

DRIVING RESEARCH & INNOVATION

NET GAINS TO EXCHEQUER

SUPPORTING JOBS & THE LOCAL ECONOMY

**DELIVERING  
FOR IRELAND**  
AN IMPACT  
ASSESSMENT  
OF IRISH  
UNIVERSITIES

LIFETIME EARNINGS PREMIUM  
INCREASING EXPORT EARNINGS

MAJOR SOCIO-CULTURAL IMPACT

# AN IMPACT ASSESSMENT OF IRISH UNIVERSITIES

**INDECON**

International Economic Consultants



**120,000**  
STUDENTS IN 2017



**21,801**  
FULL-TIME JOBS SUPPORTED...

...INCLUDING **15,724 DIRECTLY EMPLOYED** IN 2017



**€106,000**



**UNDERGRADUATE DEGREE HOLDER**

NET LIFETIME EARNINGS GAIN

**€146,000**

**MASTER'S DEGREE HOLDER**  
NET LIFETIME EARNINGS GAIN

**€222,000**

**PHD HOLDER**  
NET LIFETIME EARNINGS GAIN

MORE THAN **2**   
**MILLION VISITORS**

ATTENDED EVENTS OR  
ATTRACTIONS LOCATED  
IN OR RUN BY IRISH  
UNIVERSITIES IN 2017



€1,606  
MILLION

NET LIFETIME GAIN TO EXCHEQUER  
FROM STUDENT COHORT THAT  
STARTED UNIVERSITY IN 2017-18



€2,566  
MILLION

NET LIFETIME  
INCOME GAIN  
FOR STUDENT COHORT  
THAT STARTED UNIVERSITY  
IN 2017-18

€8,891  
MILLION

CONTRIBUTED TO THE IRISH  
ECONOMY IN 2017-18



€2,802  
MILLION

DIRECT, INDIRECT AND  
INDUCED NON-RESEARCH  
EXPENDITURE IN 2017



€386  
MILLION

EXPORT EARNINGS FROM  
INTERNATIONAL STUDENTS



€1,531  
MILLION

ECONOMIC CONTRIBUTION FROM  
RESEARCH AND DEVELOPMENT  
IN UNIVERSITIES 2017-18



## WHY AN IMPACT STUDY?

Universities play a central role in the economic, social and cultural life of the nation. They feed the talent pipeline for the growing knowledge economy. They are centres of creativity and learning. They generate cutting-edge research and innovation. They nurture culture, heritage and sports. They support communities and are significant employers in their local economies.

The full impact of Irish universities on the economy and society as a whole has, however, never been measured before. Impact assessments have become widely used in most developed countries to provide an understanding of how universities contribute to the national economy and the social and cultural fabric of the country. They have become essential tools for policy makers to use when evaluating investment decisions on higher education. They also enable international comparisons of different university systems.

## WHO COMMISSIONED AND CARRIED OUT THE STUDY?

Indecon Research Economists (Indecon) were appointed by the Irish Universities Association to conduct the Impact Assessment of Irish Universities following a competitive tender process. Indecon is the largest independent economic research consultancy practice in Ireland and is part of the Indecon International Consultancy Group which includes the leading European consultancy, London Economics. In addition to numerous sectoral economic assessments in Ireland, Indecon has also carried out a number of impact assessments of university systems in the UK and elsewhere.

Indecon assembled a broad range of data from the universities themselves as well as from public bodies such as the Higher Education Authority, the Central Statistics Office, the Department of Education and Skills and others. Their detailed independent assessment was completed throughout much of 2018 and the early part of 2019. All findings and conclusions in the report are entirely attributed to Indecon.

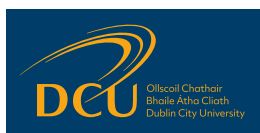
**INDECON**  
International Economic Consultants

## WHAT'S COVERED?

This summary report outlines the key findings of a rigorous socio-economic impact assessment of the university sector in Ireland by Indecon Research Economists. The Indecon assessment covers the combined impact of the seven Irish universities – Dublin City University, Maynooth University, NUI Galway, Trinity College Dublin, University College Cork, University College Dublin and University of Limerick.

The Impact Report, for the first time, provides measurements and insights on the collective contribution of the seven universities including:

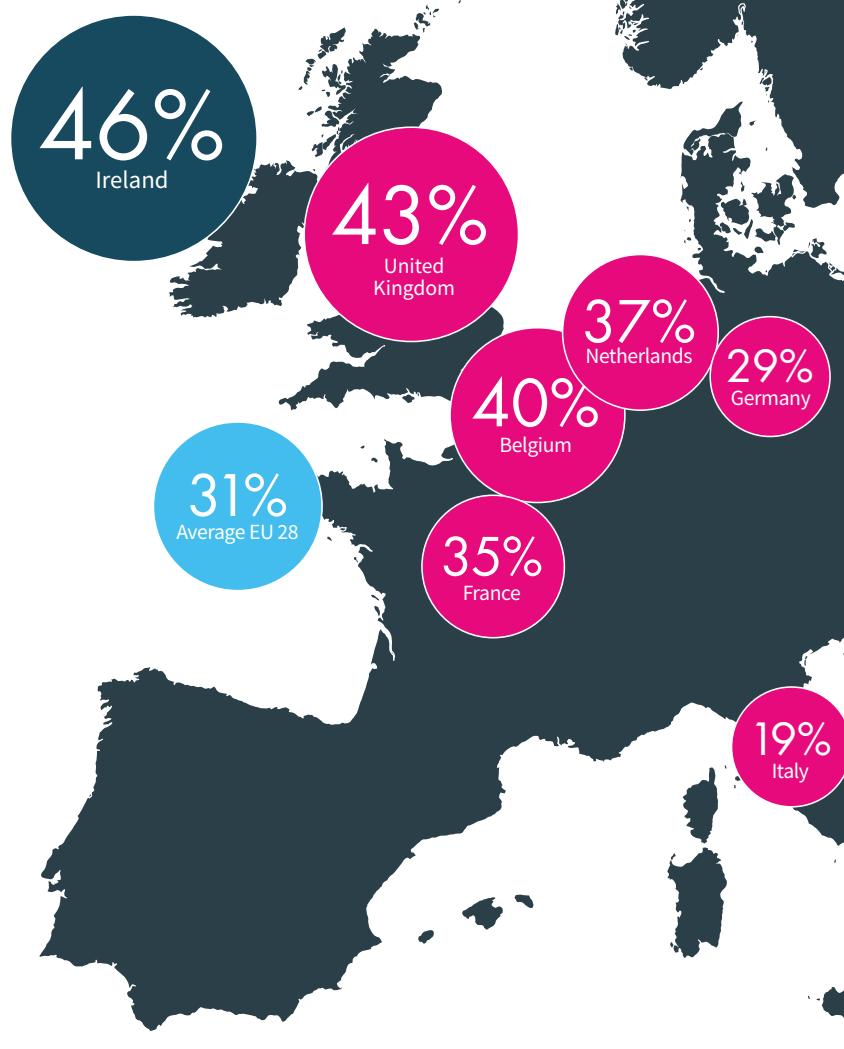
- The overall contribution of universities to the Irish economy;
- The direct impact of university expenditure on the economy;
- The indirect and induced impacts of university expenditure;
- The contribution of universities to research and innovation;
- The export earnings of Irish universities through international students;
- The total impact of universities on lifetime earnings of graduates and the associated exchequer benefits;
- The employment and local economic dividend of universities;
- The wider social and cultural contribution of universities.



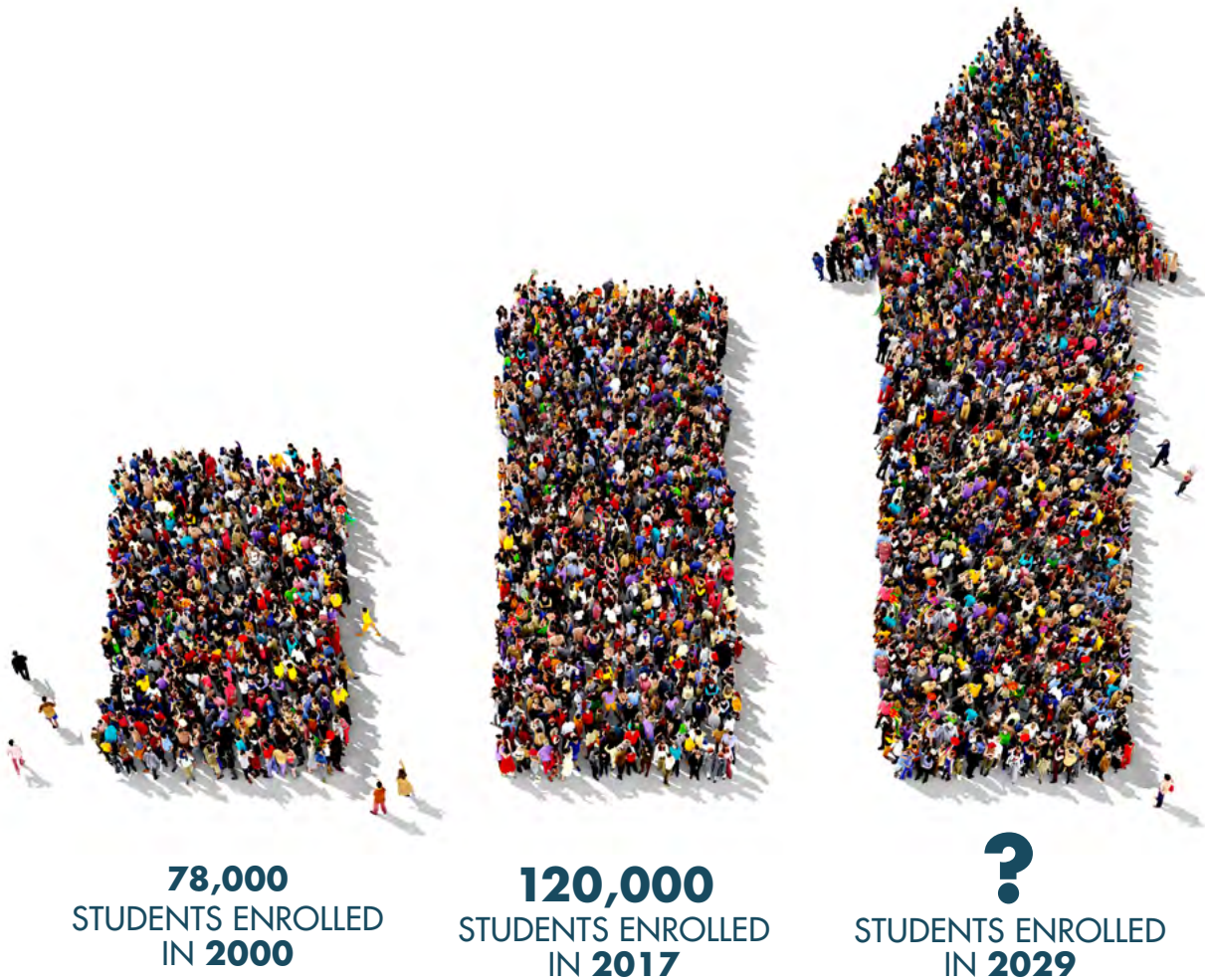
## LEADERS IN EUROPE

### Ireland is the EU's most highly educated Member State.

The educational attainment of Ireland's population is now well ahead of the EU average. Based on Eurostat data for 2017, 46% of 25 to 64 year-olds in Ireland have a third level qualification as against the EU average of 31%. This is cited as one of the key reasons for our success in continuing to attract foreign direct investment and for the growth in the knowledge economy.



| Source: Indecon analysis of Eurostat data.



OVER **50%**  
**INCREASE IN IRISH UNIVERSITY ENROLMENTS  
 SINCE THE YEAR 2000 ...AND GROWING**

Ireland has moved towards becoming a more highly skilled and educated population in recent decades. In 2000 less than 78,000 students were enrolled, compared to over 120,000 by 2017. This reflects both a growth in the university aged cohort and a shift to more highly skilled employment. Some sectors of the Irish economy now have over 65% graduate employment. The importance of higher education is evident in the high value-added sectors of the Irish economy such as information and communication, professional, scientific and technical activities.

## IMPACT OF IRISH UNIVERSITIES ON RESEARCH

Irish universities are major drivers of research and innovation in Ireland. Their cumulative expenditure of €632 million in 2017 spans the full range of research fields including engineering and technology, natural sciences, medical and health sciences, social sciences, agriculture and food and humanities.

Irish universities account for 20% of total annual national expenditure on R&D and represent 83% of all R&D expenditure in the higher education sector. Irish universities accounted for 50% of total funding raised by Irish enterprises and institutions under the EU's Horizon 2020 programme between 2015 and 2017.

The spillover impact of university-based research on the wider economy adds a further €373 million benefit to the economy. Spillovers are enabled through direct R&D collaborations between the universities and firms, the publication and dissemination of research findings, or through universities' graduates who enter into the labour market.

That, combined with indirect and induced effects of €526 million, brings the total research impact to the economy of €1,531 million.

**€1,531  
MILLION**  
TOTAL RESEARCH  
IMPACT TO THE  
ECONOMY

**€632** MILLION DIRECT RESEARCH

**€373** MILLION SPILLOVER RESEARCH

**€526** MILLION INDIRECT AND INDUCED







RESEARCH EXPENDITURE

RESEARCH IMPACT

INDUCED RESEARCH IMPACT

# RESEARCH AND INNOVATION

## IMPACT ON INNOVATION, ENTERPRISE AND KNOWLEDGE TRANSFER

The impact of university R&D on innovation in Irish enterprise is also very substantial. This encompasses patents, research agreements and collaborations with enterprise, licences, options and assignments, invention disclosures, spin-outs and incubator companies.

Through its university graduates, Ireland's educated workforce has been widely cited as a key reason for Ireland's success in continuing to attract foreign direct investment and in supporting indigenous enterprises. In the 2018 IMD World Competitiveness Yearbook, Ireland was ranked 9th in the world in terms of the ability of university education to meet the needs of a competitive economy.

611

PATENT FAMILIES  
OWNED BY  
UNIVERSITIES



RESEARCH  
AND INNOVATION

IN 2017 THERE WERE:



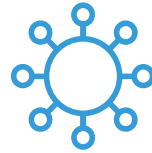
584

RESEARCH  
AGREEMENTS  
AND ENTERPRISE  
COLLABORATIONS



119

LICENCES,  
OPTIONS AND  
ASSIGNMENTS



93

ACTIVE  
SPIN-OUTS



188

INCUBATOR  
COMPANIES AT  
UNIVERSITIES



# THE IMPACT OF UNIVERSITY ON GRADUATE LIFETIME EARNINGS

Educating students to the highest possible standards of excellence is at the heart of the university mission. Equipping students with the education and skills to succeed in their careers and in life is a core objective. The Indecon analysis has found that university graduates with an undergraduate degree have a 95% probability of employment. This rises to 96% for those with a Master's degree and 97% for those with a PhD.

Indecon economic modelling has found that third level graduates have an earnings premium of 38% to 43% over those with no formal education/primary education.

The analysis shows that the net lifetime earnings gain of students entering university in 2017-18 and completing a full-time undergraduate degree is €106,000 in today's money terms. This figure is net of the costs incurred by students in obtaining their degrees as well as the costs of income foregone while attending university and all taxes and charges.

The net lifetime earnings gain for Master's Degree holders rises to €146,000 in today's money terms. The net lifetime earnings gain for PhD graduates rises by a further €116,000 on top of the undergraduate earnings premium totalling €222,000.

On the basis of these figures, the total lifetime income benefits, expressed in current money terms, for the cohort of students who entered university in 2017-18 is €2,566 million. These estimates are based on a conservative modelling approach including a 4% discount rate in accordance with the latest Staff Paper on appraisal parameters published by the Department of Public Expenditure and Reform.



Net earnings gain compared to those with no third level education:



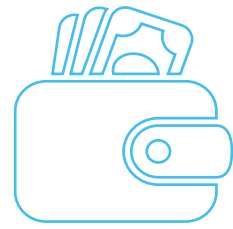
€106,000

**UNDERGRADUATE  
DEGREE HOLDER**  
NET LIFETIME  
EARNINGS GAIN



€146,000

**MASTER'S  
DEGREE HOLDER**  
NET LIFETIME  
EARNINGS GAIN



€222,000

**PHD  
HOLDER**  
NET LIFETIME  
EARNINGS GAIN



# UNIVERSITY GRADUATE RETURNS TO THE IRISH EXCHEQUER

University graduates also contribute directly to the Exchequer in the form of higher personal taxes arising from their earnings premium. Indecon has calculated the additional taxes paid by graduates over their lifetime and deducted the costs incurred by the Exchequer in providing university education. The analysis shows a net gain to the Exchequer of €62,000 on average. This can rise to €126,000 for PhD holders.



€62,000



**NET GAIN TO  
EXCHEQUER**  
FROM LIFETIME EARNINGS  
OF UNDERGRADUATE  
DEGREE HOLDER



R

Combining the Exchequer gain for the full cohort of students who entered university in 2017-18 yields a cumulative Exchequer gain of €1,606 million over the lifetime of those students in today's money terms.



This analysis which shows a substantial yield to the Exchequer, takes full account of tax receipts from these individuals had they not attended university and is a realistic estimate of the actual net benefit of these graduates to the Exchequer.

# RETURNS TO THE EXCHEQUER

# IMPACT OF UNIVERSITY EXPENDITURE AND EMPLOYMENT ON WIDER ECONOMY

## Direct Impact

The seven universities covered by this study employed a total of 15,724 full-time equivalents (FTEs) in 2017. In addition, Indecon estimates that a further 6,077 FTEs are accounted for through indirect and induced employment. This brings the total employment benefit from Irish universities to 21,801 FTEs.

## Indirect and Induced Impact

Universities also contribute to the wider economy through other forms of expenditure. This includes indirect or knock-on business activity arising from university expenditure as well as the induced effects such as additional impact of household consumption.

Cumulatively, this amounts to an impact of €3.96 billion.

21,801  
FULL-TIME  
EQUIVALENT JOBS  
SUPPORTED

€3.96  
BILLION\*

TOTAL IMPACT OF  
UNIVERSITY EXPENDITURE  
ON IRISH ECONOMY

€2,160 MILLION DIRECT

€1,170 MILLION INDUCED

€626 MILLION INDIRECT

\*This figure differs from that reported on page 01 as it includes research expenditure and impacts which are treated separately from the €2,802 million figure on page 01.

# IMPACT ON AND WID





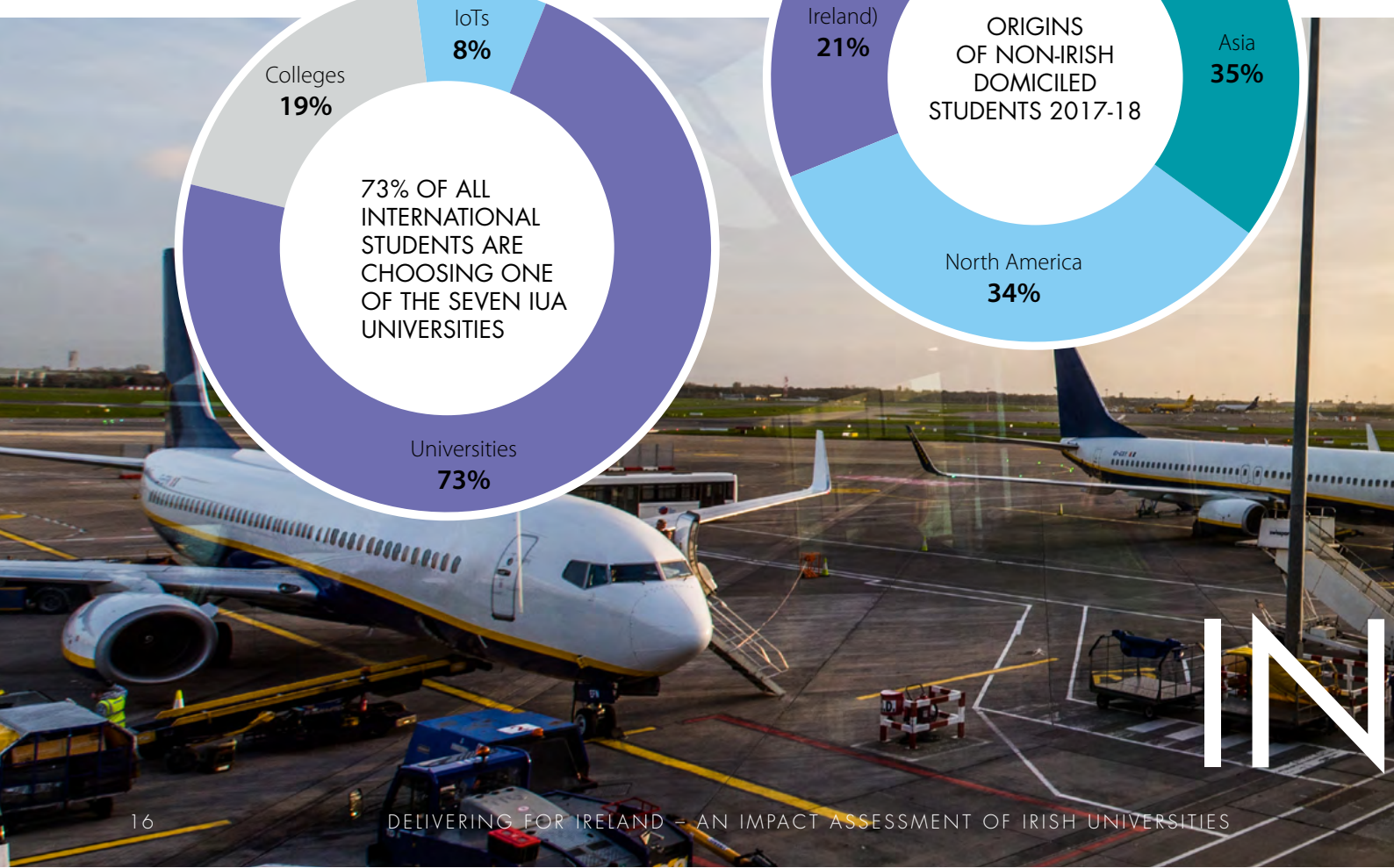
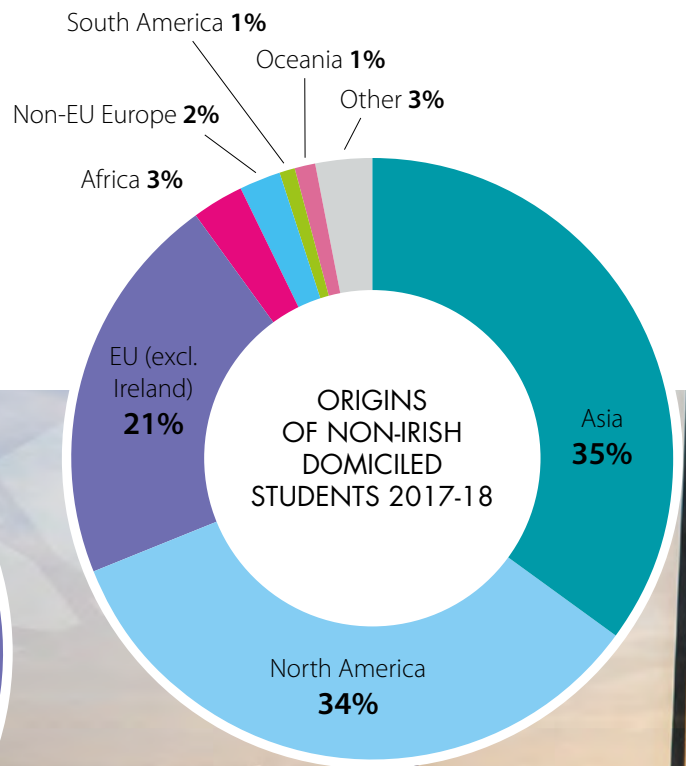
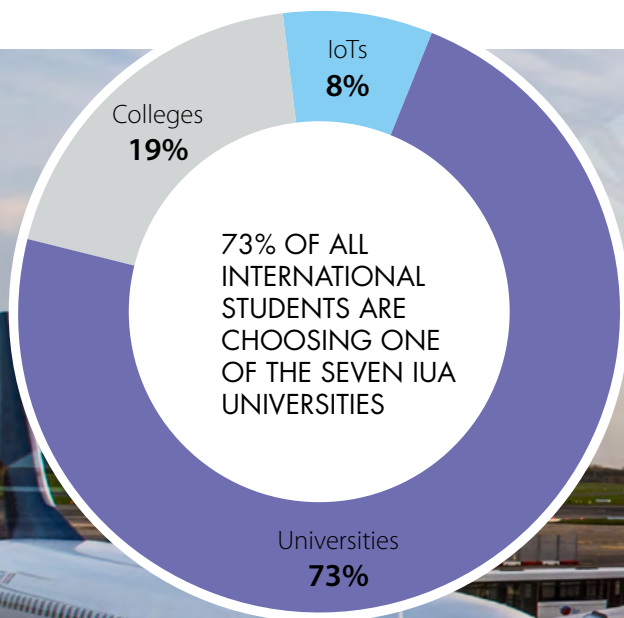
# AN EMPLOYMENT FOR ECONOMY

# ECONOMIC IMPACT OF INTERNATIONAL STUDENTS

Universities have attracted increasing numbers of international students in recent years with more than 100 countries represented across the seven universities. Apart from the fees generated from these students, they also bring spending power to the local economy and are, in effect, regarded as export earnings for Ireland.

Irish universities represent the largest destination for international students in Ireland, accounting for 73% of all international students studying in Ireland.

Indecon has estimated the net benefit to the Irish economy arising from the international student cohort. The analysis deducts the costs to the Exchequer and accounts for the varying fee levels between EU and non-EU students.



**I N**



ESTIMATED TOTAL ANNUAL EXPORT INCOME  
GENERATED FOR THE IRISH ECONOMY  
FROM INTERNATIONAL STUDENTS

€386 MILLION



IN 2017-18  
THERE WERE

16,701

FULL-TIME NON-IRISH  
STUDENTS LIVING  
IN IRELAND



# INTERNATIONAL STUDENTS

## THE SOCIAL AND CULTURAL IMPACTS OF IRISH UNIVERSITIES

The significant role of the seven IUA universities in Irish social and cultural life should not be underplayed. They are deeply embedded in the communities in which they are located with socio-cultural activities spanning tourism, sport, music and entertainment, arts and culture.

Culturally, universities provide support and creative skills for the wider community. The majority of people in arts-related occupations have a degree or higher including over 80% of authors, writers and translators.

MORE THAN **2**   
**MILLION**  
**VISITORS**  
ATTENDED EVENTS OR  
ATTRACTIONS LOCATED  
IN OR RUN BY IRISH  
UNIVERSITIES IN 2017



# SOCIAL

The university experience has a powerful and life-lasting impact on graduates well beyond their academic qualification. A survey of alumni by Indecon that attracted 6,600 respondents showed the vast majority saying that university had a very positive or positive impact on a range of social, cultural and economic outcomes.

## 75% + OF ALUMNI SAY UNIVERSITY HAD A VERY POSITIVE OR POSITIVE IMPACT ON:



FACILITATING  
SOCIAL MOBILITY



PROVIDING SKILLS  
FOR CREATIVE  
ACTIVITIES



INCREASING  
LOCAL SPEND



DEVELOPING  
CULTURAL  
ACTIVITIES





3 MILLION  
VOLUNTEER HOURS  
WITH ESTIMATED  
VALUE OF

€28.4 MILLION

University students are actively engaged in a variety of volunteering activities.

Over 17,500 students from the 2017-18 academic year engaged in volunteering representing a value of €28.4 million.\*



\* Based on formally recorded hours on StudentVolunteer.ie and estimates from CSO and other data. It is likely that the actual level of voluntary activities is higher but not all are formally recorded.

25%

OF NEW UNIVERSITY  
ENTRANTS IN 2017-18  
CAME FROM PRIORITY  
ACCESS SCHEMES

Irish universities play an important role in supporting social mobility and access to higher education. Across the seven university campuses, the student body is increasingly reflective of our diverse society by supporting social mobility and access to higher education for those from socio-economically disadvantaged backgrounds and for those with disabilities.

The Higher Education Access Route (HEAR) and Disability Access Route to Education (DARE) have successfully promoted access to education nationally. Between 2015-2017 over 15,600 students accepted an offer through either DARE or HEAR.



# AND CULTURAL IMPACTS

Indecon Independent  
Assessment of the Economic  
and Social Impact of Irish  
Universities

Produced for



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