

The State of University-Business Cooperation in Ireland

Part of the DG Education and Culture
Study on the Cooperation Between
Higher Education Institutions and
Public and Private Organisations in Europe

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Abbreviations

EC	European Commission
HEI	Higher Education Institution
LLL	Lifelong Learning
R&D	Research and Development
SME	Small- and medium-sized company
S2BMRC	Science-to-Business Marketing Research Centre
UBC	University-Business Cooperation

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Executive summary

A tale of two worlds

The Irish results of this study reflect a large divide in the perceptions of higher education institution (HEI) managers and academics in respect to cooperation between HEIs and business (from here termed University-Business Cooperation or UBC). Irish HEI managers perceive their HEIs to be highly developed and themselves as European leaders in UBC with a great deal of *structures and approaches* as well as *activities* in place to support UBC. Contrary, Irish academics perceive that there is only a moderate development of UBC, that there are only a modest level of academic *benefits* from UBC and that UBC has only a moderate contribution to the HEIs three missions. The difference between the two about the extent of UBC is the second largest difference recorded between HEI managers and academics Europe-wide, behind the United Kingdom. So considering these results, three options exist: (i) the academics know how much cooperation is being undertaken and the HEI managers are miss-informed and over-optimistic, (ii) the HEI managers have a good overview of all UBC *activities* in the HEI and the academics are miss-informed and pessimistic or (iii) a combination of the above. Either way, it is vitally important that the Irish HEIs get the managers and academics are on same page to ensure that both have a similar understanding of UBC.

About the study

The results presented in this report were from a study commissioned by the European Commission (EC). Surveys were sent out to all registered European HEIs in 33 countries in 2011. In total, 6,280 responses were received from European academics and HEI management. From Ireland (forming the basis for this report) 113 responses from academics (72) and HEI management (41) were received. The study measured the perceptions of these two groups in respect to their own cooperation efforts and those of their HEI respectively.

Collaboration and Commercialisation of R&D are the most developed forms of UBC

The most developed types of UBC in Ireland are: (1) *Collaboration in research and development (R&D)*, (2) *Commercialisation of R&D results* and (3) *Entrepreneurship*, with the least developed type being: *Mobility of academics*. Whilst HEI managers perceive themselves to be European leaders in UBC, with all types of cooperation being more developed in Ireland compared to the average European HEI, the

higher development and emphasis on R&D cooperation and Entrepreneurship reflect the commercial orientation of many Irish HEIs. These 'transactional' (financially quantifiable) types of cooperation are substantially more developed in Ireland (highly developed) than in Europe (moderately developed). Whilst still above the EU average, *mobility of students and academics* are less developed by comparison with *collaboration in R&D*. It is important to note that, in contrast to the HEI managers, Irish academics do not necessarily perceive themselves to be European leaders in UBC and assess an overall extent of UBC similar to the European average.

Funding barriers still need to be reduced in Ireland

The primary *barriers* to UBC in Ireland are perceived to be: (1) 'lack of university funding', (2) 'the current financial crises', and (3) 'lack of financial resources of the businesses'. It seems logical that reducing actual and/or perceived *financial barriers* to UBC is a crucial step to Ireland's continuous development of UBC. Irish academics perceive that after *funding barriers*, *relational barriers* also prominent, whilst HEI managers perceive *usability of results* to have a more profound affect. Overall, *barriers* to Irish UBC are perceived to be at the European average.

Relationships drive cooperation in Ireland

As in Europe generally, *relationship drivers* such as (1) 'understanding of common interest', (2) 'existence of mutual trust', and (3) 'existence of mutual commitment' were nominated by HEI manager as the most important *drivers* of UBC. The importance of relationships was agreed upon by both HEI managers and academics, although generally Irish academics perceive less UBC drivers than HEI managers. This suggests that a focus on greater effort to bring academics together with business, and the fostering of relationships, is needed for further improvement of this cooperation.

Academics perceive lower personal benefits from UBC

Irish academics perceive the primary winners from UBC to be: (1) students, (2) businesses followed by (3) benefits to the HEI, and (4) personal benefits, being by far the lowest. These results imply that academics need to receive greater personal *benefits* from their HEI in terms of chances of promotion in order to increase UBC activity. This is reflected in the

implementation and motivation strategies which are considerably less developed than the European average. HEI management state that (1) HEIs *benefit* the most from UBC before (2) students, (3) business and (4) society, which implies that Irish HEI managers see UBC as a vital part of the mission of the HEI. HEI management rate *benefits* of UBC for all groups to be above the European average, whereas academics have a mixed opinion, rating personal *benefits* below the European average and *benefits* for other stakeholders above the European average.

Perceived leaders in supporting mechanisms for UBC

UBC *strategies* are only moderately developed in Ireland, leaving some room for improvement. Significantly, '*implementation strategies*' in Irish HEIs are developed only to a low-moderate level with '*incentives for academics*' and '*the inclusion of UBC as part of the assessment of work performance*' substantially underdeveloped compared to the other strategies.

Irish *structures and approaches* are perceived to be very well developed, substantially more developed than the European average. Owing to the high financial commitment and long-term return on investment required of *structures and approaches*, there is evidence of some real commitment to UBC in Ireland.

UBC *activities* in Ireland are very well-developed being the most developed of the four *supporting mechanisms*. In fact HEI managers perceive them to be the highest in Europe.

Overall, in respect to the UBC *supporting mechanisms* named below, HEI managers perceive those in Ireland to be some of the most developed in Europe although UBC strategies are an exception.

Introduction

Background

With the creation of the Europe 2020 programme, the European Union's (EU) growth strategy for the coming decade, and the higher education modernisation agenda, Europe is embracing the need to create a more connected and functional relationship between government, business and HEI in order to increase employment, productivity and social cohesion¹. If fostering UBC is understood as 'interactions' between HEIs and businesses for mutual benefit, then fostering UBC and extracting its value can help society face a number of issues. UBC helps universities to face the problem of decreasing public funds² help businesses to gain and maintain their competitive advantage in today's dynamic international markets, contribute to the economic development on regional and national level³ as well as meet the demands of the labour market to provide more relevant knowledge and skills and greater job prospects of students⁴. Additionally, there are substantial indirect outcomes of UBC including support in the creation of a knowledge economy⁵, support for local business⁶, creation of jobs⁷, stimulation of economic growth and increased living standards whilst reducing hindrances to good living⁸. In this context, UBC creates mutual benefit for all parties involved, and wider, to society.

Over the last few decades there has been a dramatic shift in the focus of HEIs and policy makers towards the HEI's so-called 'third mission'. Through this, HEIs have had their roles focussed to a greater extent on the need to contribute to society in a more meaningful way through knowledge and technology creation, transfer and exchange⁹. In recent years, the focus has been extended to recognise all the ways in which HEIs can contribute to society including *Lifelong learning* (LLL), *Entrepreneurship* or exchanges of workers with businesses as means to reach the third mission. Owing to this, the holistic extraction of value via UBC has become more important for the viability and relevance of HEIs as the benefits of closer and better cooperation between HEIs and businesses and the benefits for the students have been increasingly recognised.

¹ European Commission, 2011

² Carayol, 2003

³ OECD, 2002

⁴ Bozeman & Boardman, 2013

⁵ Etzkowitz & Leydesdorff, 2000

⁶ Davey et al., 2011

⁷ *ibid*

⁸ Etzkowitz & Leydesdorff, 2000

⁹ *ibid*

Objective

The objective of this report is to evaluate the current status of UBC in Ireland and benchmark these outcomes against European HEIs. As a result of this analysis, the reader will have a clearer understanding of the extent of cooperation with business. Furthermore, the report aims to highlight the *Barriers* and *Drivers* preventing or motivating cooperation as well as the extent of development of mechanisms supporting UBC, in comparison with the European average.

Methodology

The survey

The survey was created during a project completed with the European Commission (EC) in a fifteen and a half month study on the cooperation between HEIs and public and private organisations in Europe. The main components of the project were in-depth qualitative interviews with 10 recognised industry experts as well as a major quantitative survey. The survey was translated into 22 languages and sent to all registered European HEIs (numbering over 3,000) in 33 countries during March 2011. Through this, a final sample of 6,280 academics and HEIs' representatives was achieved making the study the largest study into cooperation between HEIs and business yet completed in Europe.

Questions were posed to two groups within HEIs. These groups were asked about their perception of UBC:

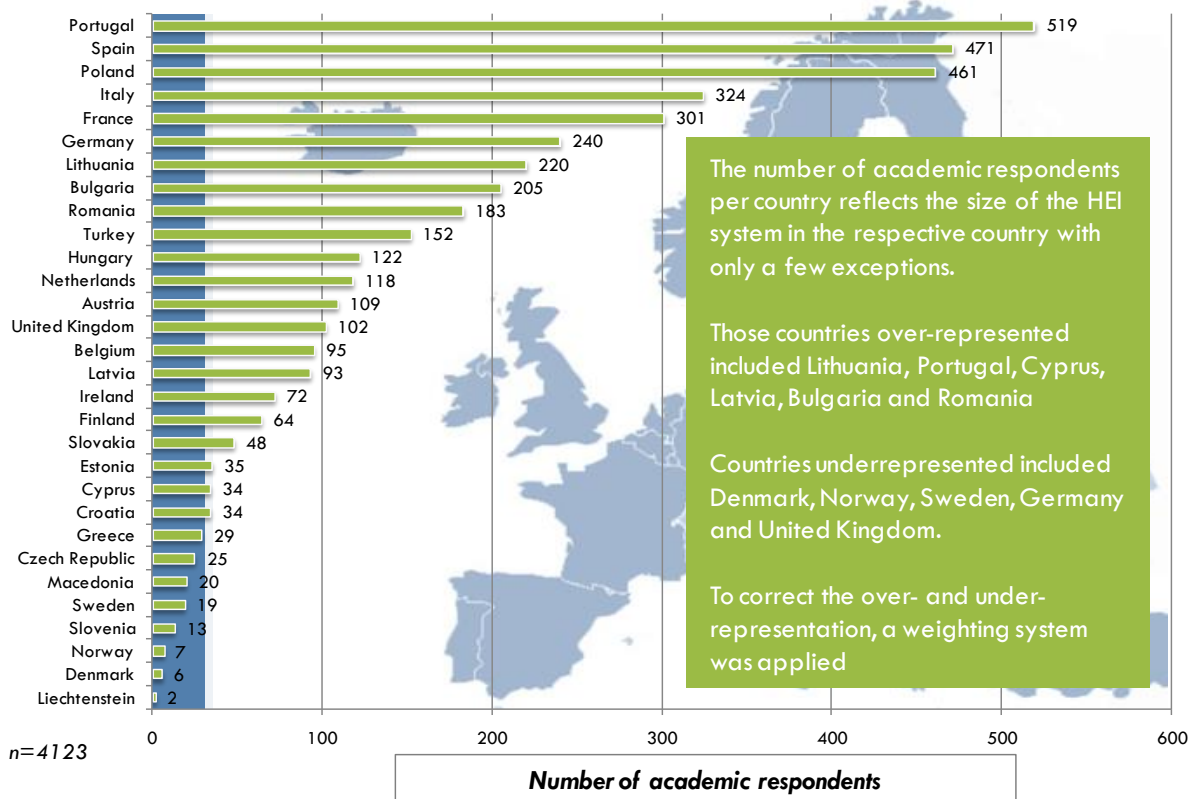
1. **Individual academics** were asked to respond on behalf of themselves
2. **HEI management** (HEI managers and university professionals working with industry) were asked to respond on behalf of their HEI.

	Focus	Responded on behalf of	Colour code for results
1	Academics	Indv. academics	Green
2	HEIs	HEI management and university professionals working with industry	Orange

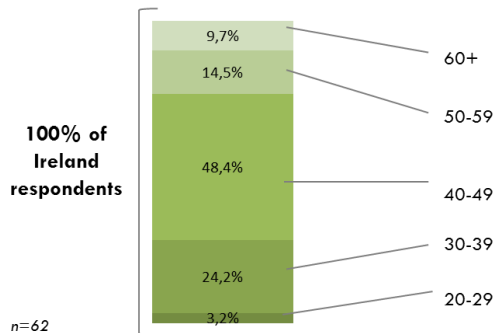
Colour codes have been used throughout the report to identify those results received from the academic (green) and those results received from the HEI (orange).

Respondents (academic)

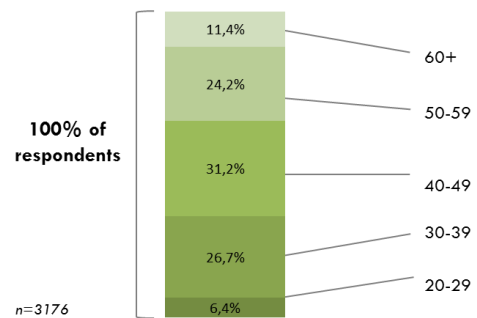
Country



Age of respondents in Ireland



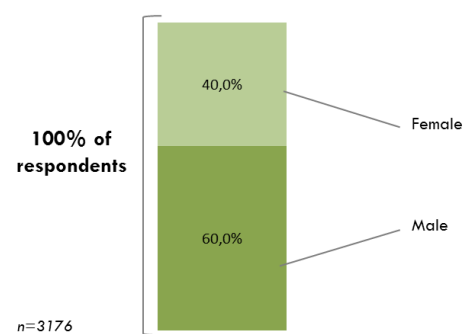
Age of respondents in Europe



Gender of respondents in Ireland

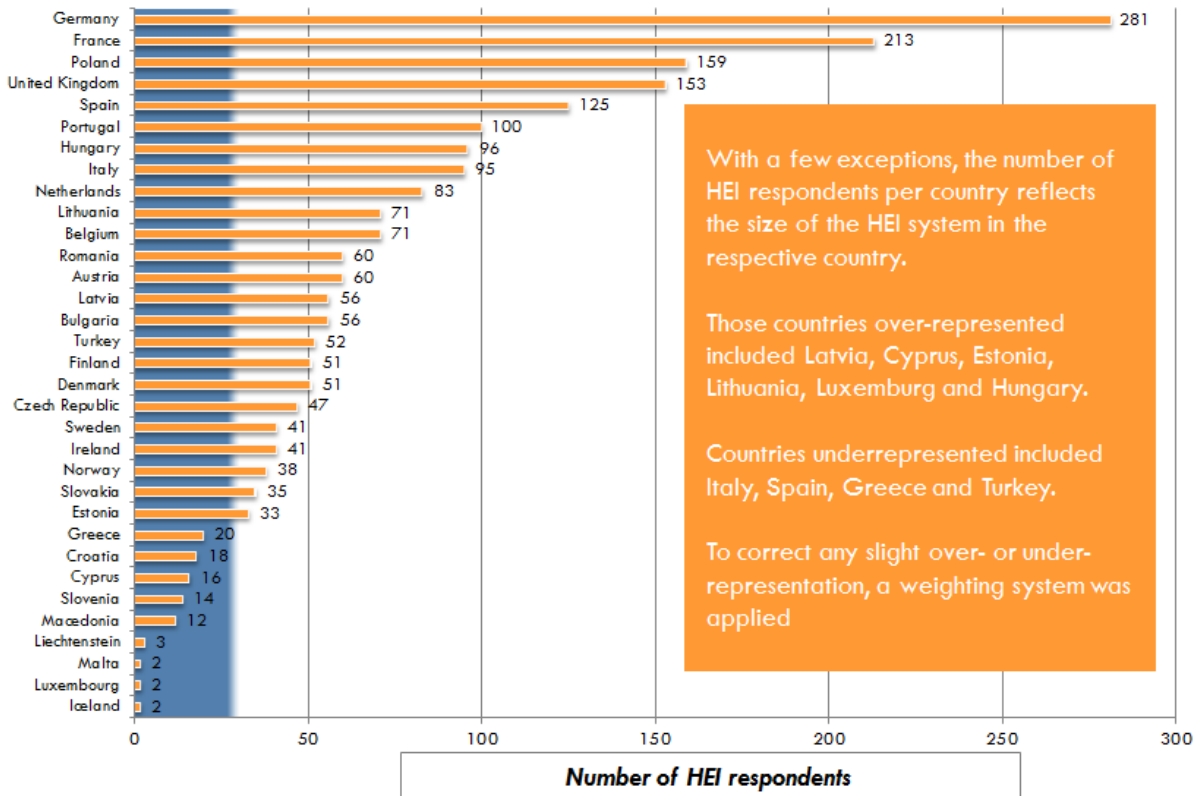


Gender of respondents in Europe

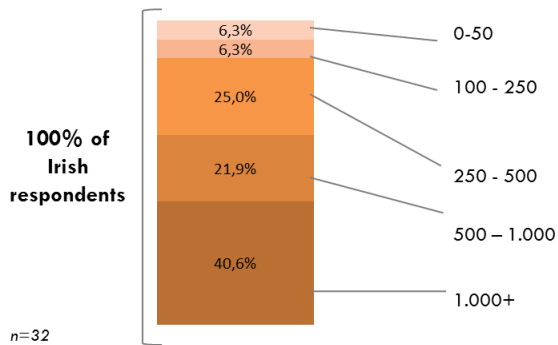


Respondents (HEIs)

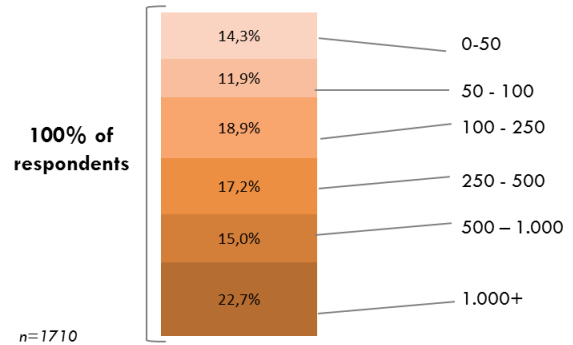
Country



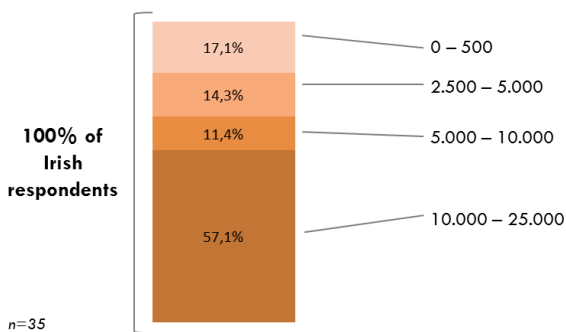
Size of HEI (no. of academics) in Ireland



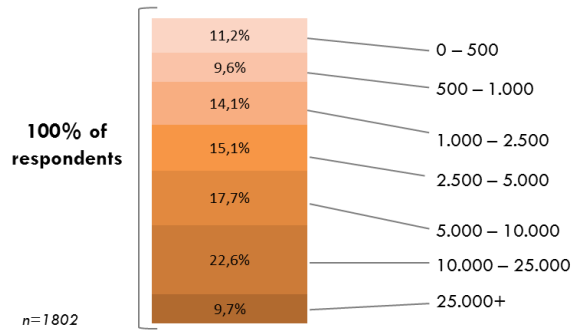
Size of HEI (no. of academics) in Europe



Size of HEI (no. of students) in Ireland



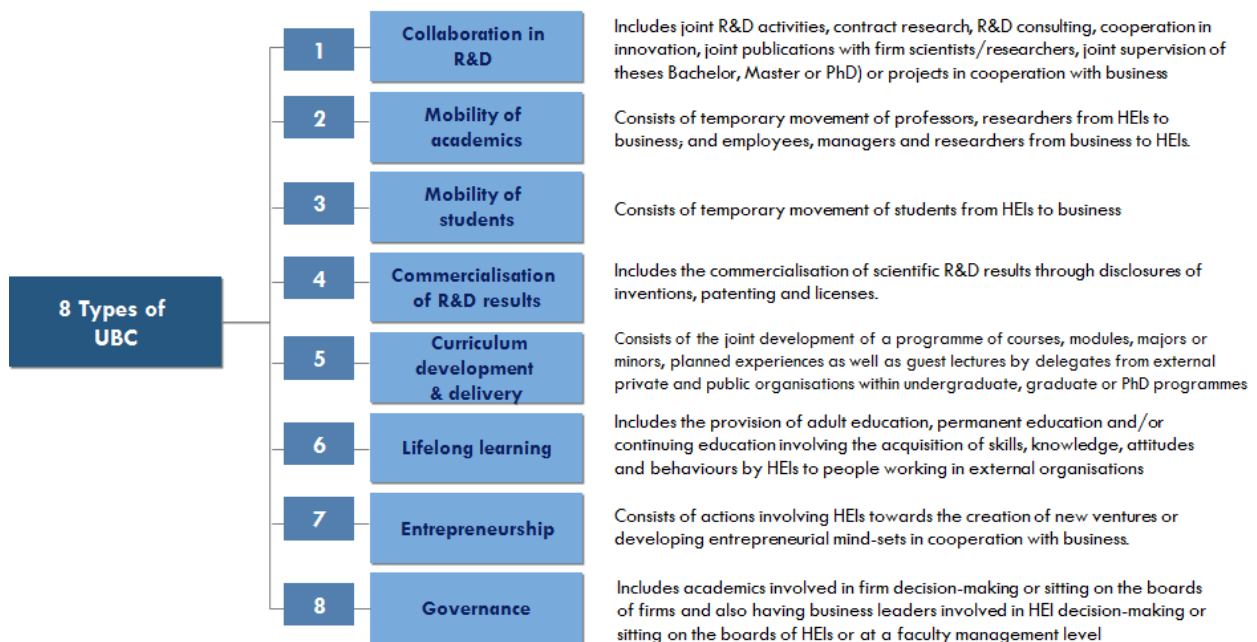
Size of HEI (no. of students) in Europe



Results

Extent of UBC

There have been eight types of cooperation recognised between university and business as found in the *State of European UBC Report* with the following descriptions:



3 clusters of HEI cooperation

In respect to cooperation with business, it was found that HEIs could also be categorised into 3 clusters:

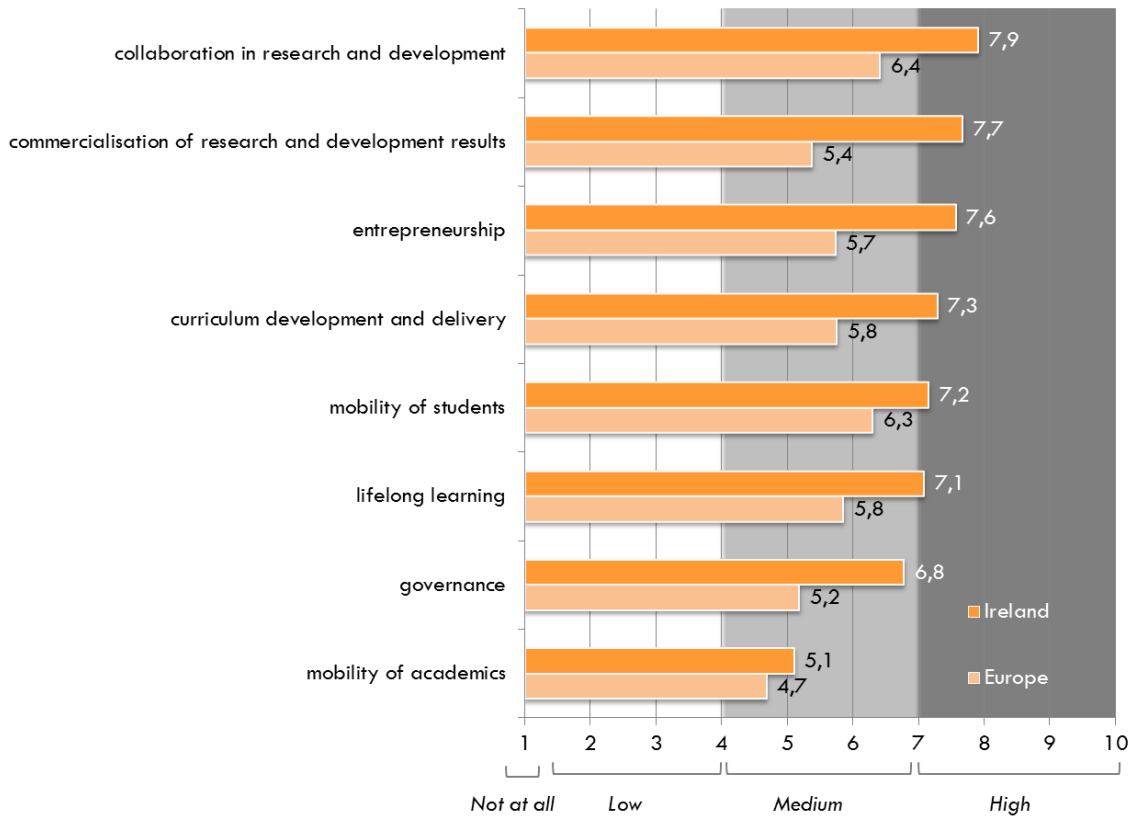
1. the 'innovators' undertaking a higher level for all types of UBC,
2. the 'majority' undertaking a medium level for all types of UBC,
3. the 'laggards' executing generally a low level (or not at all) for all types of UBC.

Relationship among cooperation types

The study identified that HEIs tend to cooperate at a similar level in all UBC types e.g. if they cooperate to a high extent with business in *Collaboration in R&D*, they cooperated to a similar extent for all the remaining types of UBC.

Extent of University-Business Cooperation in Ireland

As answered by HEI management



Extent of cooperation in Ireland

There is a high degree of diversity in the development of the different types of UBC in Ireland, with *Collaboration in R&D* (7.9), *Commercialisation of R&D results* (7.7) and *Entrepreneurship* (7.6) as the most developed types and *Mobility of academics* as the least developed one. Interestingly, in a separate test of academic UBC perceptions, Irish academics perceive themselves to be low in *Governance* and very low in *Academic mobility*, in fact the lowest in Europe. This large gap between the academics and managers perceptions shows a clear disconnection of the two groups and call for more communication.

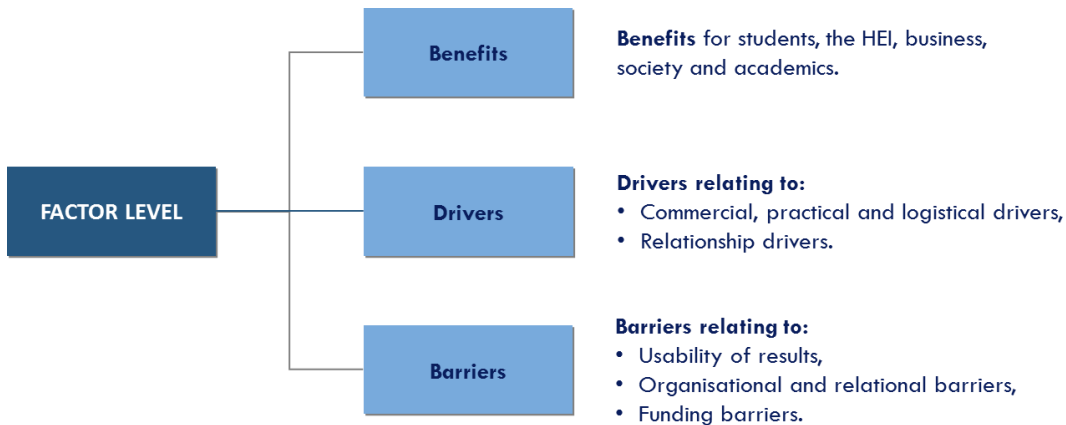
Benchmarking Ireland against the EU

According to the results, Ireland HEI management show a far higher extent of development of all UBC types in comparison to the European average. Based on these results, they certainly see themselves as the 'early adaptors' of Europe, although academics opinion is most modest. In comparison with the European average, the results for Ireland are as follows:

	Ireland	Europe
Highly developed	<ol style="list-style-type: none"> 1. Collaboration in R&D 2. Commercialisation of R&D results 3. Entrepreneurship 4. Curriculum development and delivery 5. Mobility of Students 6. Lifelong Learning 	
Moderately developed	<ol style="list-style-type: none"> 7. Governance 8. Mobility of Academics 	<ol style="list-style-type: none"> 1. Collaboration in R&D 2. Mobility of Students 3. Lifelong Learning 4. Curriculum development and delivery 5. Entrepreneurship 6. Commercialisation of R&D results 7. Governance 8. Mobility of Academics

Factors influencing the extent of UBC

The coming section will outline the extent to which a number of factors affect cooperation of HEIs with business in Ireland. The following factors have been found to significantly influence cooperation within the European context:



Relationship between barriers and drivers

A barrier provides a hindrance or obstacle to do something, while a driver provides the motivation to do that thing. More specifically, removing a barrier does not create UBC, rather it makes UBC possible. Instead it is the driver that means that an academic cooperate with business. As an example, even when the lack of funds is nominated as the highest barrier (obstacle), owing to the impossibility of cooperating without funds, the presence of funds may not be enough to cooperate if the 'relationship drivers' or perceived *benefits* (motivators) are not developed.

Benefits explained

Benefits are the perceived positive outcome (financial and non-financial) from undertaking UBC for the different stakeholders groups that can potentially participate in UBC. This perception can be a reason to increase or decrease their participation or the involvement of other groups. For example, if academics perceive their own benefits to be low, that might cause a low participation in UBC and if they perceive that *Benefits* for students are high, they might undertake actions that contribute to students' involvement in UBC.

Barriers hindering UBC in Ireland

Barriers are those obstacles that restrict or inhibit the ability of academics or HEIs to engage in UBC.

The following table explains the extent of relevance of *barriers* to UBC by academics (green) and HEIs (orange) in Ireland compared to the EU average. The *barriers* have been factored into 'meta-groups' in order to provide a more strategic understanding.

Barriers (grouped) to cooperation – Ireland vs Europe

As answered by academics and HEI management

Usability of results	Extent of relevance (1-10)		Extent of relevance (1-10)	
	Ireland		Europe	
	ACAD	HEI	ACAD	HEI
<ul style="list-style-type: none"> The focus on producing practical results by business, The need for business to have confidentiality of research results, Business fear that their knowledge will be disclosed. 	5.9	6.3	6.1	6.0

Funding barriers	Extent of relevance (1-10)		Extent of relevance (1-10)	
	Ireland		Europe	
	ACAD	HEI	ACAD	HEI
<ul style="list-style-type: none"> Lack of external funding for University-Business cooperation, Lack of financial resources of the business, Lack of HEI funding for UBC, The current financial crises. 	7.1	7.3	6.5	6.8

Relational barriers	Extent of relevance (1-10)		Extent of relevance (1-10)	
	Ireland		Europe	
	ACAD	HEI	ACAD	HEI
<ul style="list-style-type: none"> Business lack awareness of HEI research activities / offerings, The limited absorption capacity of SMEs to take on internships or projects, Differing time horizons between HEI and business, Differing motivation / values between HEI and business, Universities lack awareness of opportunities arising from UB-cooperation, Bureaucracy within or external to the HEI , Limited ability of business to absorb research findings, Differing mode of communication and language between HEI and business, A lack of contact people with scientific knowledge within business, Difficulty in finding the appropriate collaboration partner, No appropriate initial contact person within either the HEI or business. 	6.5	6.1	6.4	6.2

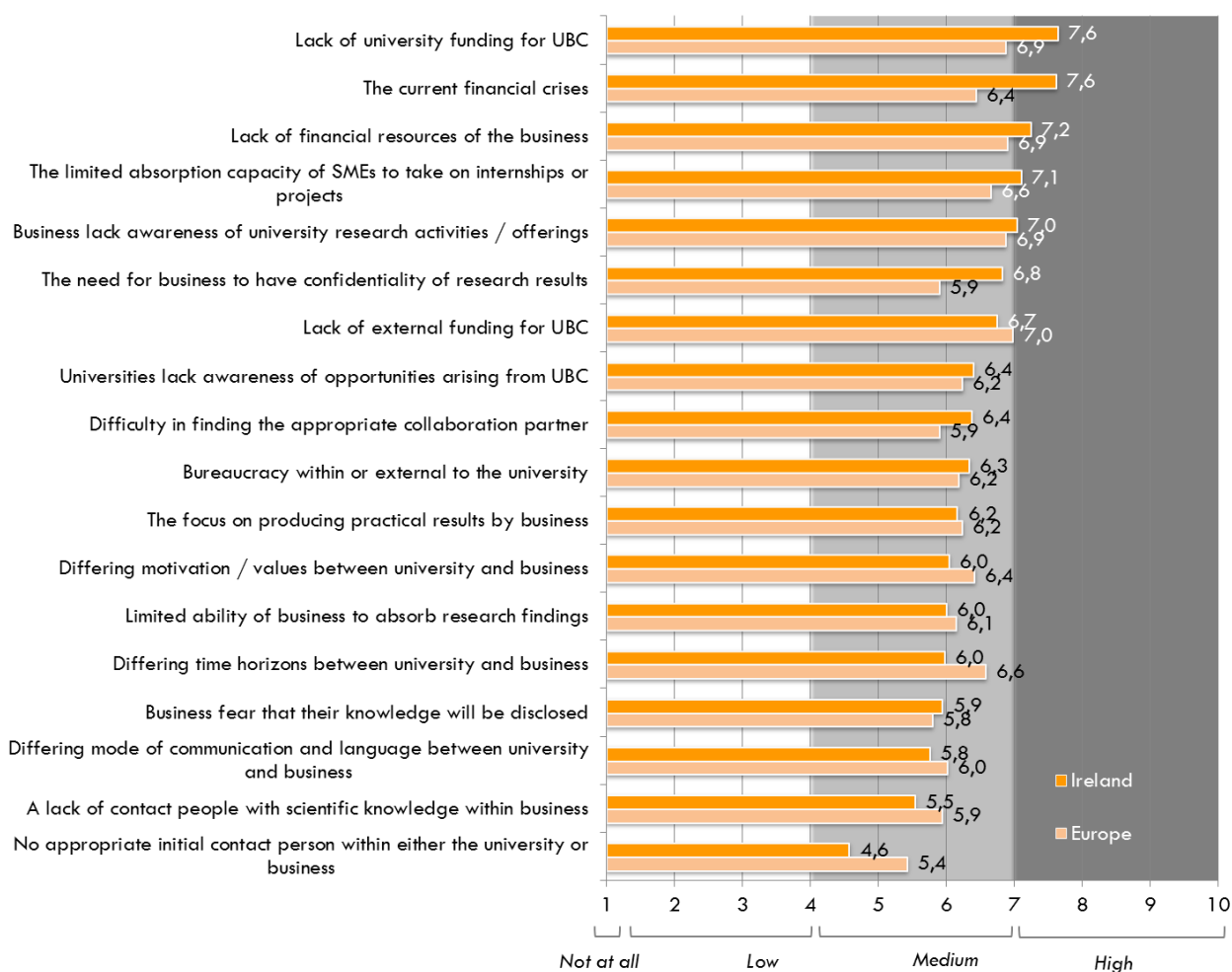
Three groups of UBC barriers

Resulting from a factor analysis of the results, *Barriers* can be categorised in the following groups:

1. usability of results,
2. funding barriers and
3. relational barriers.

Main barriers to cooperation – Ireland vs Europe

As answered by HEI management



The most prominent *barriers* named by Ireland HEI management are those related to the lack of funding between the HEI and business, including 'lack of university funding for UBC' (7.6), 'the current financial crisis' (7.6) and 'lack of financial resources of the business' (7.2). In comparison with the European average, in Ireland these funding barriers are seen as far more important *barriers*. This indicates the current financial crisis has a large influence on Irish HEIs and suggests a need for greater financial support for cooperation efforts in Ireland.

In respect to the '*relationship barriers*', whilst not seen as the main *barriers* and being below the European average, HEI management in Ireland have also recognised them significantly. Similarly, in both Ireland and Europe 'the limited absorption capacity of SMEs to take on internships or projects' (7.1 and 6.6) and 'business lack awareness of university research activities / offerings' (7.0 and 6.9) are perceived to be of high importance.

Although the perception of the *barriers* related to the '*usability of the results*' to cooperation in Ireland is rated by HEIs as moderate level (6.3), Irish academics

rated this factor as a slightly smaller barrier than their HEI management European counterparts (5.9 in Ireland compared with 6.1 in Europe).

In comparison to the EU average, Ireland HEI management perceive the *barriers* directly relating to accessibility such as 'a lack of contact people with scientific knowledge within business' (5.5 and 5.9); and 'no appropriate initial contact person within either the university or business' (4.6 and 5.4) of a lower importance than the EU average, showing the existence of many already established relationships.

Main barriers to UBC in Ireland

1. Lack of university funding for UBC
2. The financial crisis
3. Lack of financial resources of the business
4. The limit absorption capacity of SMEs to take on internships or projects
5. Business lack awareness of university research activities/offerings

Drivers stimulating UBC in Ireland

Drivers are those factors that encourage academics or HEIs to engage in UBC.

The following table explains the extent of relevance of *Drivers* of UBC by academics (green) and HEIs (orange) in Ireland compared to the EU average. The *Drivers* have been factored into 'meta-groups' in order to provide a more strategic understanding of UBC *Drivers*.

Two groups of UBC drivers

Resulting from a factor analysis of the results, *Drivers* can be categorised in the following groups:

1. *relationship drivers* and
2. *business drivers*.

Drivers (grouped) of cooperation – Ireland vs Europe

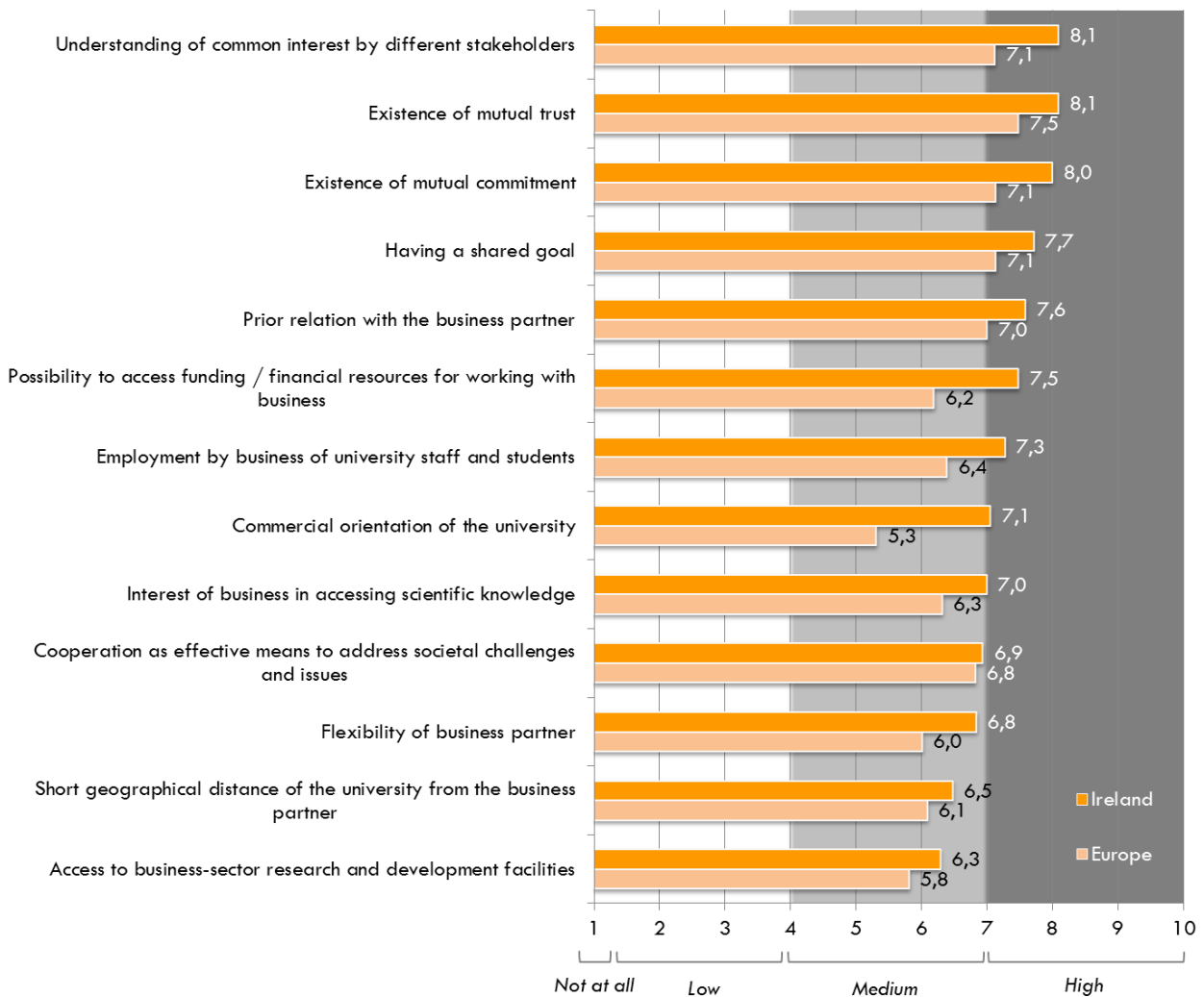
As answered by academics and HEI management

Relationship drivers	Extent of facilitation (1-10)		Extent of facilitation (1-10)	
	Ireland		Europe	
		ACAD	6.4	ACAD
<ul style="list-style-type: none"> • Existence of mutual trust, • Existence of mutual commitment, • Having a shared goal, • Understanding of common interest by different stakeholders (e.g. universities; business; individuals; students), • Prior relation with the business partner, • Cooperation as effective means to address societal challenges and issues. 	HEI	7.7	HEI	7.0

Business drivers	Extent of facilitation (1-10)		Extent of facilitation (1-10)	
	Ireland		Europe	
		ACAD	5.6	ACAD
<ul style="list-style-type: none"> • Employment by business of HEI staff and students, • Interest of business in accessing scientific knowledge, • Possibility to access funding / financial resources for working with business, • Short geographical distance of the HEI from the business partner • Flexibility of business partner, • Access to business-sector research and development facilities • Commercial orientation of the HEI. 	HEI	6.9	HEI	6.7

Main drivers of cooperation – Ireland vs Europe

As answered by HEI management



Similarly to Europe, the HEI managers in Ireland perceive the highest drivers of UBC to be *relationship drivers*, such as ‘understanding of common interest by different stakeholders’ (8.1), ‘existence of mutual trust’ (8.1), ‘existence of mutual commitment’ (8.0) and ‘having a shared goal’ (7.7). In general, Ireland HEI management perceive the *relationship drivers* to be of a high importance (7.7), while the academics rate these drivers considerably lower (6.4), showing again the disconnected evaluation of the two respondent groups surveyed.

The level of importance of the *relationship drivers* in Ireland, as assessed by both HEI management and academics, is higher than the European average. However, the *business drivers* in Ireland are considered as an equal level of importance as the European average, according to HEI management and academics’ perceptions (6.9 and 5.6 in Ireland compared to 6.7 and 5.6 in Europe).

Generally, the perceptions of all UBC drivers in Ireland are higher than the European average. This commonly higher recognition of drivers for UBC highlights the importance of UBC in the Irish HEI environment and is in line with the aforementioned higher development of all types of UBC in Ireland.

Main drivers of UBC in Ireland

1. Understanding of common interest by different stakeholders
2. Existence of mutual trust
3. Existence of mutual commitment
4. Having a shared goal
5. Prior relation with the business partner

Benefits of cooperation (academic perspective)

Benefits are the positive results that stakeholders perceive that they obtain from undertaking UBC.

The following table explains the extent of relevance of benefits of UBC by academics (green) in Ireland compared to the EU average. The benefits have been factored into 'meta-groups' in order to provide a more strategic understanding of UBC benefits.

Four groups of UBC benefits for academics

Resulting from a factor analysis of the results, Benefits for academics can be categorised in the following groups:

1. benefits for students,
2. benefits for business,
3. benefits for HEIs and
4. personal benefits for academics.

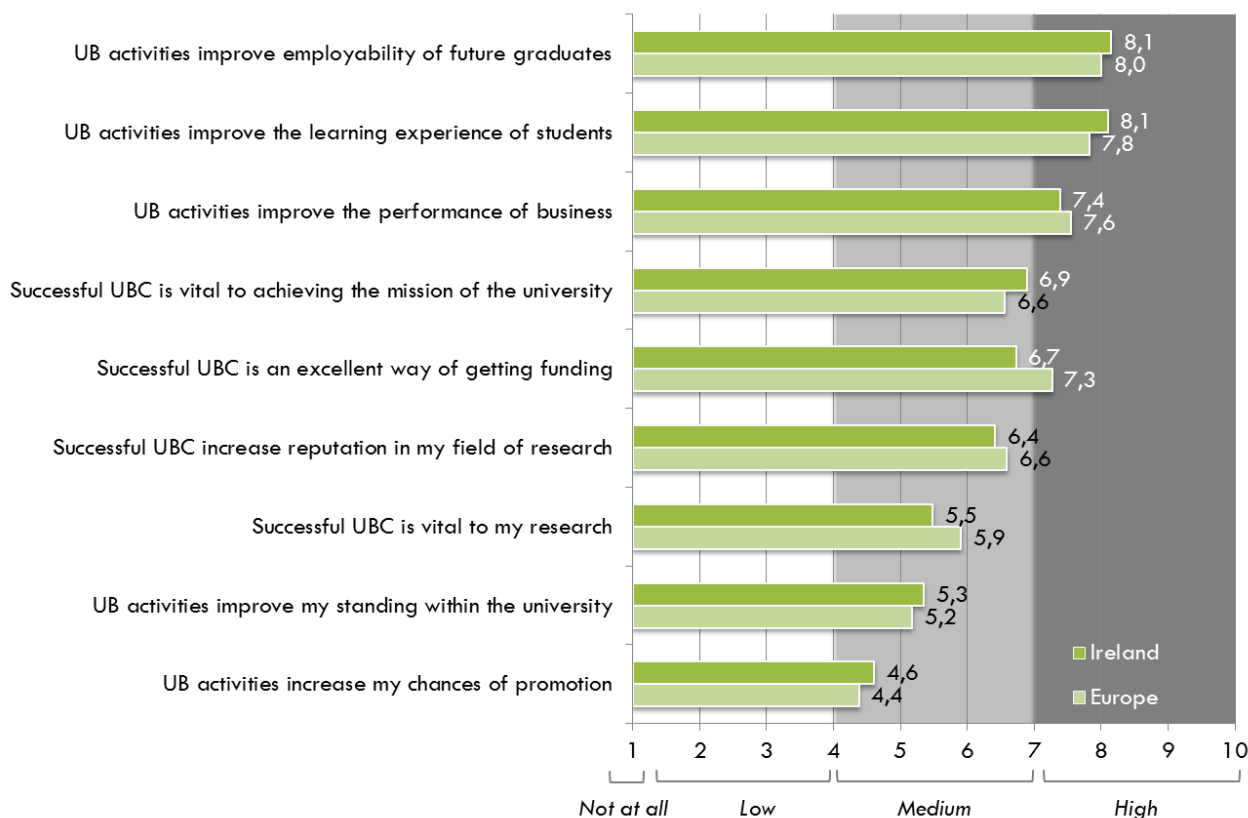
Benefits (grouped) from cooperation – Ireland vs Europe

As answered by academics

Benefits for students <ul style="list-style-type: none"> • UB activities improve employability of future graduates • UB activities improve the learning experience of students 	Extent of importance (1-10)		Extent of importance (1-10)	
	Ireland		Europe	
	ACAD	8.1	ACAD	7.9
Benefits for business <ul style="list-style-type: none"> • UB activities improve the performance of business 	Extent of importance (1-10)		Extent of importance (1-10)	
	Ireland		Europe	
	ACAD	7.4	ACAD	7.6
Benefits for HEIs <ul style="list-style-type: none"> • Successful UBC is vital to achieving the mission of the HEI 	Extent of importance (1-10)		Extent of importance (1-10)	
	Ireland		Europe	
	ACAD	6.9	ACAD	6.6
Benefits for academics <ul style="list-style-type: none"> • Successful UBC is an excellent way of getting funding • Successful UBC increases my reputation in my field of research • Successful UBC is vital to my research • UB activities improve my standing within the university • UBC activities increase my chances of promotion 	Extent of importance (1-10)		Extent of importance (1-10)	
	Ireland		Europe	
	ACAD	5.2	ACAD	5.9

Main benefits from cooperation – Ireland vs Europe

As answered by academics



Academics in Ireland nominate that the greatest Benefits from UBC are for students ('University-Business activities improve employability of future graduates' (8.1), 'University-Business activities improve the learning experience of students' (8.1)) then to business ('University-Business activities improve the performance of business' (7.4)), being both perceived as high. These are followed by *Benefits* for the HEI, as well as some personal *benefits*. Interestingly, whilst Irish academics recognise that 'UBC increases their standing in their university' and 'an excellent source of funding', they rate other personal benefits from UBC ('University-Business activities increase my chances of promotion') and also the contribution of UBC to their research ('successful UBC increase reputation in my field of research' and 'successful UBC is vital to my research') much lower.

In comparison with the European average, Irish academics see higher amount of benefits to the mission of HEIs and students and less benefits to business. However, Irish academics are much more negative in respect to the potential acquisition of funds through UBC and the importance of the role of UBC in their research. Similarly, Irish academics

perceive to a lower extent that UBC increases their reputation in their field of research. Overall, Irish academics perceive their own benefits from UBC to be of a lower extent in comparison to the European average, which can be a reason for not getting engage in cooperation with business.

Main benefits of UBC identified by Irish academics

1. University-Business activities improve employability of future graduates,
2. University-Business activities improve the learning experience of students,
3. University-Business activities improve the performance of business,
4. Successful UBC is vital to achieving the mission of the university,
5. Successful UBC is an excellent way of getting funding

Benefits of cooperation (HEI perspective)

Benefits are the positive results that stakeholders perceive that they obtain from undertaking UBC.

The following table explains the extent of relevance of perceived *Benefits* of UBC by HEI management (orange) in Ireland compared to the EU average. The *Benefits* have been factored into 'meta-groups' in order to provide a more strategic understanding of UBC *Benefits*.

Benefits (grouped) from cooperation – Ireland vs Europe

As answered by HEI management

Benefits for the HEI	Extent of importance (1-10)		Extent of importance (1-10)	
	Ireland		Europe	
	HEI	9.0	HEI	7.7
<ul style="list-style-type: none"> • UBC is vital to achieving the mission of the HEI. 				
Benefits for students	Extent of importance (1-10)		Extent of importance (1-10)	
	Ireland		Europe	
	HEI	9.3	HEI	8.5
<ul style="list-style-type: none"> • UBC increases skills and graduate development 				
Benefits for business and society	Extent of importance (1-10)		Extent of importance (1-10)	
	Ireland		Europe	
	HEI	8.6	HEI	7.3
<ul style="list-style-type: none"> • UBC has beneficial effects on the local industry • UBC improves regional productivity • UBC creates local employment • UBC increases local GDP and disposable income • UBC creates a range of beneficial social and recreational benefits 				

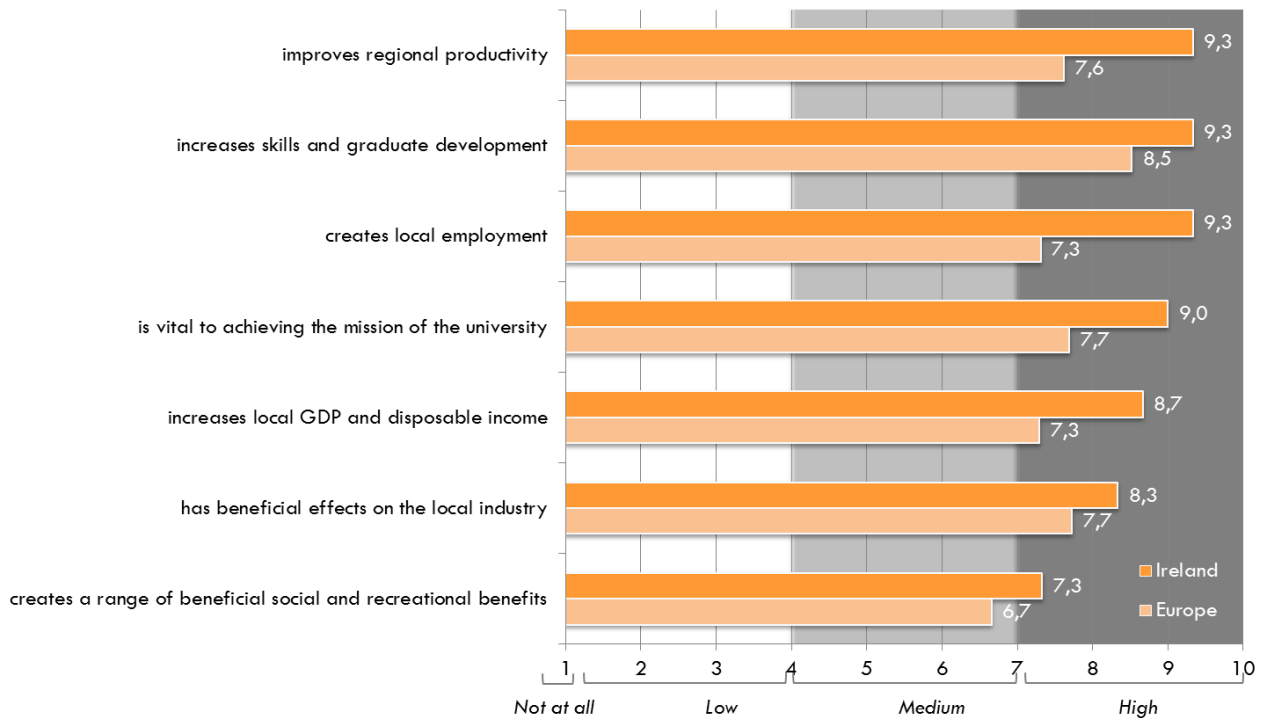
Three groups of UBC benefits for HEIs

Resulting from a factor analysis of the results, *Benefits* for HEIs can be categorised in the following groups:

1. *benefits for students,*
2. *benefits for business and society, and*
3. *benefits for HEIs.*

Main benefits from cooperation – Ireland vs Europe

As answered by HEI management



HEI management in Ireland perceive all *benefits* from UBC to be of a high importance (from 7 to 10) and in comparison with the European average, all of them are perceived to be higher. There are three *benefits* perceived to be equally important. One of the *benefits* is for students, with the increase of their skills and development, which also has the highest value for the rest of the European HEI management. At the same level is the improvement of the regional productivity, revealing a belief in the positive impact that UBC can have in the whole region. The third benefit is related with the creation of local employment, which is more related to the *benefits* for local businesses.

Below the three *benefits* aforementioned, the highest benefit is for the important role of UBC in the contribution to the HEI mission, showing how much HEI management perceive the *benefit* for their own institution.

Overall, Irish HEI management perceive all the *Benefits* from UBC to be of a higher importance in comparison to the European average.

Main benefits of UBC identified by Irish HEI management

1. UBC improves regional productivity
2. UBC increases skills and graduate development
3. UBC creates local employment
4. UBC is vital to achieving the mission of the university
5. UBC increases local GDP and disposable income

Benchmark

...universities in your region!

Assisting governments and universities to improve University-Business Cooperation

Using the State of European University-Business Cooperation (UBC) study results, decision makers, managers and practitioners involved in university-business cooperation can benefit from receiving:

1. a benchmark in terms of UBC of your organisation, institution, sector, region or country against others.
2. a clear picture of progress in efforts to increase university-business cooperation,
3. proactive areas of focus for increasing UBC,
4. the required information to advance university-business cooperation within their region or institution

Provided to your organisation in the form of a report and/or presentation, a state of the UBC report dedicated to your organisation can assist with developing greater financial and other benefits from UBC.



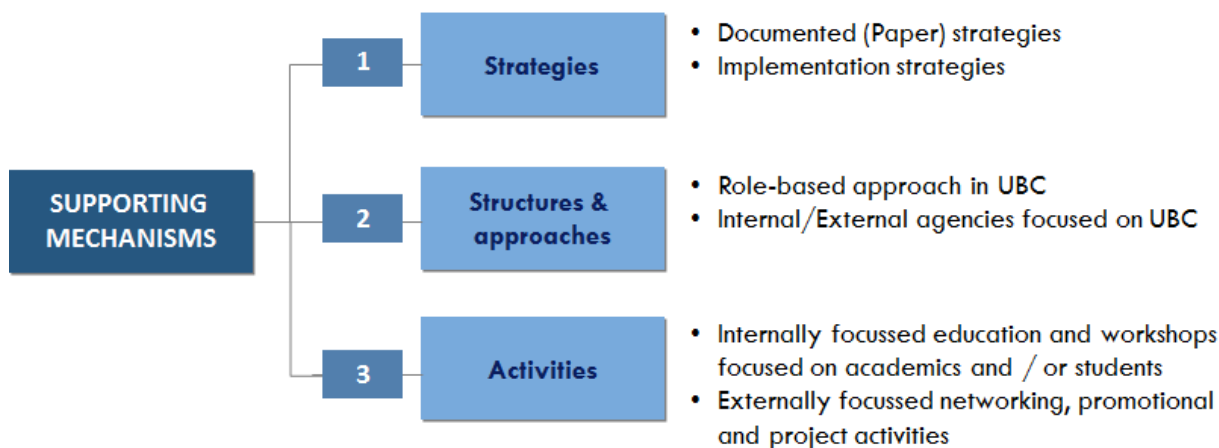
...your university!

Please contact davey@apprimo.com for more information.

Supporting mechanisms for UBC

Supporting mechanisms are interventions designed to support the development of cooperation between HEIs and business.

The coming section will outline the extent to which UBC *Supporting mechanisms* are developed in Ireland. The development of these mechanisms has been found to significantly influence cooperation within the European context.



Supporting mechanisms explained

The UBC *Supporting mechanisms* constitute the action-level, where all stakeholders need to focus their efforts when they want to influence the extent of UBC.

The specific role and importance of *supporting mechanisms* at HEIs has long been recognised in both practice and literature. They are often recognised in multiple ways including (i) in a variety of different names (e.g. interventions, enablers), (ii) captured in a model (e.g. ecosystem, regional innovation system) or (iii) known through their individual elements (e.g. activities, infrastructure).

A key finding of the *State of European UBC Report*¹⁰ was that the extent of development of the *Supporting mechanisms* was found to significantly affect the extent of general activity between HEIs and business. The nature of the *Supporting mechanisms* in terms of (i) responsibility, (ii) expense and (iii) time to impact are summarised in the table below.

	Primary responsibility for the mechanism	Secondary responsibility	Expense	Time to impact
Strategies	HEI management	All UBC stakeholders	Low	Long term
Structures and approaches	HEI / regional Govt. and agencies	Regional UBC stakeholders	Agencies: High Personnel: Med-high	Agencies: Long Personnel: Medium
Operational activities	Knowledge transfer Professionals	Regional UBC stakeholders	Medium	Short-medium term

¹⁰ Davey et al, 2011

Strategies for UBC in Ireland

Strategies are the drafting and implementation of cross-functional decisions by a HEI that will enable it to achieve its long-term objectives with respect to UBC.

The primary responsibility for the creation of UBC *strategies* is with HEI management as a strategic instrument is usually created by decisions made at a HEI board level.

Two groups of UBC strategies

Resulting from a factor analysis of the results, *Strategies* can be categorised in the following groups:

1. *Documented strategies*
2. *Implementation and motivation strategies*

Development of UBC Strategies (grouped) – Ireland vs Europe

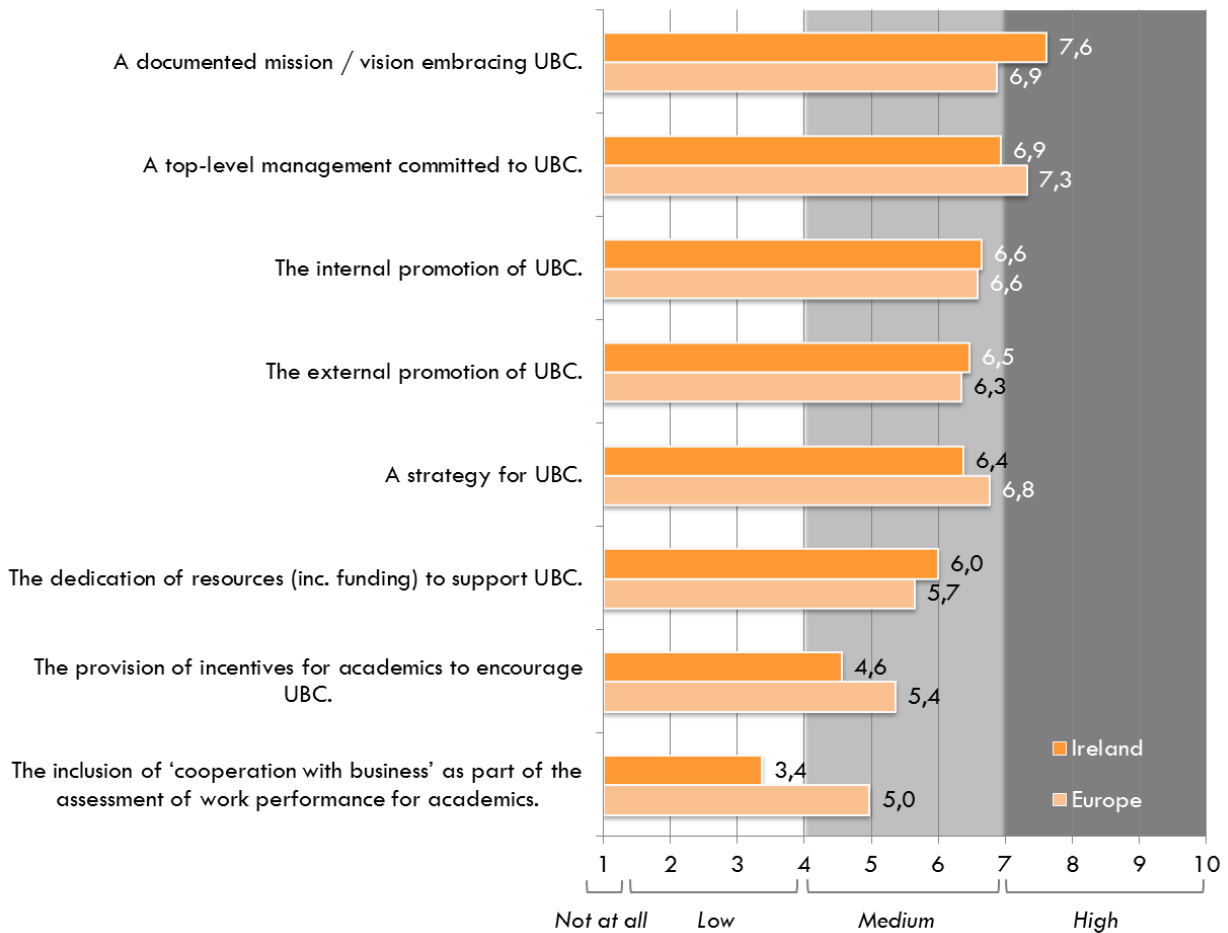
As answered by HEI management

Documented (Paper) strategies	Extent of development (1-10)		Extent of development (1-10)	
	Ireland		Europe	
	HEI	6.7	HEI	6.8
<ul style="list-style-type: none"> • A top-level management committed to University-Business cooperation, • A documented mission / vision embracing University-Business cooperation, • A strategy for University-Business cooperation, • The internal promotion of University-Business cooperation., • The external promotion of University-Business cooperation. 				

Implementation and motivation strategies	Extent of development (1-10)		Extent of development (1-10)	
	Ireland		Europe	
	HEI	4.8	HEI	5.4
<ul style="list-style-type: none"> • The dedication of resources (inc. funding) to support University-Business cooperation, • The provision of incentives for academics to encourage University-Business cooperation, • The inclusion of 'cooperation with business' as part of the assessment of work performance for academics. 				

Development of UBC strategies – Ireland vs Europe

As answered by HEI management



The *documented strategies supporting UBC* show a medium extent of development (6.7) with 'a documented mission / vision embracing UBC' (7.6), 'a top-level management committed to UBC' (6.9) and 'the internal promotion of UBC' (6.6) being rated the highest. Overall, the *documented strategies* in Ireland are of a similar extent of development in comparison with the European average.

In terms of *implementation strategies*, when compared with the European average, Ireland shows generally a lower level. 'The provision of incentives for academics to encourage UBC' and 'the inclusion of 'cooperation with business' as part of the assessment of work performance for academics' to be developed far lower (4.6 and 3.4) in Ireland than in Europe (5.4 and 5.0 respectively). Therefore, Ireland HEIs and government could further increase in cooperation with business, by creating incentives for academics to cooperate with business or include it in the measurement of their work performance.

Overall, the Irish HEIs show a similar extent of development of the *documented strategies*; however the *implementation strategies* are far lower developed

when compared with the European average. These results show an official recognition of the importance of UBC, but a lack of transformation of that commitment into actions and dedication of resources.

Highly developed	<ol style="list-style-type: none"> 1. A top-level management committed to UBC 2. A documented mission / vision embracing UBC 3. A strategy for UBC 4. The external promotion of UBC 5. The internal promotion of UBC 6. The dedication of resources (incl. funding) to support UBC
Moderately developed	<ol style="list-style-type: none"> 7. The provision of incentives for academics to encourage UBC 8. The inclusion of 'cooperation with business' as part of the assessment of work performance for academics

Structures and approaches for UBC in Ireland

UBC *Structures and approaches* are mechanisms created as a result of top-level strategic decisions within (or related to) a HEI. They are enablers of UBC and include the creation or development of positions or agencies put in place in order to promote, develop or implement UBC with a mid to long term focus. They can be created within the HEI or externally, as a bridge between the HEI and business. *Structures and approaches* usually involve significant investment and can be funded by the HEI, the government, business or a combination of these sources.

Two groups of UBC structures and approaches

Resulting from a factor analysis of the results, *Structures and approaches* can be categorised in the following groups:

1. *the creation and /or expansion of positions (personnel) and*
2. *agencies (units of focus).*

Development of UBC structures and approaches (grouped) – Ireland vs Europe

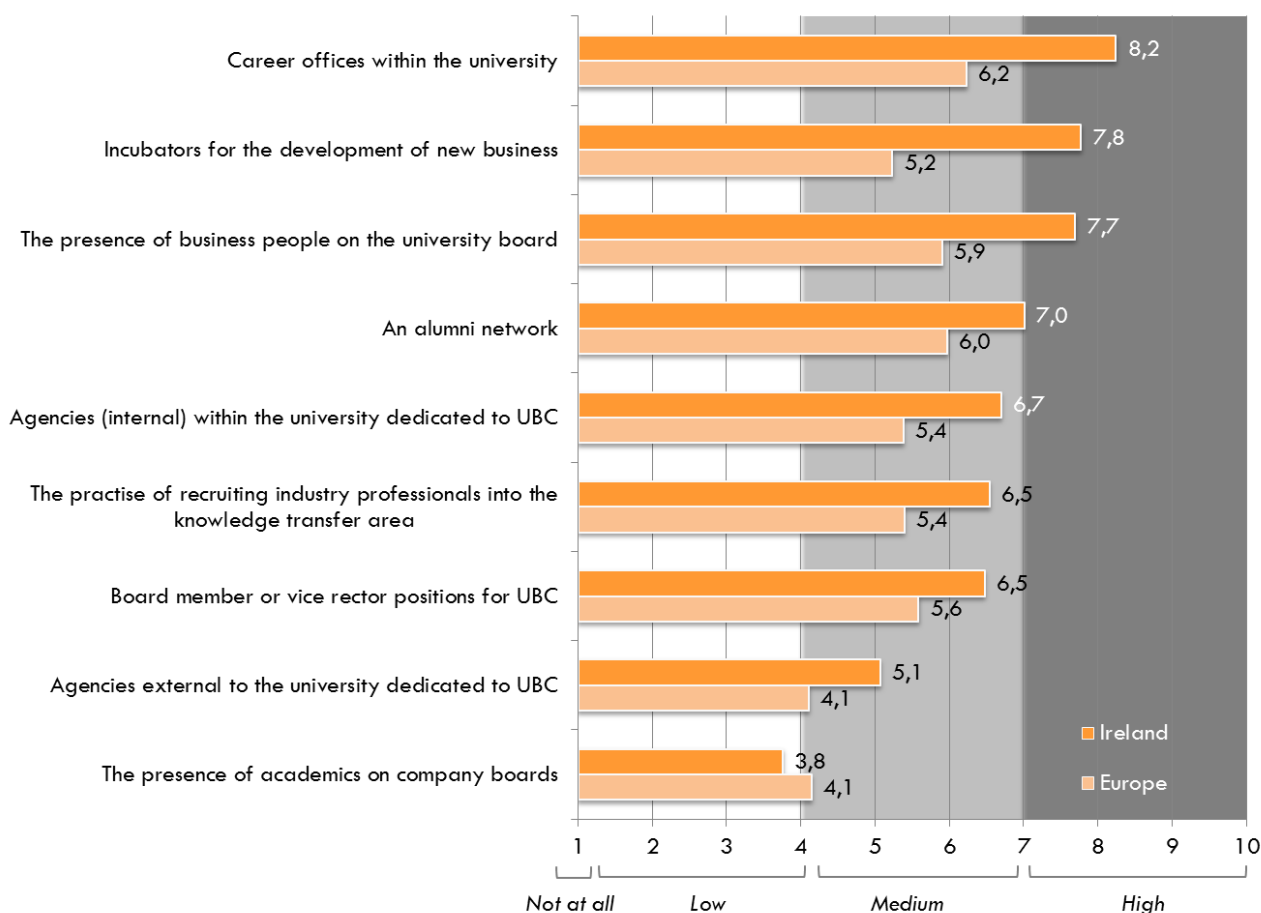
As answered by HEI management

Roles-based approaches in UBC	Extent of development (1-10)		Extent of development (1-10)	
	Ireland		Europe	
	HEI	6.3	HEI	5.4
<ul style="list-style-type: none"> • The presence of academics on company boards, • The presence of business people on the HEI board, • Board member or vice rector positions for UBC. • The practise of recruiting industry professionals into the knowledge transfer area., • An alumni network. 				

Internal/External agencies focused on UBC	Extent of development (1-10)		Extent of development (1-10)	
	Ireland		Europe	
	HEI	7.0	HEI	5.3
<ul style="list-style-type: none"> • Career offices within the HEI, • Agencies external to the HEI dedicated to UBC • Agencies (internal) within the HEI dedicated to UBC, • Incubators for the development of new business. 				

Development of UBC structures and approaches – Ireland vs Europe

As answered by HEI management



The extent of development of the *structures and approaches* for UBC in Ireland shows the devotion of Ireland HEIs to the support and development of UBC. While in Europe all the *structures and approaches* are developed at a medium level, in Ireland the development is more diversified, with almost half of the mechanisms developed at a high level and one of them developed at a low level. The *role-based approaches* in UBC are considerably more developed than the European average.

In comparison to the European average, the development of agencies within the HEI dedicated to UBC is significantly higher in Ireland. The internal focus on UBC in Irish HEIs is evident through the high development of 'career office within the university' (8.2), 'incubators for the development of new business' (7.8) and 'agencies (internal) within the university dedicated to UBC' (6.7). This indicates the long term financial commitment Ireland has made towards UBC.

With 'agencies external to the university dedicated to UBC' (5.1) and the presence of academics on company boards (3.8) as the lowest developed structures, the lack of focus on external structures supporting UBC is evident. The lowest developed

approach is related to governance, which is also the lowest developed type of UBC.

High developed	<ol style="list-style-type: none"> 1. Career offices within the university 2. Incubators for the development of new business 3. The presence of business people on the HEI board 4. An alumni network
Medium developed	<ol style="list-style-type: none"> 5. Agencies (internal) within the HEI dedicated to UBC 6. The practise of recruiting industry professionals into the knowledge transfer area 7. Board member or vice rector positions for UBC 8. Agencies external to the university dedicated to UBC 9. The presence of academics on company boards

Operational activities for UBC in Ireland

Operational activities are actions of a practical and immediate nature undertaken by actors within HEIs, governments, regional agencies and business to create and support UBC. *Operational activities* are usually the *Supporting mechanisms* that require the lowest financial investment and the lowest commitment and whose scope and volume can be more easily described, measured and managed.

Three groups of UBC operational activities

Resulting from an analysis of the results, *Operational activities* can be categorised in the following groups:

1. *Internally focused education and workshops focused on academics*
2. *Internally focused education and workshops focused on students*
3. *Externally focused networking, promotional and project activities*

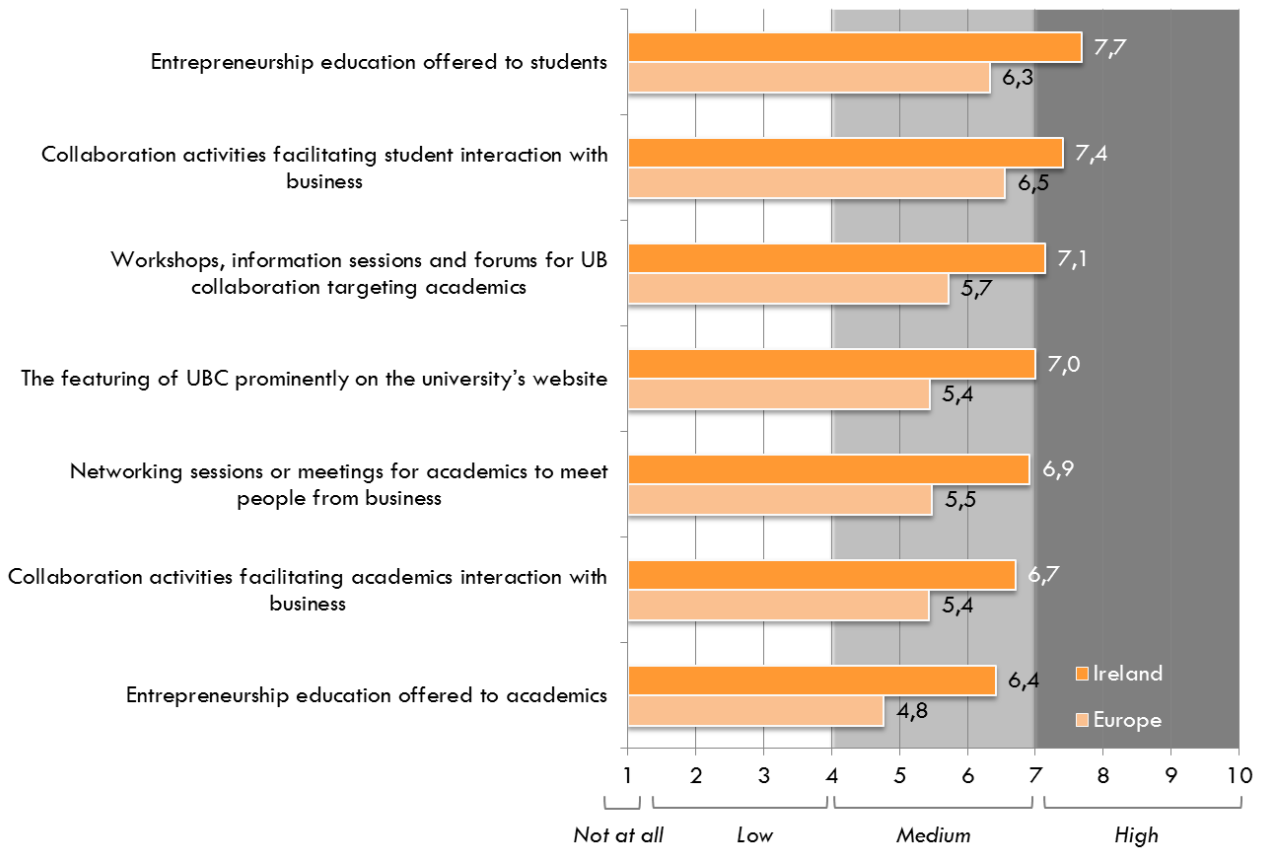
Development of UBC operational activities (grouped) – Ireland vs Europe

As answered by HEI management

Internally focused education and workshops focused on <u>academics</u> <ul style="list-style-type: none"> • Workshops, information sessions and forums for University-Business collaboration targeting academics, • Entrepreneurship education offered to academics. 	Extent of development (1-10)		Extent of development (1-10)	
	Ireland		Europe	
	HEI	6.7	HEI	5.3
Internally focused education and workshops focused on <u>students</u> <ul style="list-style-type: none"> • Entrepreneurship education offered to students. 	Extent of development (1-10)		Extent of development (1-10)	
	Ireland		Europe	
	HEI	7.7	HEI	6.3
Externally focused networking, promotional and project activities <ul style="list-style-type: none"> • Networking sessions or meetings for academics to meet people from business, • The featuring of University-Business cooperation prominently on the HEI's website, • Collaboration activities facilitating student interaction with business, • Collaboration activities facilitating academics interaction with business. 	Extent of development (1-10)		Extent of development (1-10)	
	Ireland		Europe	
	HEI	7.0	HEI	5.7

Development of UBC operational activities – Ireland vs Europe

As answered by HEI management



Regarding *operational activities*, the development of all the activities in Ireland is higher than the European average. In activities for students' interaction with business, Ireland is very well advanced with 'entrepreneurship education offered to students' (7.7) being highly developed in Irish HEIs. Contrary, the activities targeted at academics are of a far lower development than those activities targeted at students, being entrepreneurship education offered to academics the least developed activity.

Irish HEIs also show a higher extent of development in respect to the activities focussed on external stakeholders ('featuring of UBC prominently on the university's website', 'networking sessions or meetings for academics to meet people from business', 'collaboration activities facilitating academic interaction with business' and 'collaboration activities facilitating student interaction with business'), being the external activities towards students and business more developed than the activities of academics and business.

Highly developed	<ol style="list-style-type: none"> 1. Entrepreneurship education offered to students 2. Collaboration activities facilitating student interaction with business 3. Workshops, information sessions and forums for UBC targeting academics 4. The featuring of UBC prominently on the university's website
Moderately developed	<ol style="list-style-type: none"> 5. Networking sessions or meetings for academics to meet people from business 6. Collaboration activities facilitating academic interaction with business 7. Entrepreneurship education offered to academics

The UBC Ecosystem

The UBC ecosystem is a model for understanding the important elements affecting University-Business Cooperation (UBC)

Model created by

Todd Davey, Victoria Galan-Muros, Arno Meerman.

Model validation partners

Science-to-Business Marketing Research Centre, UIIN, apprimo UG

Co-created by

105 practitioners validating the model in their work.

The model relationships have been scientifically validated by the Science-to-Business Marketing Research Centre

1 Indirect outcome (society)

2 Direct outcome (actors)

3 University-Business Cooperation (UBC) types

4 Influencing factors

5 Supporting mechanisms

6 Key stakeholders

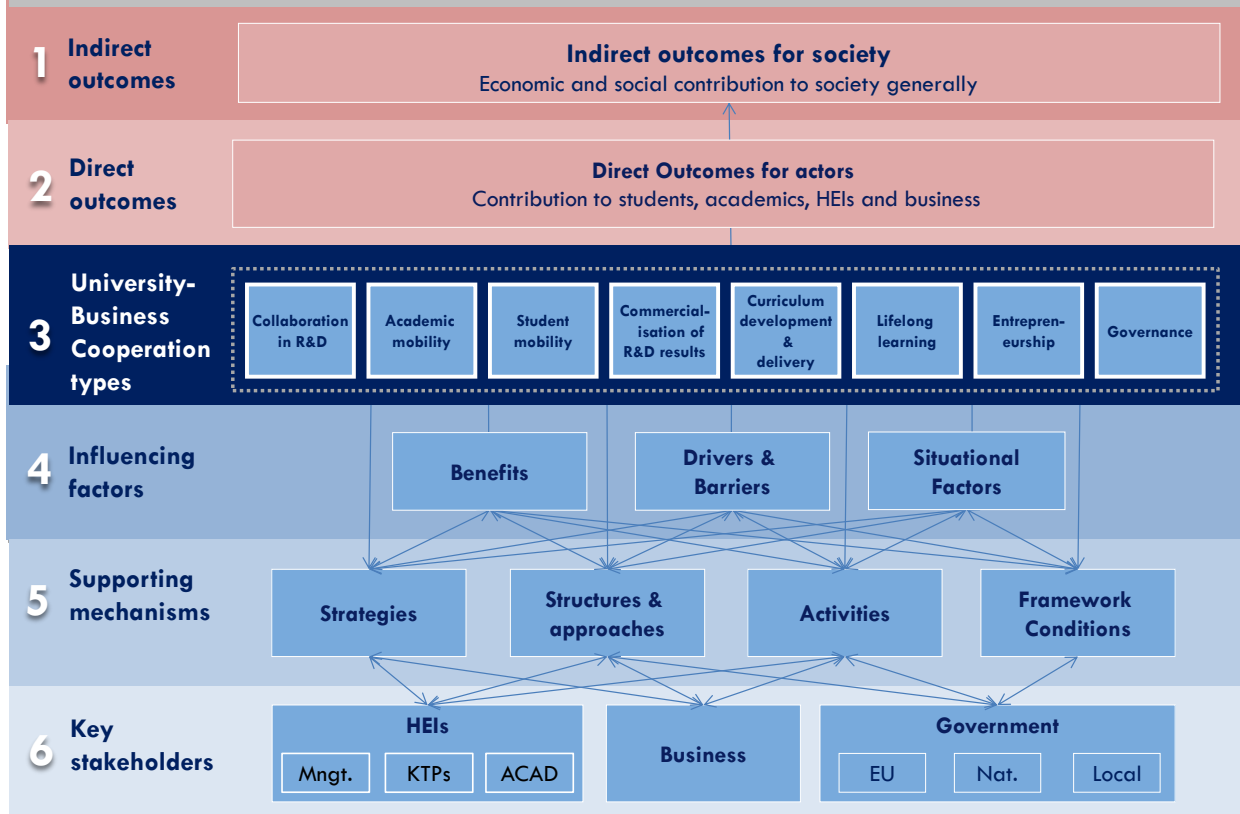
Are you...?

- ...attempting to develop UBC within your organisation?
- ...repetitively thinking about the factors affecting cooperation between university and business as well as their how they relate to each other?
- ...trying to foster open innovation involving universities?
- ...continually confronted with the challenge of creating better relationships between HEIs and business?
- ...a revolutionary trying to match researchers with business partners?

... if you answered 'yes' to any of these questions, you are not alone: this model was developed by people like you for these reasons



UBC ECOSYSTEM MODEL > Detailed



6 Ecosystem Elements (and their key findings)

1. UBC is vital in the creation of a knowledge society
2. UBC provides direct outcomes for students, HEIs, academics and businesses
3. Those UBC types with more direct, measurable, and promotable benefits are the most developed (e.g. collaboration in R&D, mobility of students)
- 4a. *Situational factors* (e.g. age, faculty) help to explain UBC but there is little that can be implemented from these results
- 4b. Lack of funding and excess of bureaucracy at all levels (HEI, national, European) are the highest *barriers* to UBC
- 4c. Personal relationships drive UBC. It's a people game!
- 4d. Perceptions of high personal benefits and incentives are motivators of UBC
5. The creation and development of *supporting mechanisms* (especially those with the highest impact) are critical for UBC
6. In the UBC ecosystem, the multiple actors need to work cooperatively and in a coordinated manner

UBC ECOSYSTEM Layers explained		All aspects are measurable (benchmarking)
1	Indirect Impact	Impact level How it impacts society
2	Direct outcomes	Outcome level How it affects stakeholders
3	University-Business Cooperation types	Result level What occurs
4	Influencing factors	Factor level What you have to consider
5	Supporting mechanisms	Action level What you can do
6	Key stakeholders	Stakeholder level

Please go to <http://ub-cooperation.eu/pdf/UBCECO.pdf> for more information or contact davey@aprimo.com.

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