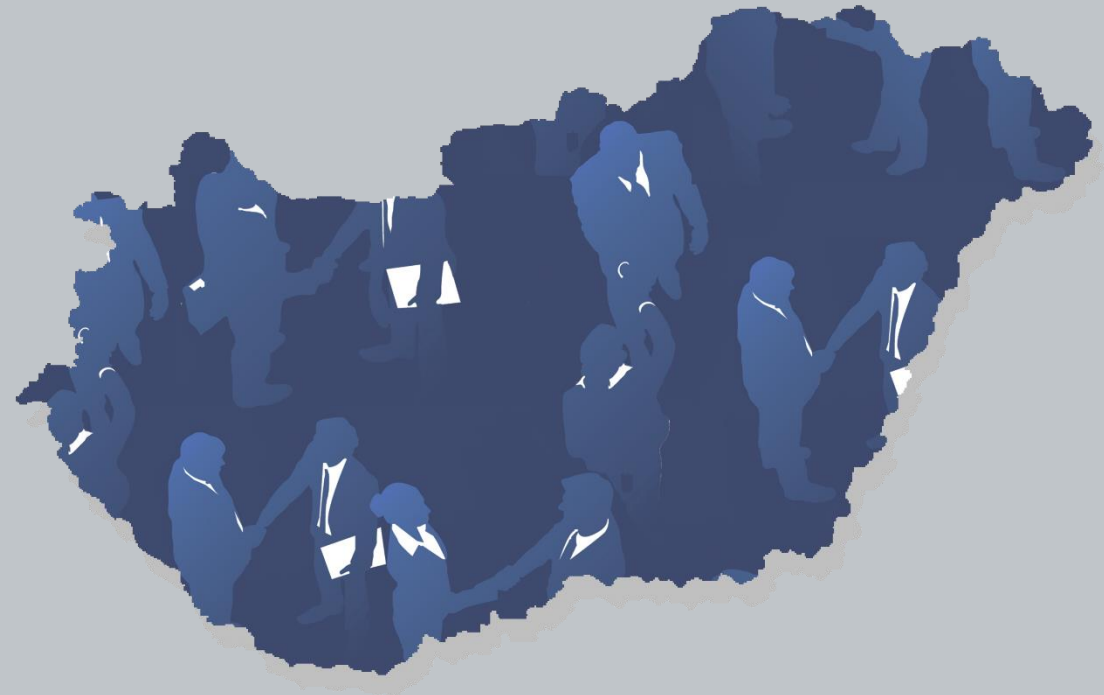


State of University- Business Cooperation HUNGARY

Business Perspective

Study on the cooperation between
higher education institutions and
public and private organisations



The State of Hungarian University-Business Cooperation: the business perspective

Partners



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Executive summary

Summary

This report aims at contributing to our understanding of the business perspective on university-business cooperation (UBC) in Hungary. Having examined the perceptions of a wide range of businesses provides us with positive signs for the future, with 100% of businesses that cooperate with higher education institutions (HEIs) planning to maintain or increase their cooperation in the future. Yet, more can be done, for example in supporting companies with the development mechanisms and activities that can foster their cooperation with universities, as well as in developing (actual and perceived) capabilities, particularly of those businesses not currently engaged in UBC.

About the study

The results presented in this report reflect the perceptions of business representatives in Hungary with respect to UBC. Data was collected by means of an online survey sent out via email to a business database that was developed from publicly available information, leading to a total of 42 responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

University-Business Cooperation

Hungarian businesses mostly engage in joint R&D (6.1) and mobility of students (5.3). All other

activities are considerably less developed. With more than 40% of businesses in Hungary not undertaking any valorisation and management activities. Particularly low is however the development of academic and student entrepreneurship with almost 65% of Hungarian businesses not being involved in these activities at all.

Just like academics who perceive themselves as the main actors reaching out for collaboration, Hungarian businesses see themselves as the most proactive initiators of UBC. On the contrary, Hungarian business representatives perceive external intermediaries and university alumni as those stakeholders that less often initiate UBC.

It's them, not us

Hungarian business are considerably hindered by the limited funding from government for cooperating with universities. Further primary barriers identified by business respondents relate to well recognised cultural differences between businesses and HEIs, such as differing motivations and differing time horizons.

Moreover, Hungarian businesses point towards the universities, including the universities' orientation on producing scientific outputs and their high level of bureaucracy.

NOTE: This report provides a business perspective on university-business cooperation (UBC), drawing on a survey of European higher education institutions, academics and businesses. While acknowledging limitations relating to the generalisability of the results due to the non-random nature of the sample, the results provide positive signs both of the present and for the future, while also providing an indication as to areas that require future development.

Relationships matter

While funding to undertake cooperation emerges as one of the top five facilitators, relationship related factors are much more prominent. Similar to their HEI counterparts, Hungarian businesses highlight the importance of a shared goal, mutual trust, prior relationship with the university partner and mutual commitment. These results indicate that any effort towards enabling business cooperation with universities should focus on the development of trustful relationships, potentially through networking events and other opportunities to build mutually beneficial relationships.

Less benefits for us

Hungarian business see much less benefits from UBC for themselves than for university stakeholders, including students, academics and institutions. But what motivates them to cooperate with universities? The main motivators for Hungarian businesses to undertake UBC are related to the access to qualified graduates, new technologies and knowledge as well as innovations. This aligns with the results reporting student mobility and joint R&D as the most developed UBC activities, with the first being an excellent way to get early-access to future graduates. Crucial here is the acknowledgement of different but not mutually exclusive benefits for HEIs, academics and business. With the first mainly wanting to contribute to society and their missions (research & education), and the latter intending to gain access to the outcomes of these.

Lack of supporting mechanisms

Although almost half of Hungarian business respondents report that their companies' top-management is committed towards UBC, there is less developed documented strategy for collaboration with universities. Another highly developed mechanism, also reported by nearly half of Hungarian businesses, is the one related to presentations, lectures or mentoring within university (48%). Overall, dedicated structures or activities are less commonly adopted by the businesses represented in the sample.

Not our responsibility

Hungarian businesses have a positive view of their abilities in undertaking cooperation. In particular, they state they know what universities generally want from the collaboration. They furthermore identified their strengths in the ability to absorb the knowledge and technology coming from HEIs.

Yet, although claiming to be the initiator of UBC, Hungarian businesses find themselves least inclined towards taking the responsibility to collaborate with universities in both education and research.

Introduction

About the study

The study focuses on the cooperation between higher education institutions (HEIs) and public and private organisations in the 28 European Union Member States and 5 associated countries.

The State of European university-business cooperation (UBC) study is executed for the DG Education and Culture at the European Commission (EAC/10/2015) by a consortium led by the Science-to-Business Marketing Research Centre (S2BMRC), in Germany from January 2016 until November 2017.

The aim of the study is to get a more profound, comprehensive and up to date understanding of the state of UBC in Europe: what is the state of play of a wide range of UBC activities in the different countries, what are the main drivers and barriers for the different stakeholders and at what levels; what is the regulatory framework and socio-economic conditions and what kind of measures/initiatives exist on a national level to support the development of UBC. The project investigates UBC from the perspective of both university and business.

Main activities

The main components of the project were a series of expert interviews with 23 recognised UBC experts, 52 good practice case studies, a UBC policy and indicators review as well as a major quantitative survey of stakeholders within both HEIs and business. The survey was translated into 25 languages and sent to all registered European HEIs (numbering over 3,000) in the 33 countries during

October-November 2016. Through this, a final sample of 17,410 representatives from within HEIs and business was achieved. This makes the study the largest international study into cooperation between HEIs and business yet completed.

Why care about university-business cooperation?

- UBC is considered to be the engine towards knowledge-based societies and economies
- UBC is specially needed in the European context, threatened by increased global competition, with ongoing economic and social problems and high levels of youth unemployment
- UBC helps to create a more connected and functioning relationship between government, business and HEIs, which is at the core of EU funding schemes, such as Horizon 2020 and Erasmus+.
- UBC direct outcomes include:
 - improving the competitiveness of business,
 - increasing the relevance and innovativeness of research and teaching in HEIs,
 - improving the future job prospects of students and graduates,which can in the longer term:
 - create jobs,
 - stimulate economic growth,
 - increase living standards,
 - reduce hindrances to good living.

Study Objectives

The specific objectives for the study are:

- Chart the current state of play and provide an in-depth analysis of UBC in the countries covered by this study, from the HE and business perspectives;
- Deliver 50 case studies of UBC (representative sample, balanced distribution among countries and organisations, balanced distribution of HEI and business led cases);
- Review indicators measuring UBC and propose possible scenarios for the implementations of UBC monitoring in Europe;
- Provide policy conclusions and recommendations for the furthering of UBC and the best approaches to take.



UNIVERSITY-BUSINESS
COOPERATION IN EUROPE

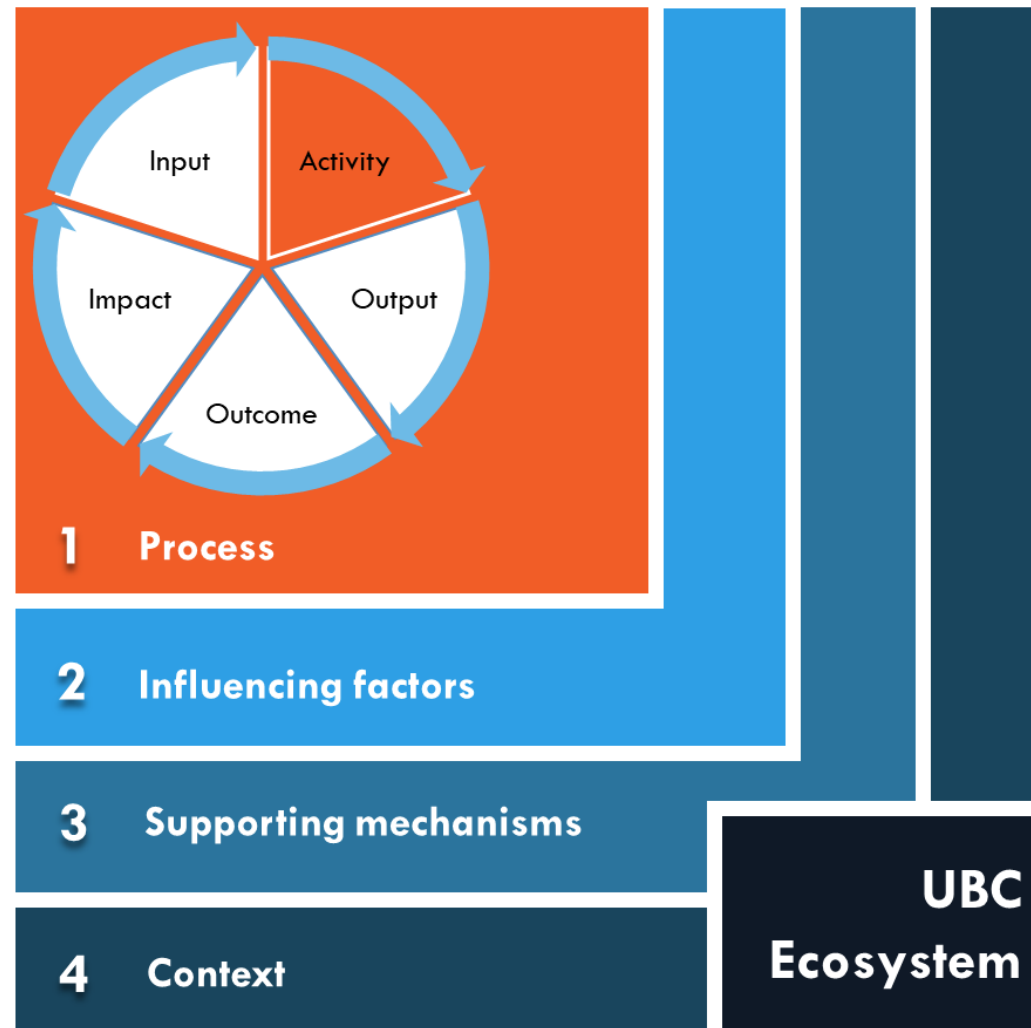
UBC activities

UBC Ecosystem Framework™

In order to best organise the project results, a project conceptual framework was chosen.

The UBC Ecosystem Framework possess a number of interrelated elements including the process of undertaking UBC, factors that are influencing UBC, mechanisms supporting UBC and finally the context in which UBC occurs.

The framework ties together the respective project activities, providing a common thread for reporting results and making recommendations.



Source: Galán-Muros, V.; Davey, T. (2017) *The UBC Ecosystem: Putting together a comprehensive framework for university-business cooperation*. *Journal of Technology Transfer*. <https://doi.org/10.1007/s10961-017-9562-3>

UBC activities

Fourteen UBC activities are recognised, commonly categorised into the areas of education, research, valorisation and management.

Area	Activities
Education	<ol style="list-style-type: none">1. curriculum co-<u>design</u>2. curriculum co-<u>delivery</u> (e.g. guest lectures)3. mobility of students (i.e. student internships/placements)4. dual education programmes (i.e. part theory, part practical)5. lifelong learning for people from business (e.g. executive education, industry training and professional courses)
Research	<ol style="list-style-type: none">6. joint R&D (incl. joint funded research)7. consulting to business (incl. contract research)8. mobility of professionals (i.e. temporary mobility of academics to business and vice versa)
Valorisation	<ol style="list-style-type: none">9. commercialisation of R&D results (e.g. licencing/patenting)10. academic entrepreneurship (e.g. spin offs)11. student entrepreneurship (e.g. start-ups)
Management	<ol style="list-style-type: none">12. governance (e.g. participation of academics on business boards and business people participation in university board)13. shared resources (e.g. infrastructure, personnel, equipment)14. industry support (e.g. endowments, sponsorship and scholarships)

Development of UBC activities

Hungarian businesses mostly engage in collaboration in R&D (6.1) and mobility of students (5.3) with less than 20% of businesses not participating in these activities. Generally universities are perceived by the Hungarian businesses mostly as institutions producing young workforce and scientists. That is the reason why these two particular activities are undertaken to a high extent.

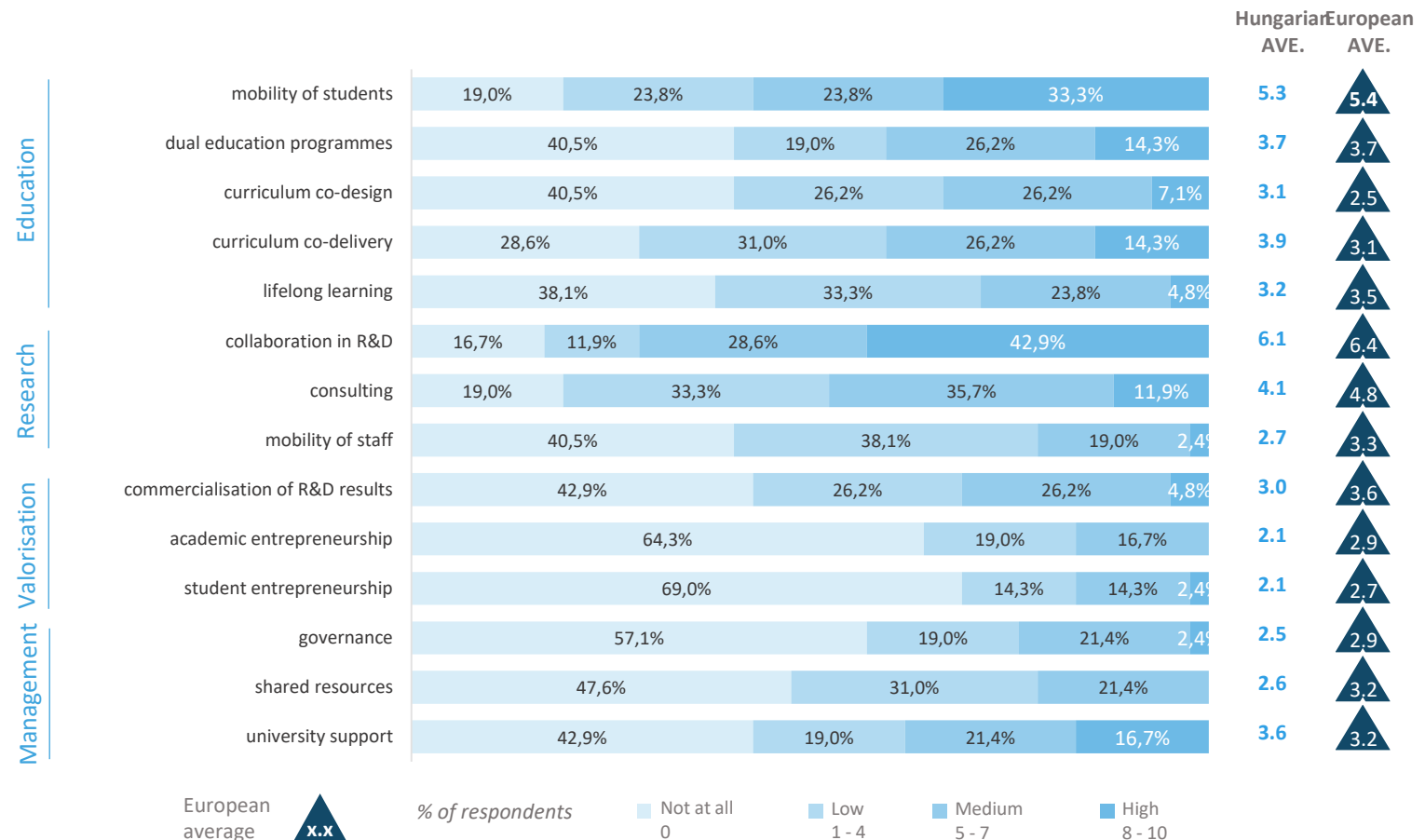
Over 40% of businesses do not undertake any valorisation and management activities.

Particularly low is the development of academic and student entrepreneurship with almost 65% of businesses not undertaking these activities at all. This indicates that academia and entrepreneurship are considered by businesses in Hungary as two totally different fields.

In comparison with the overall European UBC development for business, the Hungarian extent is similar.

UBC activities development

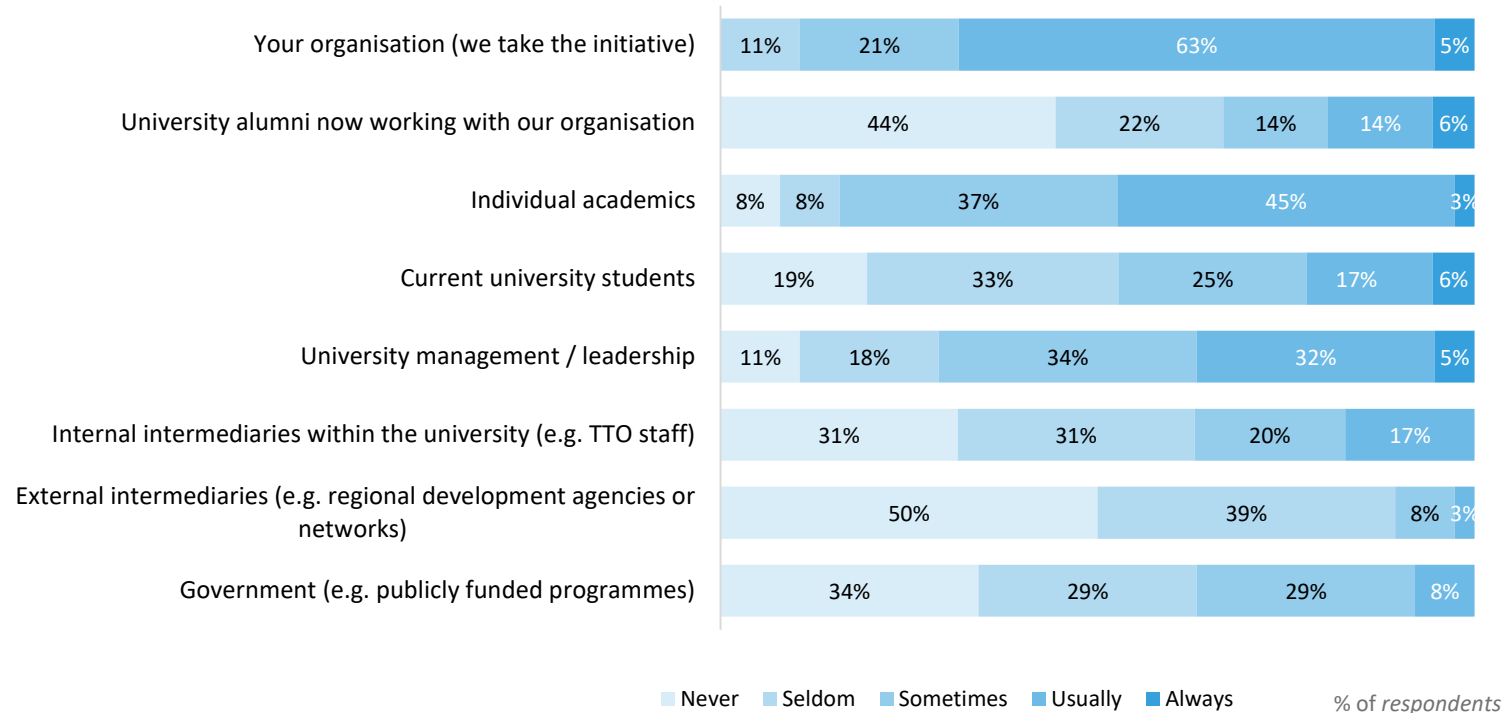
'Which UBC activities do you collaborate with universities in?'



Initiation of UBC

How UBC is initiated

'How often various stakeholders initiate UBC activities'



Hungarian businesses see themselves as the major initiators of cooperation with universities. 68% of respondents from Hungarian businesses state that their organisation always or usually initiates UBC, which however doesn't align with the perception of academics reporting themselves as the main initiators.

Hungarian businesses also recognize individual academics and university management as UBC initiators.

External intermediaries are by far perceived as the most passive actors in UBC initiation. 89% of the businesses report that they never or seldom undertake any first actions towards UBC initiation. Generally intermediaries barely play any role in Hungarian UBC context.

Similarly, 66% and 63% of business representatives indicate that alumni working with their organizations and government respectively never or seldom initiate UBC.

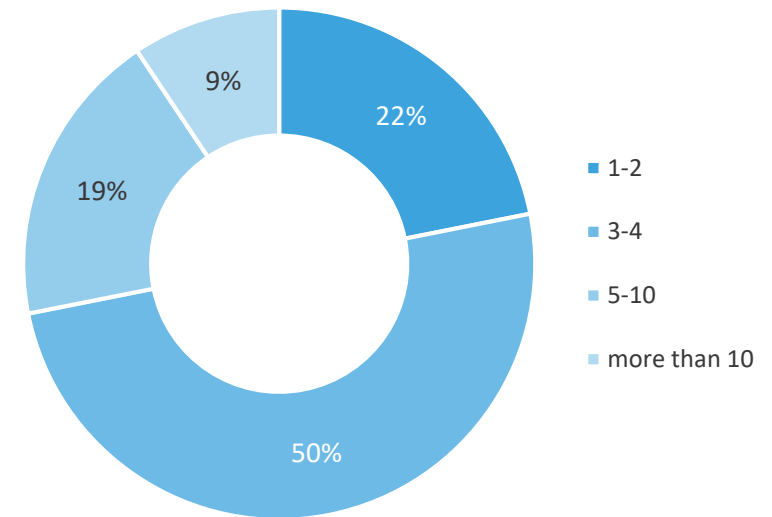
Geographical location still matters

Location of university partners

Percentage of cooperating businesses with...	
universities in their region	91%
universities in their country	88%
universities outside their country	53%

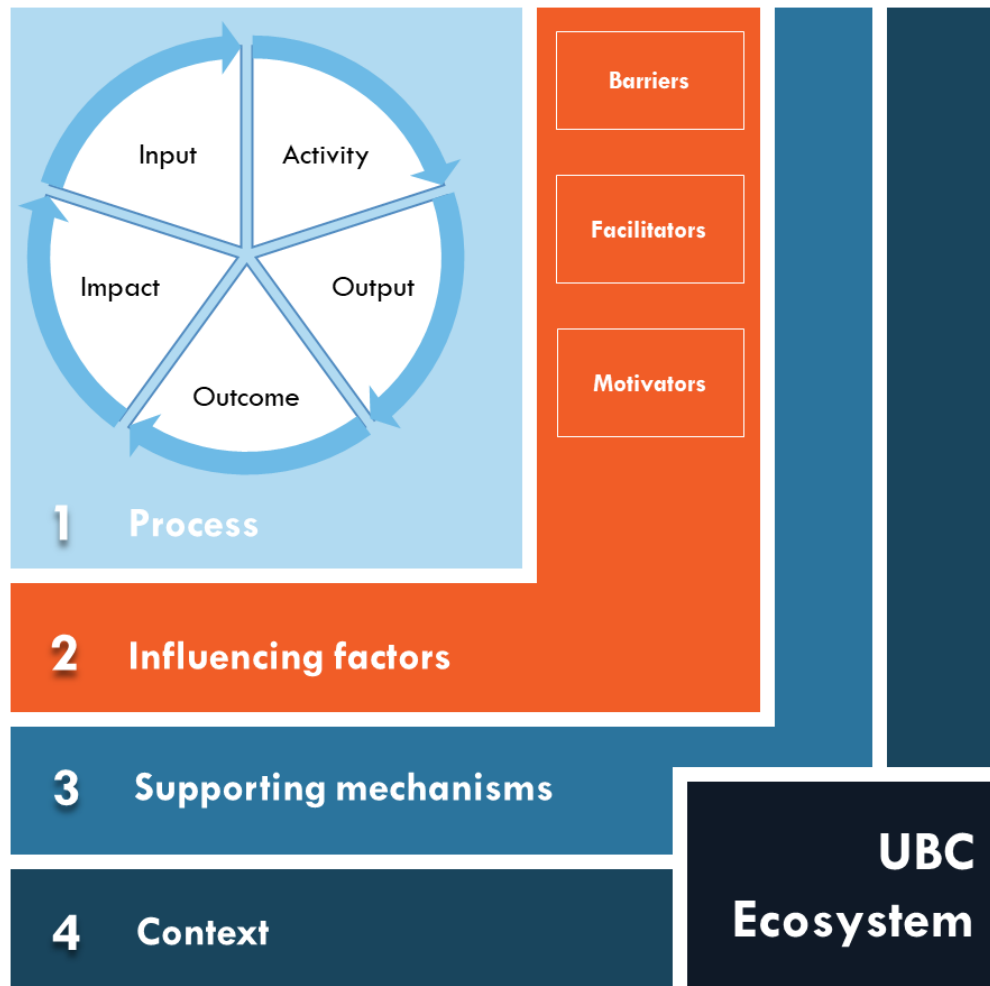
While most Hungarian businesses cooperate with their regional universities (91%), they also actively engage with Hungarian HEIs (88%). Over a half of Hungarian businesses establish UBC with universities internationally, far less than the European average (over 75%). These Hungarian businesses are mostly likely to be multinational companies that have managed to establish connections with universities outside Hungary.

Number of university partners



Around three quarters (72%) of the Hungarian businesses cooperate with less than 4 university partners. While 19% have established relations with 5-10 partners, only 9% closely interact with more than 10 universities.

Factors influencing UBC



This section outlines the extent to which various factors affect UBC.

Generally, a barrier provides a hindrance or obstacle to do something. Drivers comprise facilitators, which enable or ease the process, and the motivators, which triggers the starting of an activity and are often related to the expected outcome(s).

At the European level, this study has found that removing a barrier does not necessarily create UBC but rather it makes UBC possible. Instead, it is the facilitators and motivators (drivers) that initiate UBC.

For example, even when a lack of funds is often named as a major barrier to cooperation, the presence of funds may not be enough for cooperation to happen if the perceived facilitators or motivators are not sufficient.

Barriers hindering UBC

The main five factors inhibiting UBC for Hungarian businesses are diverse.

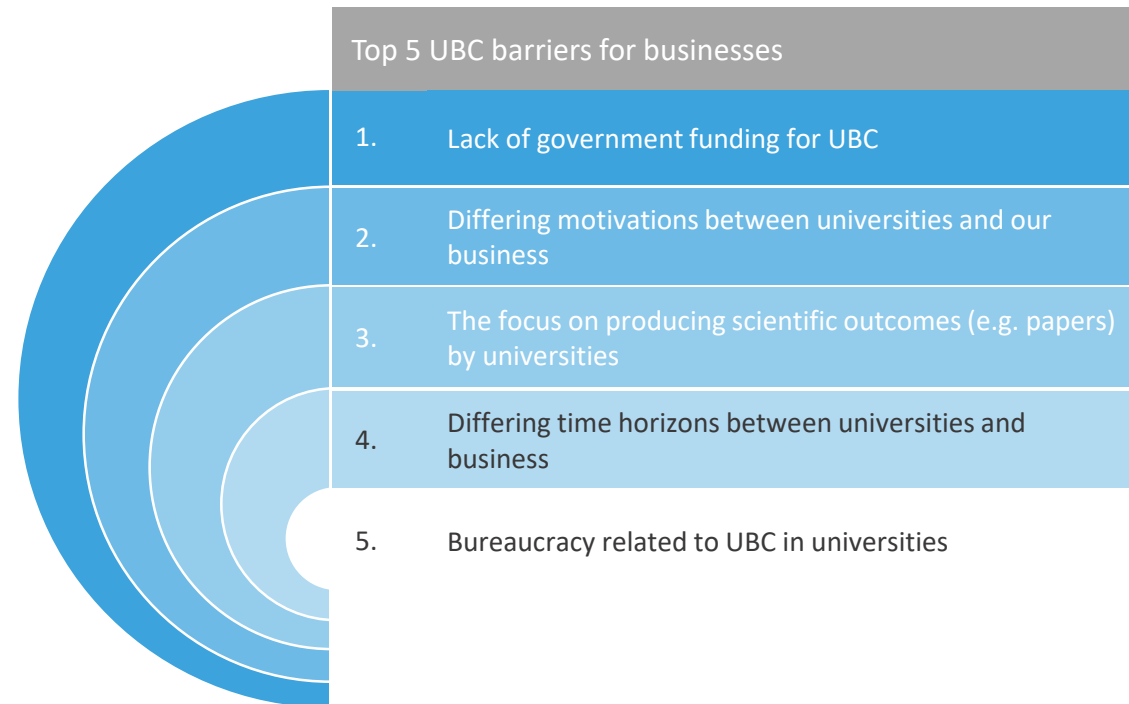
The main one is related to government funding. The government funds available for fostering university R&D, are more concentrated on internal innovation activities of HEIs.

The second biggest hindering factor is the differing motivations between the two organisations. The focus on the production of scientific outcomes by universities is also reported as an important barrier for business to undertake UBC.

Differing time horizons in academia and businesses, and the bureaucracy related to UBC in universities were also mentioned as barriers. Generally the complex and slow legislation system of the state universities are major inhibiting factors for the businesses.

Barriers

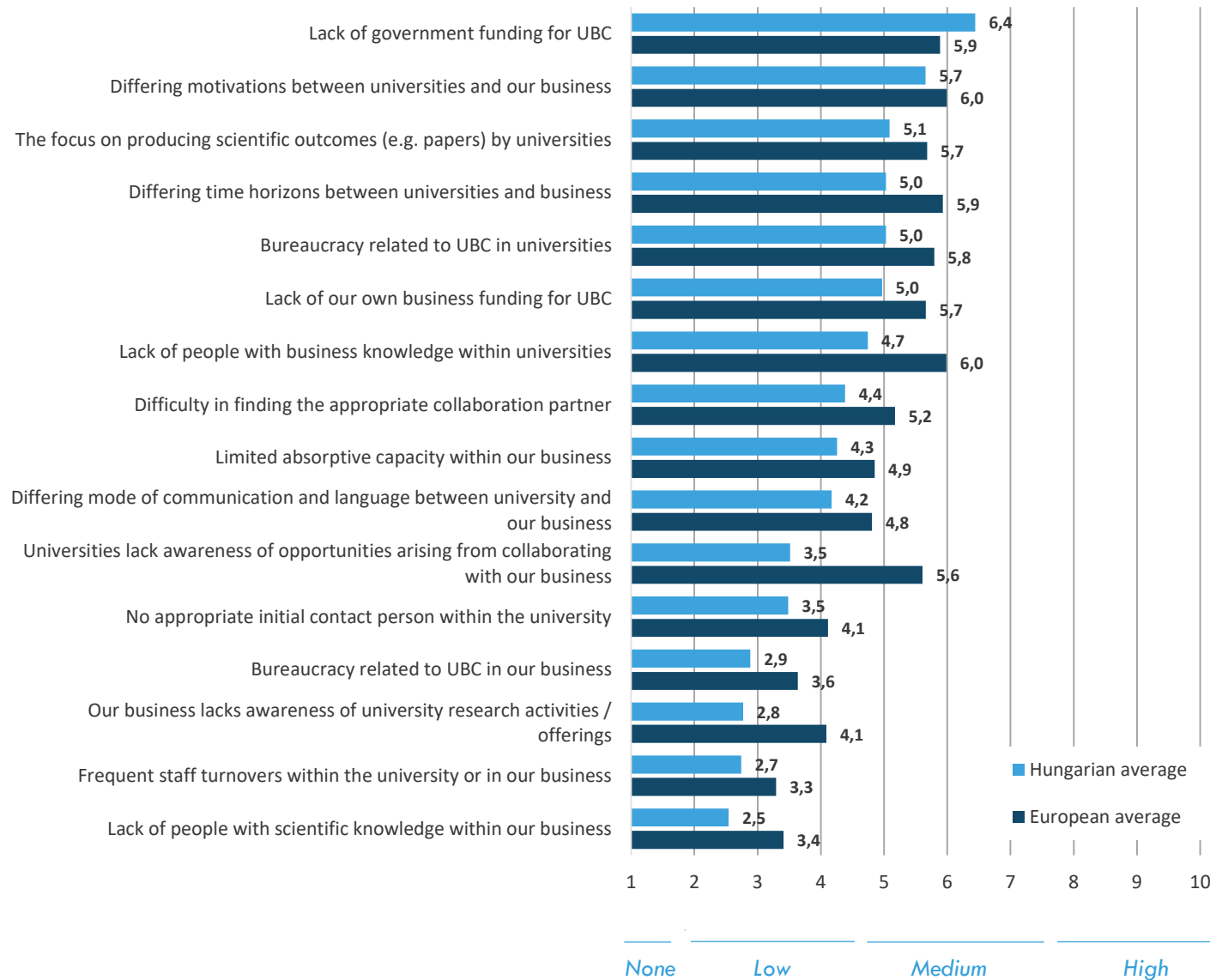
'What is inhibiting your cooperation with universities?'



Barriers hindering UBC

Barriers

'What is inhibiting your cooperation with universities?'



The majority of barriers perceived by Hungarian businesses and their European counterparts are to some extent similar. However, Hungarian businesses perceive most barriers lower.

The university lack of awareness of opportunities arising from UBC and the businesses lack of awareness of university research activities are significantly higher for European business than they are for Hungarian business.

Hungarian businesses are more hindered by the lack of government funding for UBC than their European counterparts.

Frequent staff turnovers and the lack of people with scientific knowledge within the business are the lowest barriers for Hungarian businesses.

Drivers stimulating UBC

The main factors that facilitate Hungarian business cooperation with universities are related to the relationship factors.

Thus a relationship based on shared goal, trust, commitment, and prior co-working experience is highly valued by Hungarian businesses, resulting in smoother and more successful collaboration with universities. In case of the research UBC, due to the limited number of research universities in Hungary, there are generally not many potential collaborative partners for businesses, which however always leads to a longer trustful relationship between organisations¹.

The existence of funding to undertake UBC is also likely to play an important role in facilitating UBC, according to Hungarian businesses.

Drivers are those factors that encourage businesses, academics or HEIs to engage in UBC. Drivers of UBC are divided into two factors:

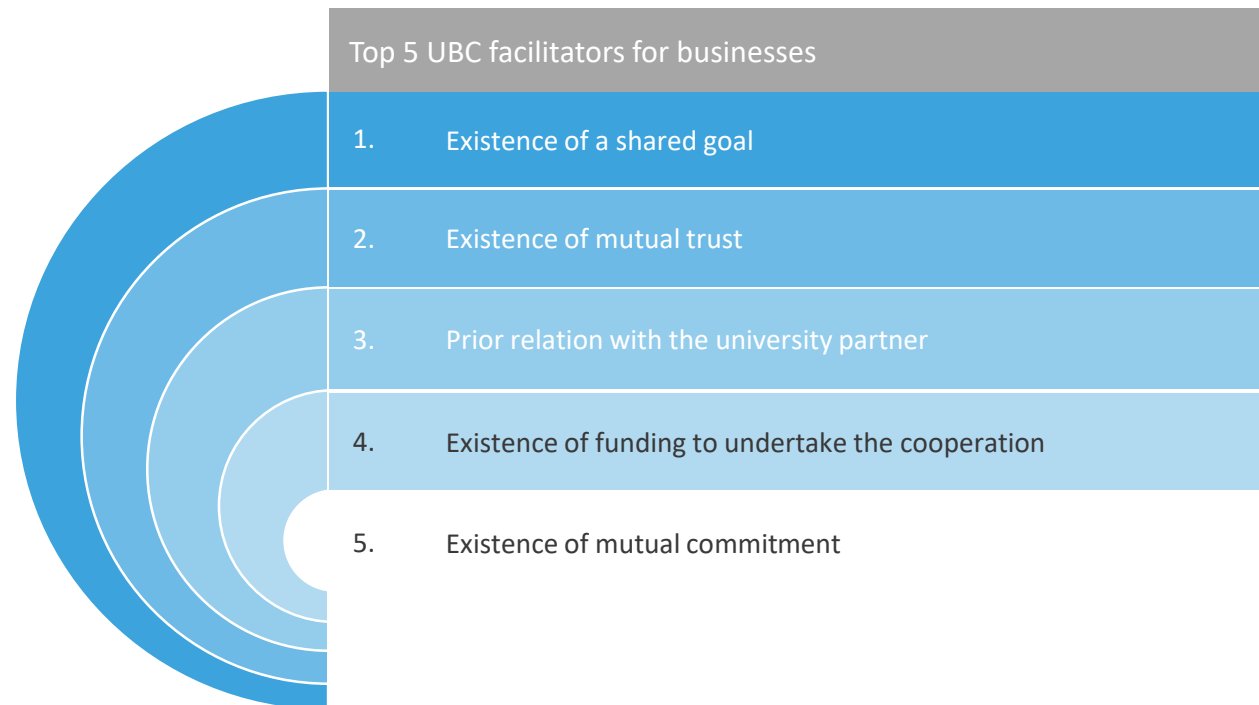
1. **Facilitators** – factors that enable or ease cooperation
2. **Motivators** – incentives or benefits that the respective stakeholders would like from the cooperation

Together, these two factors provide a comprehensive picture of what compels businesses to cooperate.

The 2010-11 State of European UBC study showed that for European universities the existence of strong UBC drivers can overcome the presence of barriers to UBC.

Facilitators enabling UBC

'What is facilitating your cooperation with universities?'

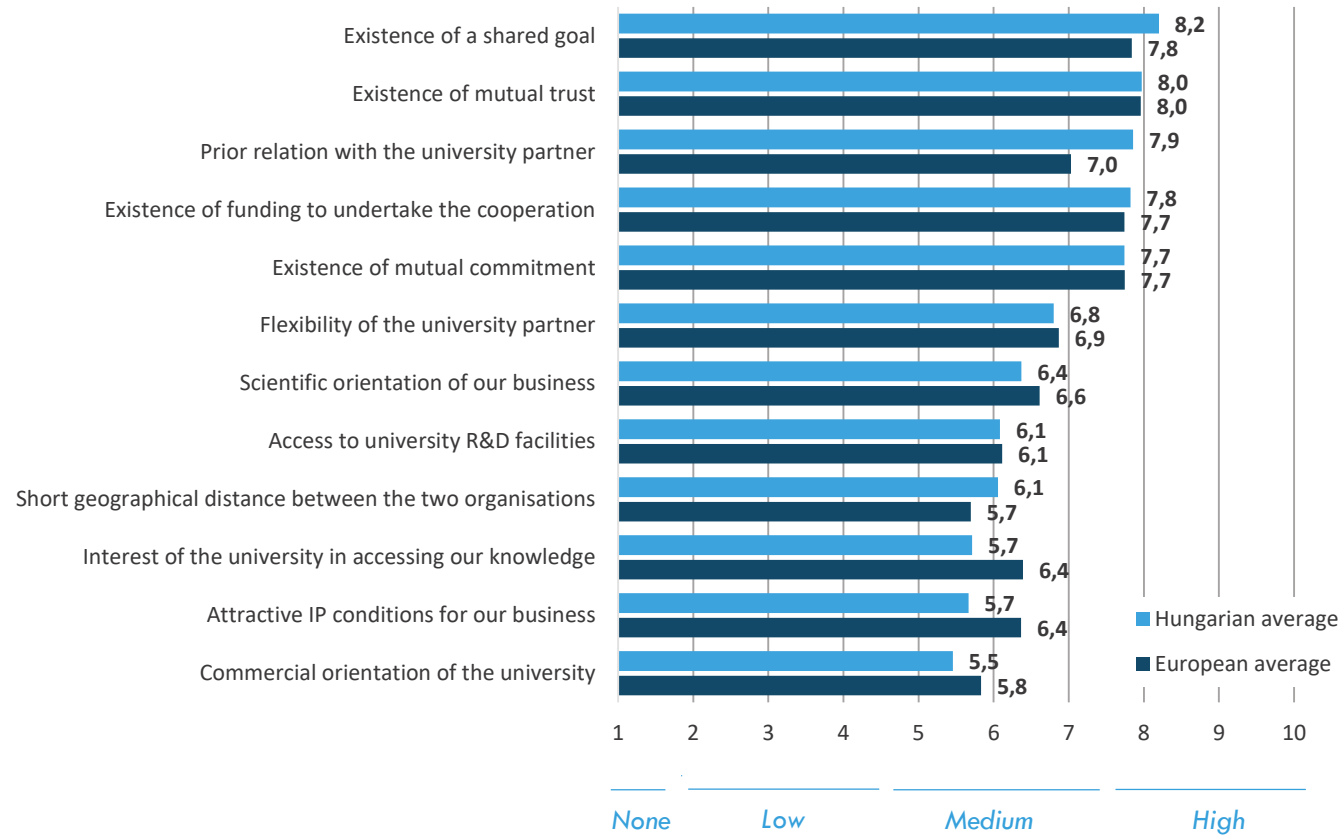


¹National Research, Development and Innovation Office (2015.05.20). Hungarian National Research Universities. Retrieved from URL: <http://nkfih.gov.hu/innovacio/hazai-innovacios/kutatoegyetemek>

Drivers stimulating UBC

Facilitators

'What is facilitating your cooperation with universities?'



Hungarian businesses have similar perception of UBC facilitators as their European counterparts.

Both groups agree on the importance of relationship facilitators in the advance of UBC.

Prior relation with the university partner is significantly more relevant in Hungary than for European businesses.

However, the scientific orientation and interest of the businesses in accessing the knowledge, attractive IP conditions for those businesses, and commercial orientation of the university have a lower importance in Hungary than for European businesses.

In general, the relationship related factors are dominant as facilitators in Hungary. On the other hand, the institutional factors proved to be less influential in UBC facilitation for Hungarian businesses.

Drivers stimulating UBC

The main motivators for Hungarian businesses to undertake UBC are related to the access to qualified graduates, new technologies and knowledge. This aligns with the results reporting student mobility and joint R&D as the most developed UBC activities.

Businesses also cooperate with universities to improve their own innovation capacity and reputation. A less important but still relevant motivation for businesses is to obtain a customized solution for their practical problems.

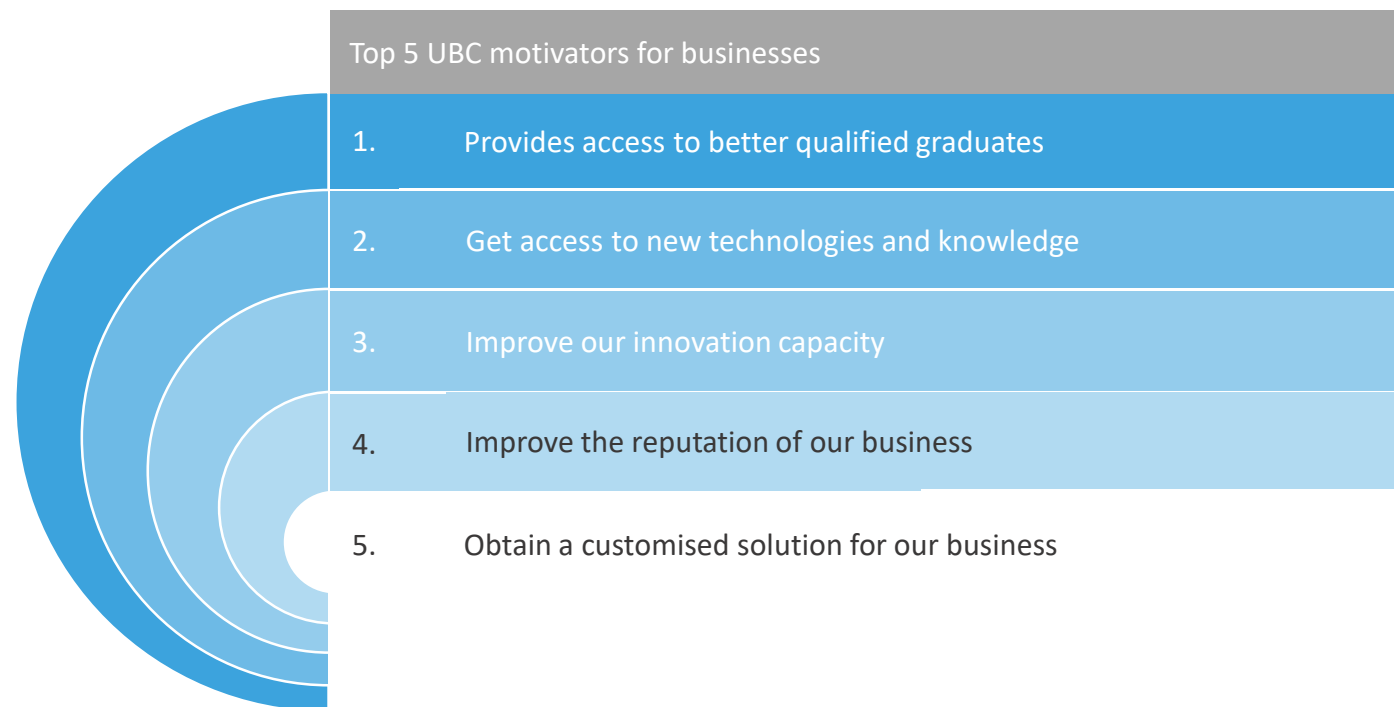
Motivations for UBC are the reasons why businesses collaborate with university.

They provide key information about the outcomes that the businesses seek from their collaborative activities relating to education, research, valorisation and management.

The ability of the collaboration to achieve these outcomes will have a substantial influence on the businesses' assessment of the success of their collaboration.

Motivators

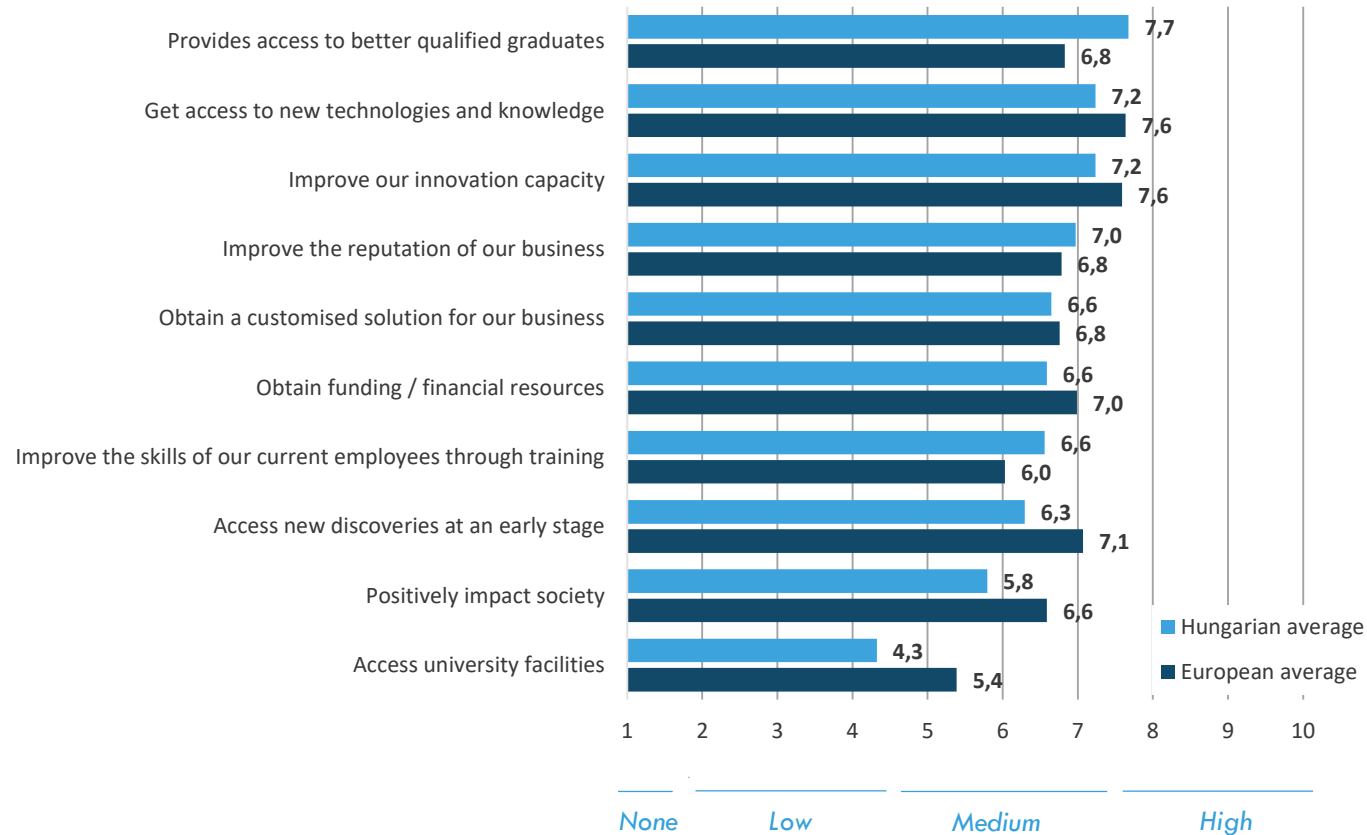
'What motivates you to cooperate with universities?'



Drivers stimulating UBC

Motivators

'What motivates you to cooperate with universities?'



Overall, the motivators to undertake UBC for Hungarian businesses vary from European average.

Willingness to access better qualified graduates is the main motivator and also higher for Hungarian businesses than for European ones. Hungarian representatives also strive more to improve their business reputation and to upgrade the skills of their current employees through training than businesses on average in Europe.

Unlike their European counterparts, Hungarian businesses are much less motivated to obtain new discoveries at an early stage. It reflects that the innovations produced by Hungarian universities are less accessible and therefore less appealing from the business perspective.

Hungarian businesses are significantly less motivated than their European counterparts to positively impact the society and access university facilities.

Benefits of UBC

Hungarian and European businesses have different perceptions in respect to which stakeholder groups benefit more or less from UBC.

While for Hungarian businesses universities and academics are the main beneficiaries, European businesses consider that students and universities receive more benefits from UBC.

Businesses in Hungary perceive themselves as beneficiaries but to a lower degree than their European counterparts.

However, both groups perceive the lowest benefits to be for society and government.


Benefits are the perceived positive outcomes (financial and non-financial) from undertaking UBC as relevant for the different stakeholder groups that can potentially participate in UBC.

The perception regarding who benefits from such cooperation can influence the decision to increase or decrease their participation or

the involvement of other groups. For example, if academics perceive their own benefits to be low, they may refrain from engaging in UBC. Yet, if they perceive benefits for students to be high, they might undertake actions that contribute to students' involvement in UBC.

Benefits of UBC

'Who receives the benefits of UBC?'

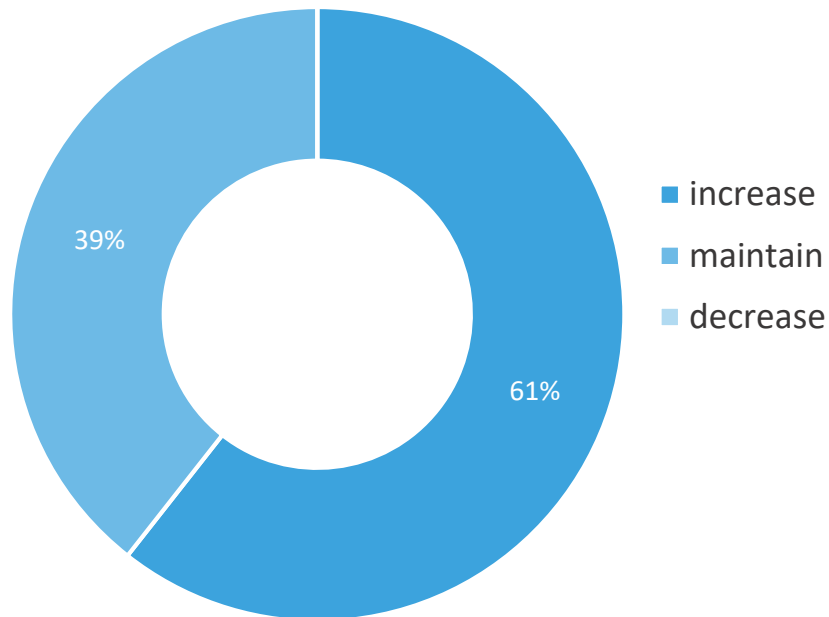


	Hungarian businesses	European businesses
1.	Universities	Students
2.	Academics	Universities
3.	Students	Businesses
4.	Businesses	Academics
5.	Society	Society
6.	Government/ public authorities	Government/ public authorities

Future intentions

Future UBC intentions – HUNGARY

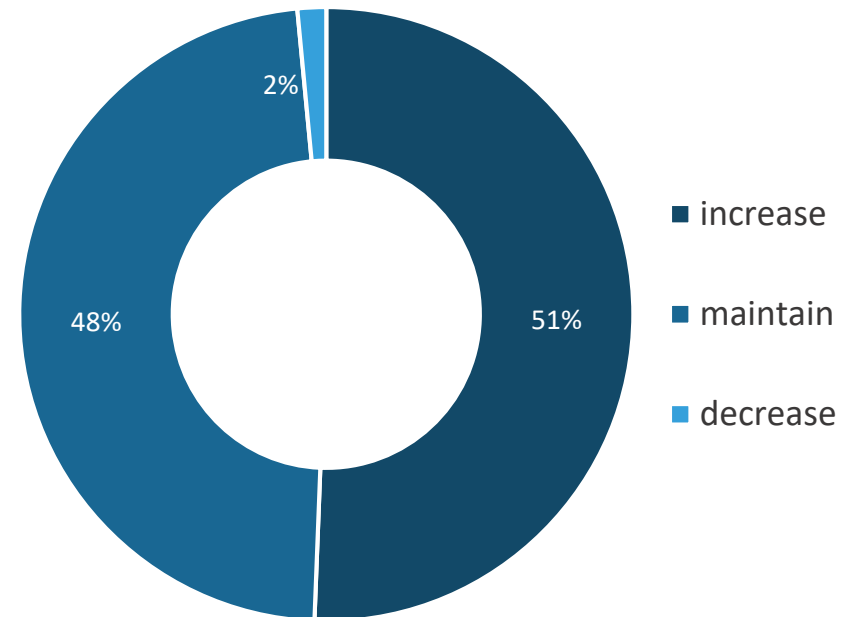
As answered by Hungarian businesses



100% of businesses in the Hungarian sample that already have relationships with universities plan to increase (61%) or maintain (39%) their cooperation with universities.

Future UBC intentions – EUROPE

As answered by European businesses



European businesses seem to be somewhat less confident in their future intentions towards UBC. Nonetheless, over a half (51%) of them plan to increase their cooperation activities, while only 1% to reduce them.

Willingness to recommend UBC

Hungarian businesses appear to be willing to recommend to their colleagues to engage in cooperation with universities in both research and education.

Hungarian businesses are as equally satisfied with their UBC in research as their European counterparts (NPS=28). While 48% of the respondents will further promote UBC positively, 20% will do it negatively.

Hungarian businesses are even more satisfied with their cooperation in education (NPS = 24), than businesses in Europe (NPS = -2). Thus 48% of the businesses would highly recommend UBC in education activities, and 24% will not endorse it. This supports the results reporting Hungarian universities to have strong educational profile.

Respondents were asked how likely it would be that they recommend to a business colleague to engage in UBC in the areas of R&D and

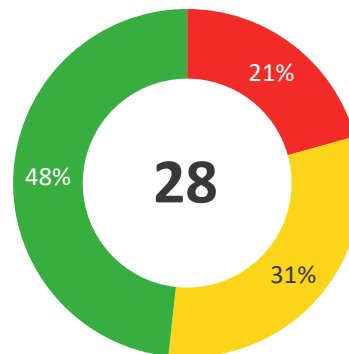
education and training (E&T). The *Net Promoter Score* metric offers a proxy for customer satisfaction.

Willingness to recommend cooperation with universities in R&D or E&T

	Detractors	Passives	Promoters	Net promotor score
Business cooperating with universities in R&D	21%	31%	48%	28
Business cooperating with universities in E&T	24%	28%	48%	24

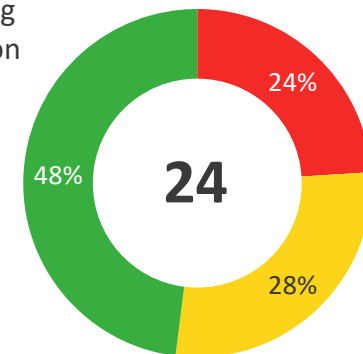
Satisfaction with cooperation with universities (net promoter score)

Business cooperating in research



■ Detractors ■ Passives ■ Promoters

Business cooperating in education

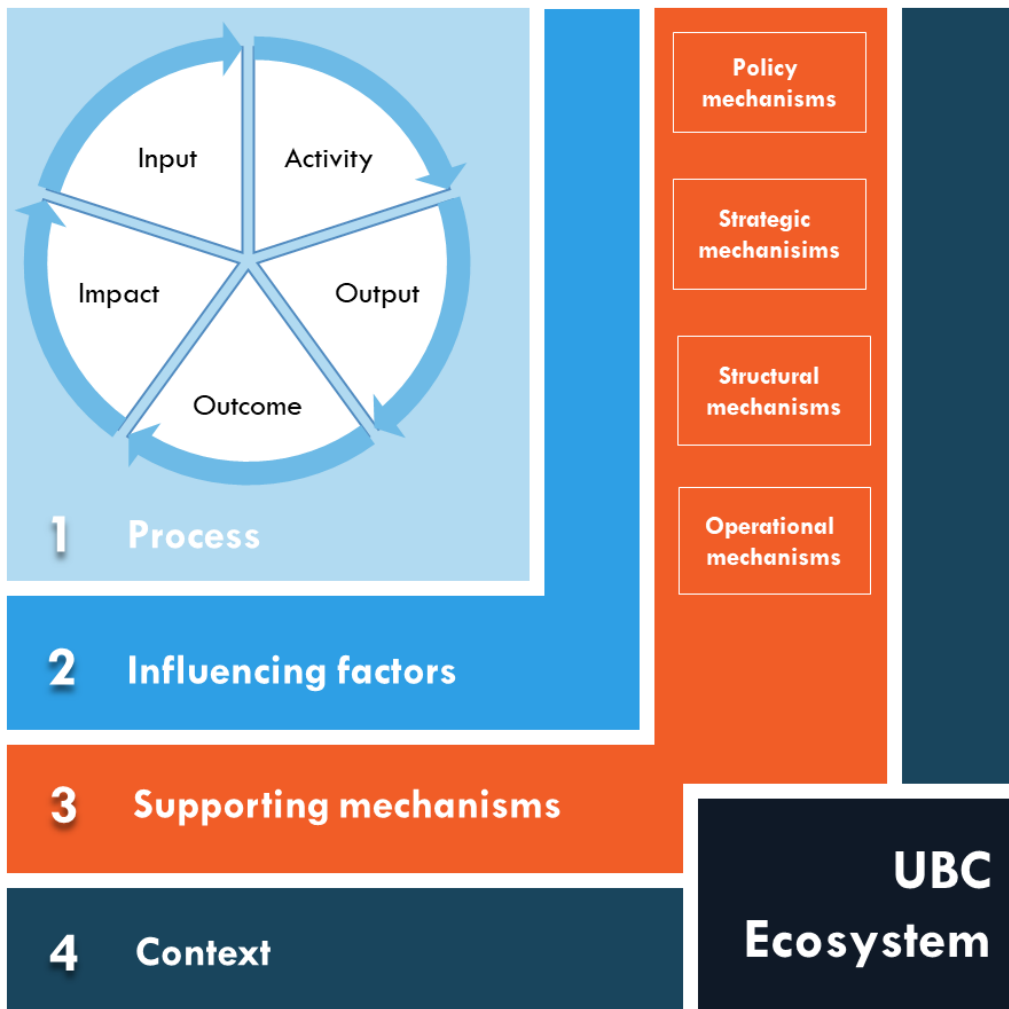


■ Detractors ■ Passives ■ Promoters

European business NPS : 28.2

European business NPS : -2.1

Supporting mechanisms for UBC



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

There are four types of supporting mechanisms:

- Policy
- Strategic
- Structural
- Operational

This section outlines the extent to which UBC supporting mechanisms are developed in this sample from the HEI perspective.

At the European level, the extent of development of all these mechanisms significantly influences the extent of cooperation.

Supporting mechanisms for UBC

Hungarian businesses can adopt a range of supporting mechanisms in their interaction with universities, but most of them are present in under a third of businesses.

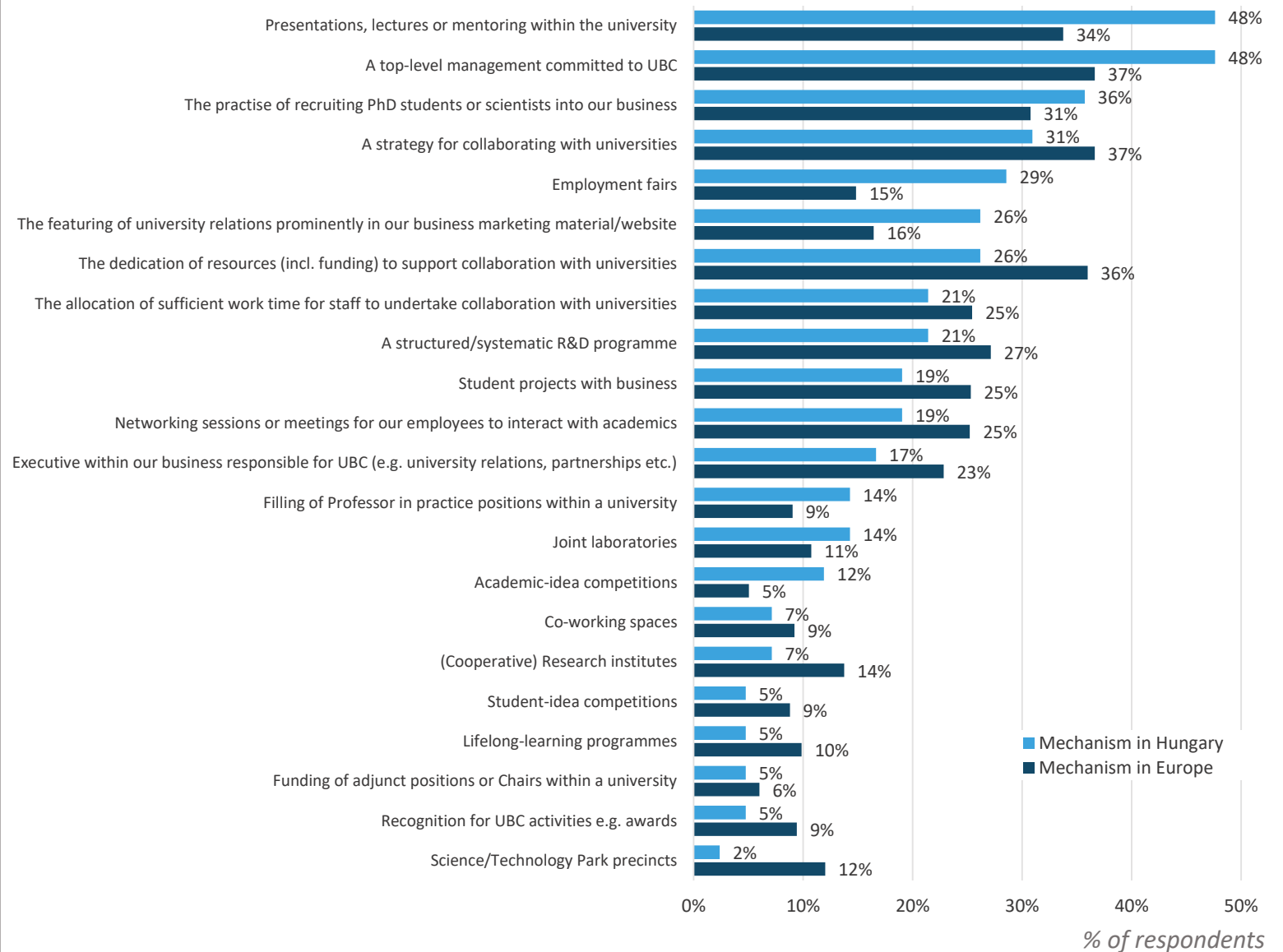
The most developed mechanisms, reported by nearly a half of Hungarian businesses, are those related to presentations, lectures or mentoring within university (48%) and top-level management commitment to UBC (48%). The practice of recruiting PhD students or scientists into the business is also relatively well developed.

The above mentioned mechanisms are to a large extent more common for Hungarian businesses than for European average, so as employment fairs and UBC visibility promotion through businesses' marketing materials.

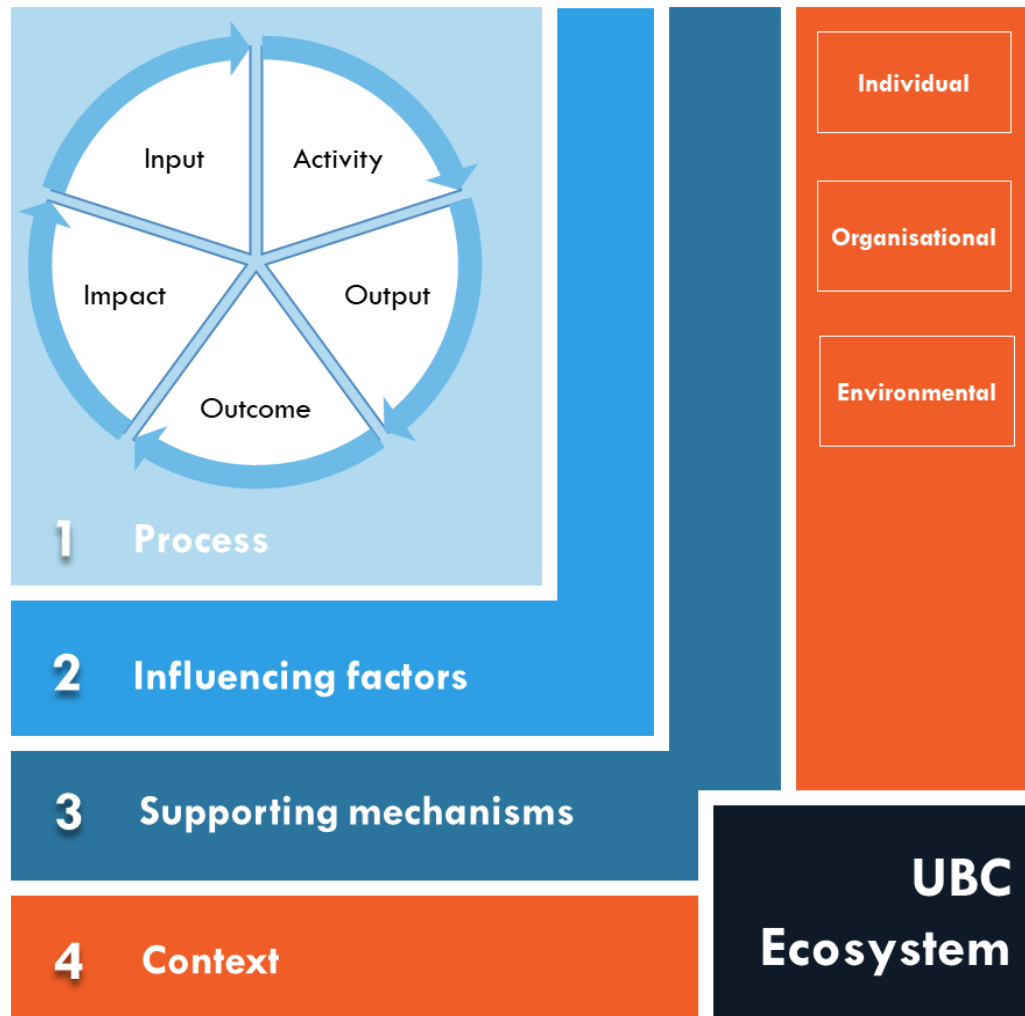
Most of the other UBC supporting mechanisms in Hungary are generally less recurrent.

Mechanisms supporting UBC

'Do these supporting mechanisms for UBC exist in your business?'



Context



The degree to which UBC takes place is influenced by a set of elements present in the context of the organisation that cannot be changed in short term.

These include the characteristics of individual actors involved, the institutional factors relating to the university and business, as well as by a set of broader environmental factors (political, economic, social, technological, etc.).

This section outlines how some contextual factors influence UBC in the country.

Context

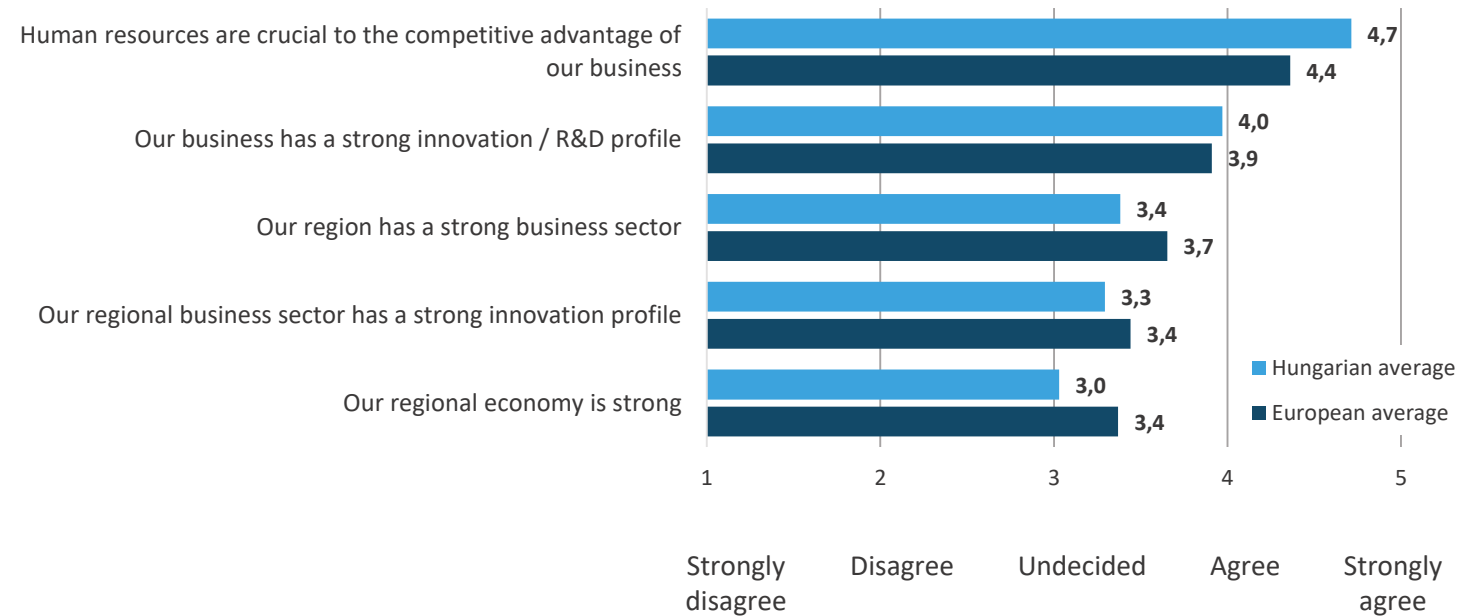
Hungarian business cooperating with universities perceive their context similarly to European businesses.

Human resources are essential for their competitiveness and the business innovation and R&D profile is seen as strong.

Hungarian perception of the strength of regional business sector, regional innovation profile and economy appears to be less positive compared to European average.

Contextual factors affecting UBC

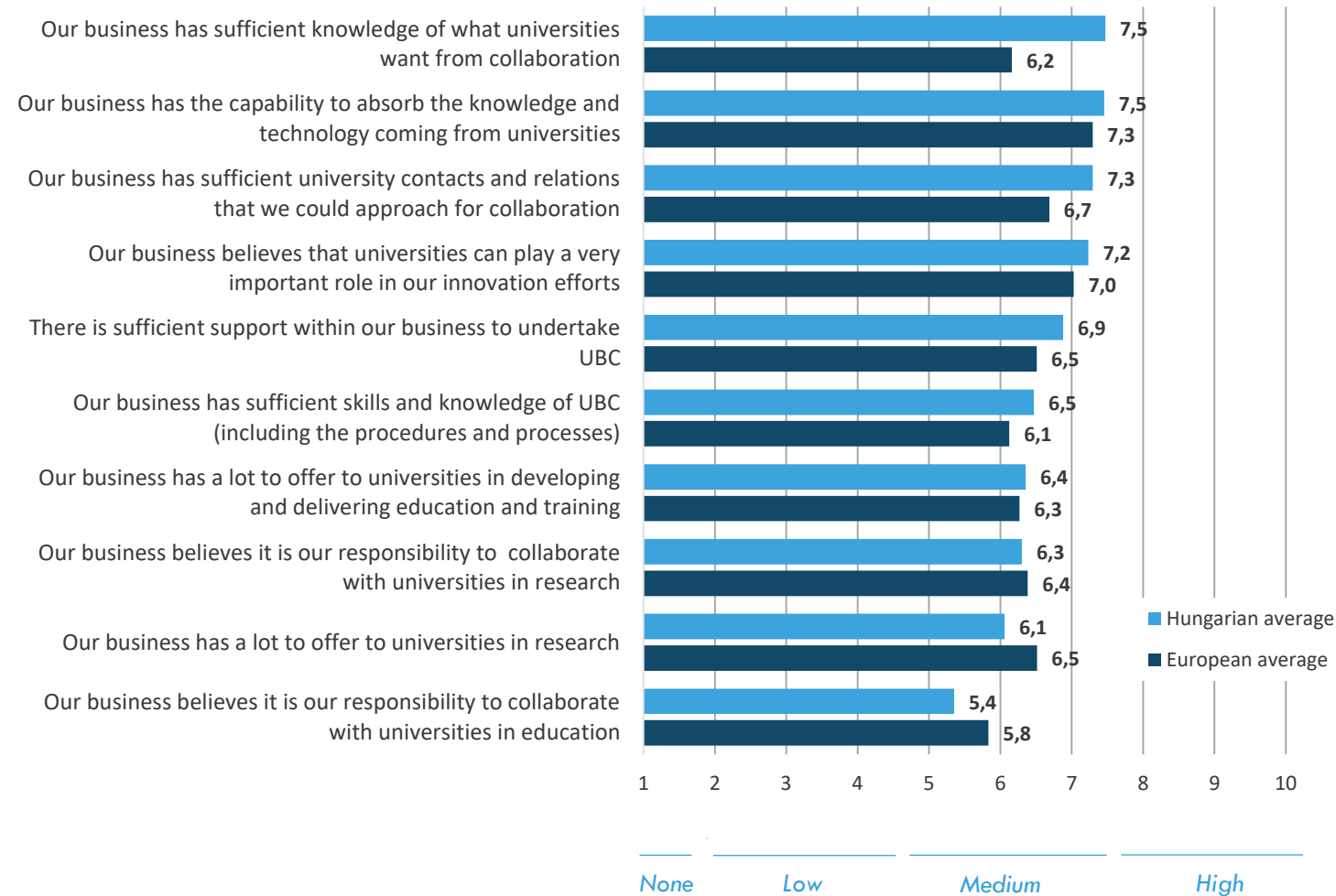
'To what extent do you agree with the following statements?'



UBC capabilities and beliefs

Supportive UBC environment

How supportive are your organisation and environment for UBC?'



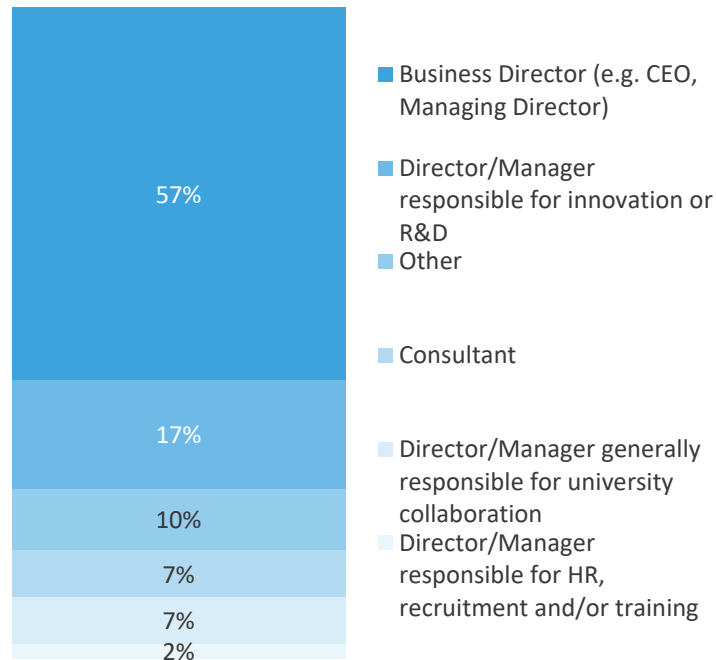
Overall, Hungarian businesses perceive most of their UBC capabilities in a medium range. They see themselves as being supportive towards cooperation with universities.

In particular, Hungarian businesses report to have sufficient knowledge of what universities want from collaboration, the ability to absorb the knowledge and technology coming from the universities, and the relevant relations and contacts to initiate collaboration.

Yet, Hungarian businesses find themselves least inclined towards taking the responsibility to collaborate with universities in education. They are also more critical than their European counterparts about their ability to offer to universities significant support in research and education.

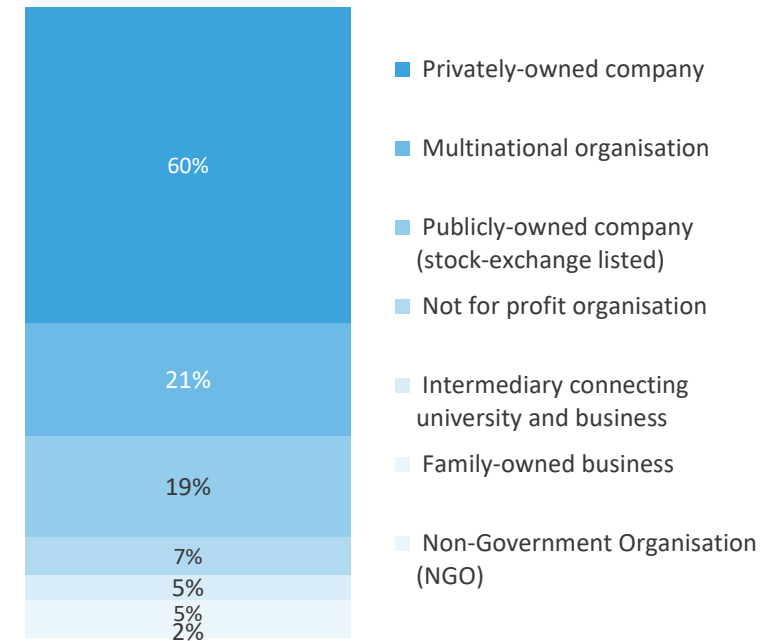
Respondents profile

Position of respondent



Business directors represent the largest group of Hungarian respondents (57%), followed by the directors responsible for innovation or R&D (17%). The remaining respondents identified themselves as consultants (7%), director/manager generally responsible for university collaboration (7%), and as directors of HR, recruitment and training (2%). 10% of Hungarian business respondents hold 'other' positions.

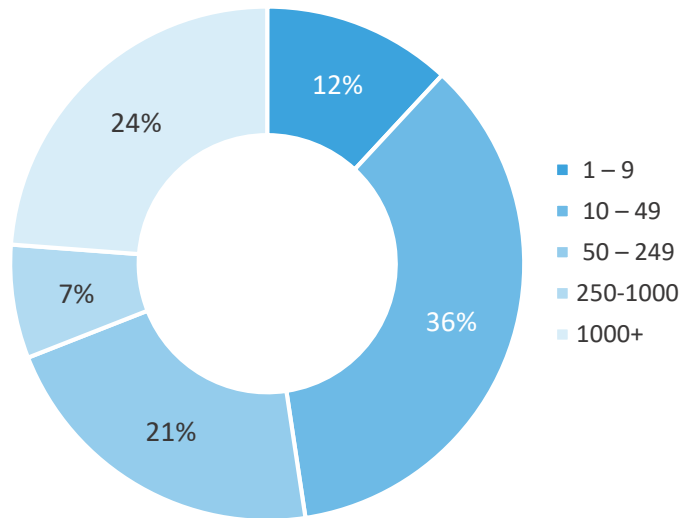
Type of business



A wide variety of businesses were represented in the Hungarian sample, with associations forming the largest group (60%). They are followed by sole-trader or partnership (21%) and privately-owned companies (19%). The types of businesses with less than 10% representation include: multinational organizations, publicly-owned companies, not for profit organisations, intermediaries connecting university and businesses, family-owned businesses and NGOs.

Respondents profile

Business size



Sample Size	
Hungarian business representatives	n = 42
European business representatives	n = 3.113

Almost a half (48%) of the Hungarian sample is comprised of small firms with 1 to 49 employees. Respondents working for medium-sized companies accounted for 21%. Large companies with 250 to 1000+ employees are represented by 31% of business representatives.

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This report is part of the DG Education and Culture study on the University-Business Cooperation in Europe: drivers, challenges and opportunities in Europe EAC/10/2015. Further information can be found at www.ub-cooperation.eu

This report is also part of the Global University-Business Monitor initiative, a global study into university engagement and cooperation between university and business. Further information can be found at www.uni-engagement.com