration data as a result of updating the migration assumptions in line with the latest CSO projections have had a very slight downwards impact on the numbers, although the effect of this change is minor compared to the other factors above.

Appendix A – Note on projections of demand for Further and Adult Education.

The further education sector in Ireland encompasses a range of provision including Post Leaving Certificate Courses, SOLAS provision, Adult Education Centres and some private and non-formal education providers. Aontas, the national adult learning organisation, estimates that in total there were 180,000 people availing of full time and part time further education in 2012, including Youthreach, PLC courses, VTOS, adult literacy and community education schemes. An estimated 75,000 people were also registered on FAS courses.

While projections of enrolment at first and second level, and projections of demand at third level can use underlying demographics and known data on the characteristics of third level entrants as a basis, it is more difficult to project demand for the further and adult education sector.

Taking PLC courses as an example, less than 30% of places are taken up every year by direct transfer from second level schools. The rest are taken up by adults from across the population, and reflect a huge range of motivations for further study, including factors in the underlying economy, a desire for lifelong learning and self-improvement, retraining for a different career path etc. In addition, government policy in further and higher education has been rapidly evolving in recent years in response to the economic crisis, with a shift of focus onto reskilling the unemployed. This has created a pull factor in some sectors and rapidly increased enrolments in areas targeted by government schemes.

Modelling these motivations in order to project demand into the future is very challenging given the numbers of providers involved, the different pathways that adults can take into further and adult education courses at different stages of their lives, and the effect that government policy has on demand for places. It is unlikely, however, given the projected increase in the overall population and the economic situation that demand will fall in the short term for further education and training.