

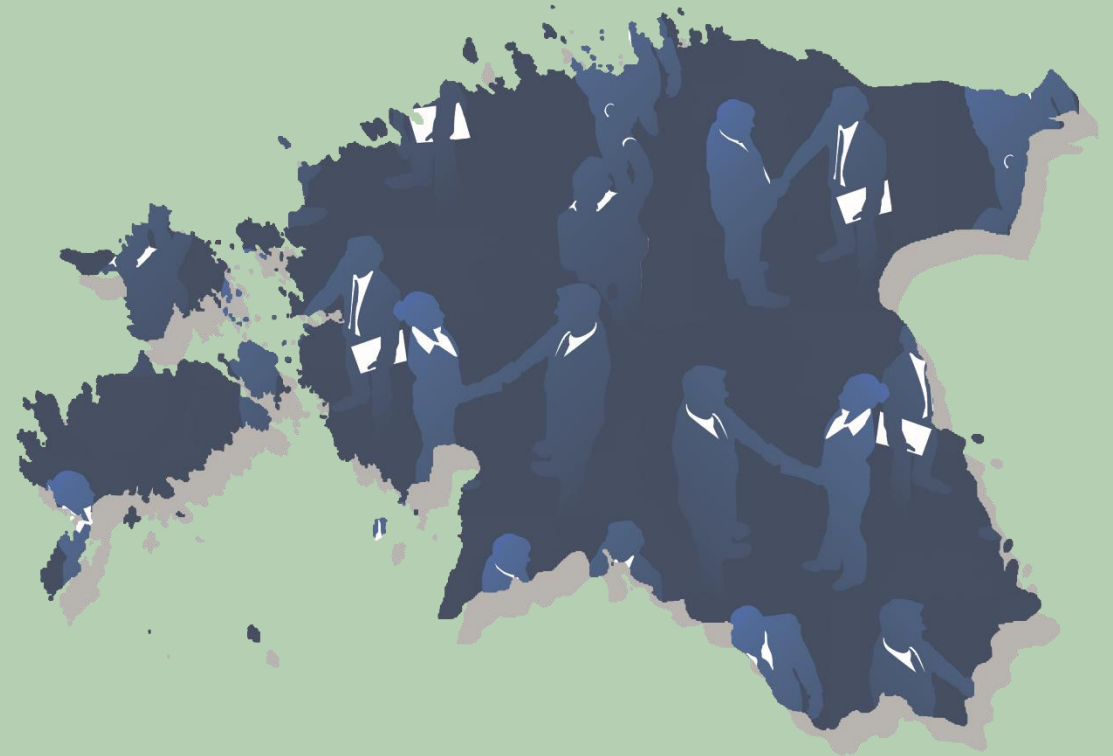


UNIVERSITY-BUSINESS
COOPERATION IN EUROPE

State of University- Business Cooperation ESTONIA

University Perspective

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



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The State of Estonian University-Business Cooperation: the university perspective

Partners



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Executive summary

Summary

This report provides the findings of a study on the university-business cooperation (UBC) in Estonia from the perspective of higher education institutions (HEIs). Examining the perceptions of academics, HEI managers and knowledge transfer professionals (KTPs) provides positive signs for the future, with 99% of respondents currently cooperating with businesses planning to maintain or increase their cooperation in the future. In this sense, Estonia proves to be an attractive country for UBC.

Currently, the Estonian UBC is less developed compared to the European average. Thus, there still is a room for further improvement, specifically in supporting academics in their cooperation efforts, including the allocation of dedicated funding and work time for UBC activities and the promotion of cooperation beyond research activities.

About the study

The results presented in this report reflect the perceptions of academics, HEI managers and KTP in Estonia with respect to cooperation between HEIs and business. Data was collected by means of an online survey distributed via email to all registered European HEIs in 33 countries during October-November 2016, leading to a total of 98 Estonian HEI responses. The study measured the perceptions of respondents with respect to their cooperation efforts, barriers, drivers, support mechanisms and perceived capabilities.

Management and valorisation least developed

Estonian academics responding to this survey are involved in a variety of different cooperation types, with joint R&D, mobility of students and curriculum co-delivery emerging as the most developed ones. However, over 40% of Estonian academics do not engage in these activities at all. Management and valorisation related activities are the least developed in Estonia, ranking below the European average.

Academics see themselves as proactive initiators of UBC, with over half of them stating that they usually or always initiate such cooperation. In contrast, very few respondents perceive current students as usually or always initiating cooperation.

Lack of resources prevalent in Estonia

All Estonian HEI respondents, including cooperating and non-cooperating academics as well as HEI representatives, state that they are considerably hindered by limited resources of SMEs. Cooperating academics and HEI managers identify lack of business funding as a prevalent barrier obstructing cooperation, while non-cooperating academics are more concerned about insufficient work time allocated by the university for academics' UBC activities. Cultural barriers such as differing motivation/values between university and business pose as further important hindrance for non-cooperating academics in Estonia.

This report provides a university 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 and funding matter

While funding to undertake cooperation emerges as the top facilitator for cooperating academics, the relational factors play important role too, and more so for HEI management. It is the existence of mutual trust, mutual commitment, a shared goal and prior relations with the partner that facilitate and thus drive cooperation from the perspective of both academics and HEI managers. These results confirm that any effort dedicated to increasing cooperation between businesses and universities should focus on relationship development as a basis for UBC.

Different motivations for UBC

In general, the main motivations to undertake UBC differ for cooperating and non-cooperating academics. Improving one's teaching and gaining new insights for research ranks the highest for cooperating academics, while improving graduate employability and provision of funding are perceived to be the most important motivators for academics who do not cooperate. As for HEI representatives, willingness to positively impact society represents the motivating factor. Overall, improvement of research and teaching motivate all HEI respondents to engage in university-business cooperation.

Lack of incentives

Universities in Estonia have low to moderately developed support mechanisms for UBC. As evident from the data, high-level strategic development such as top-level management commitment for UBC and a documented mission/vision embracing UBC are perceived to be developed below European average. The development of mechanisms related to the provision of incentives for academics to undertake

UBC, including the recognition of their UBC activities is also quite low. UBC activities are not reflected in the performance assessment of Estonian academics. Thus, there is a lack of incentives for universities to undertake UBC.

Strong focus on student entrepreneurship

Student-centred activities are the most developed operational mechanisms. Entrepreneurship courses offered to students and UBC activities facilitating student interaction with businesses are the most developed activities. On the other hand, entrepreneurship courses offered to academics are less developed within Estonian HEIs, as a culture that is generally modestly encouraging the entrepreneurial activities pervades.

Positive attitude towards UBC

Academic respondents already cooperating with businesses have a positive perception of their abilities and roles in undertaking UBC. They believe it is their and their universities' role to collaborate with businesses, in both research and education. Overall those cooperating with businesses have a positive attitude towards UBC.

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.



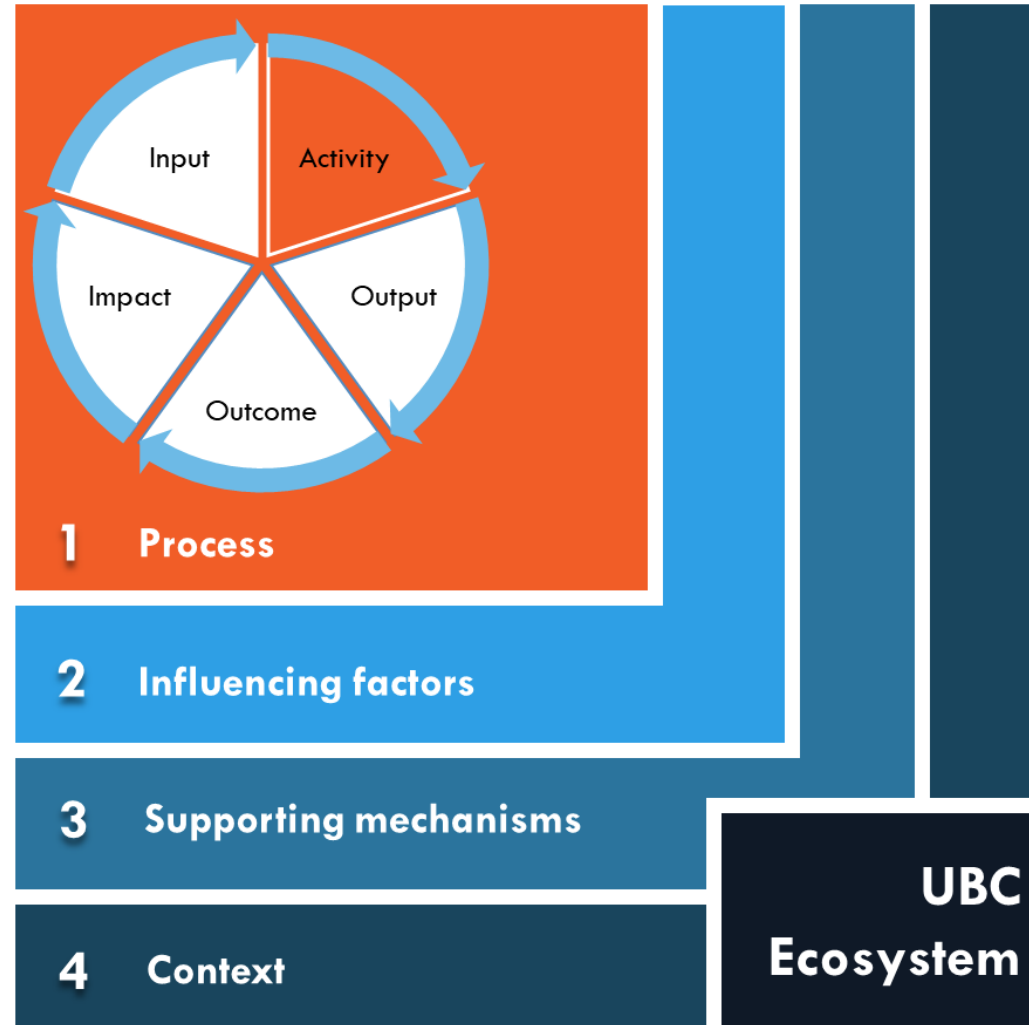
UBC activities

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 and categorised into the areas of education, research, valorisation and management.

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

Development of UBC activities

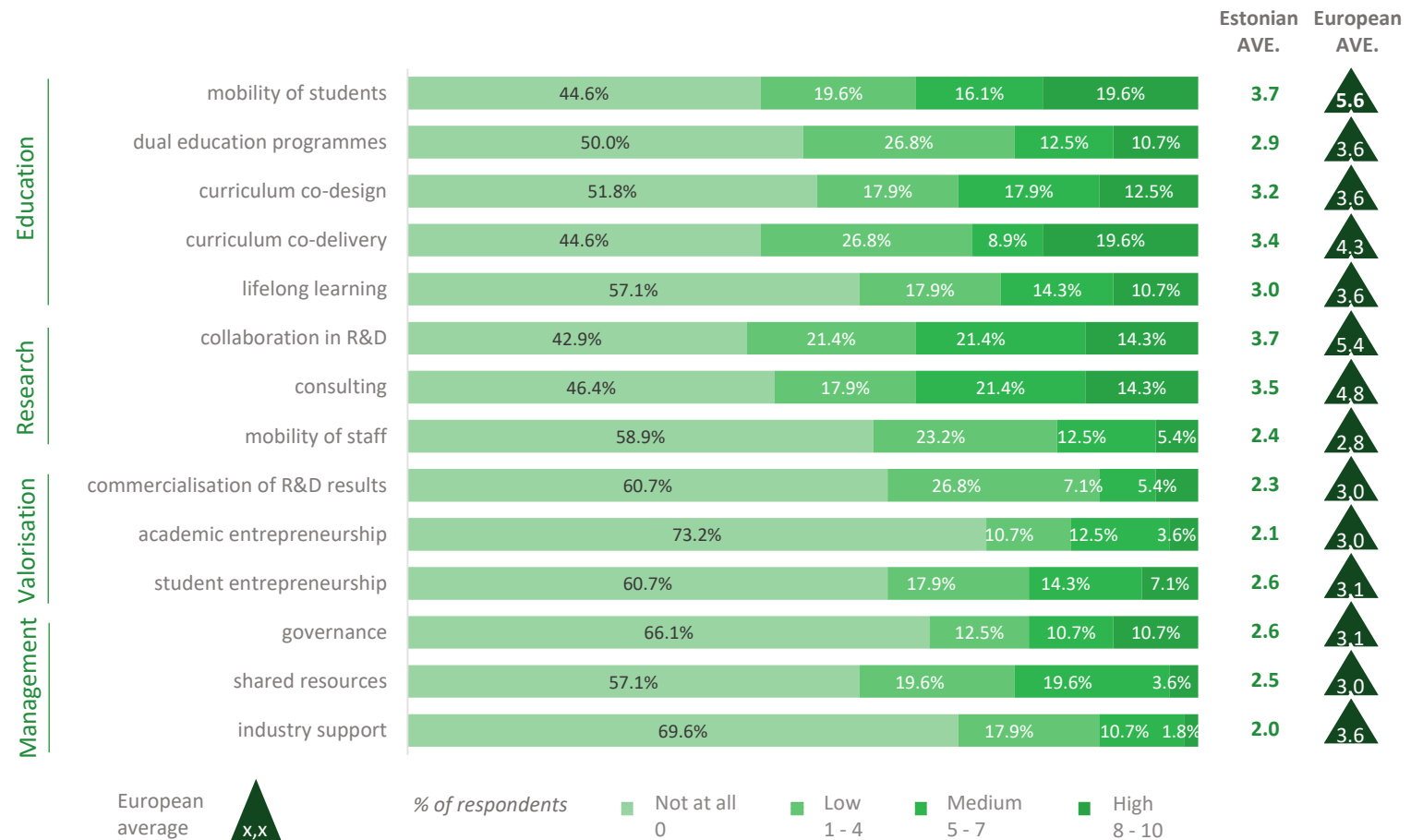
Estonia is moderately developed when it comes to its UBC engagement. Overall, Estonian academics estimate that UBC activities are less developed than for their European counterparts.

Estonian academics most commonly engage with business in joint R&D (3.7), mobility of students (3.7) and consulting (3.5). Yet, 40% of them do not engage in these activities at all. The further UBC education and research activities are considerably less developed. The development of UBC management and valorisation activities is particularly low. Over 60% of Estonian academics do not undertake cooperation with businesses in these areas at all (with the exception of shared resources).

The performance and promotion of Estonian academics is mainly evaluated and based on the number of publications in high-ranking journals. The UBC activities have a moderate addition to a scientist's profile and thus are not actively pursued. Those scientists who are well published have higher opportunities in academic career, but usually less focus on UBC. Those scientists who are focusing on UBC have less time to devote to publishing matters and have fewer chances to excel in scientific career. Thus, scientists are faced with a difficult choice.

The extent of development of UBC activities

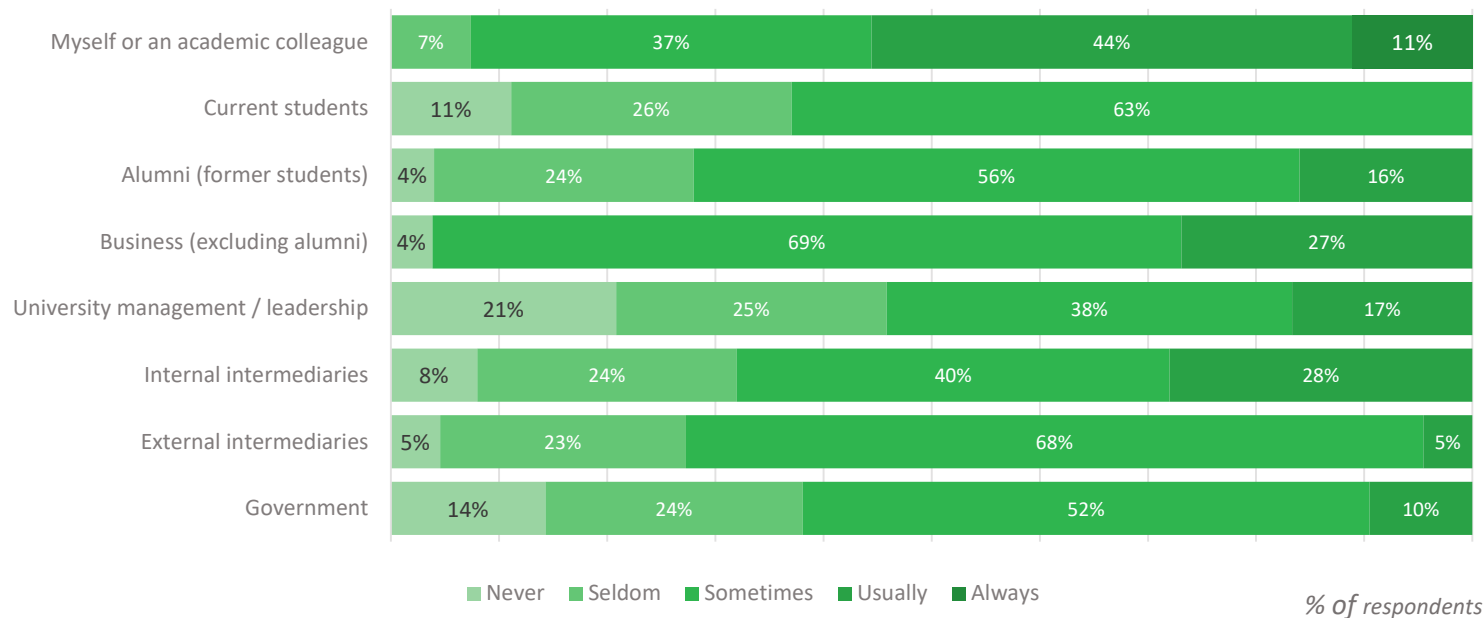
'Which UBC activities do you collaborate with businesses in?' – as answered by academics



Initiation of UBC

How UBC is initiated

'How often various stakeholders initiate UBC activities' – as answered by cooperating academics



Estonian academics perceive themselves as the most active UBC initiators with 55% of them stating they usually or always initiate the collaboration.

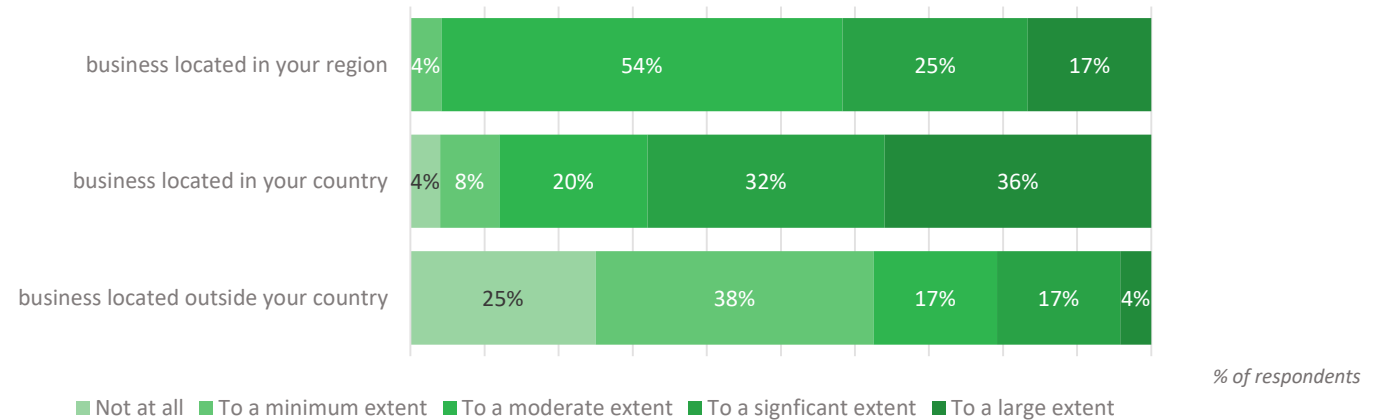
Internal intermediaries (28%) and businesses (27%) are also considered to usually initiate collaboration. Most of the Estonian universities have departments which are responsible for UBC and mediate relationships between university and businesses (e.g. ADAPTER program which is a network of Estonian universities, research & development organizations, providing a quick and reliable link for companies and organizations to the research & development community).¹

On the other hand, academics perceive that current students and external intermediaries are those stakeholders that less often initiate UBC. Students are playing quite a passive role in UBC as they do not have enough experience, knowledge and network to initiate cooperation projects.

¹University of Tartu (2019). Retrieved from: <https://en.eik.ut.ee/for-business/adapter/>

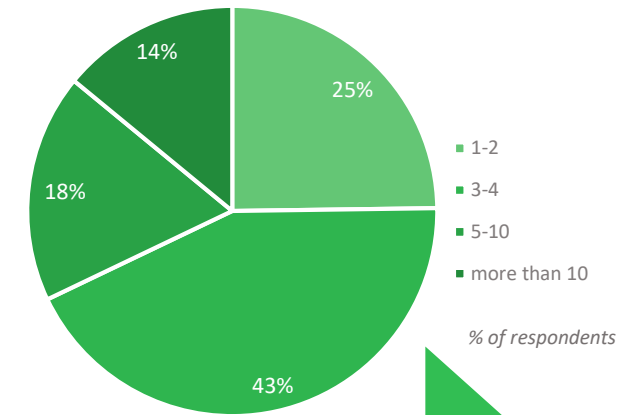
Location of cooperating partners

Location of business partners



Academics in Estonia focus on collaboration with regional (42%) and national (68%) businesses. Only 21% of academics indicate significant or high cooperation with international businesses. Most often, international businesses have their R&D centers elsewhere rather than in Estonia. Thus, the possible knowledge intensive contribution is less evident and manifests itself in lower cooperation rates.

Number of business partners

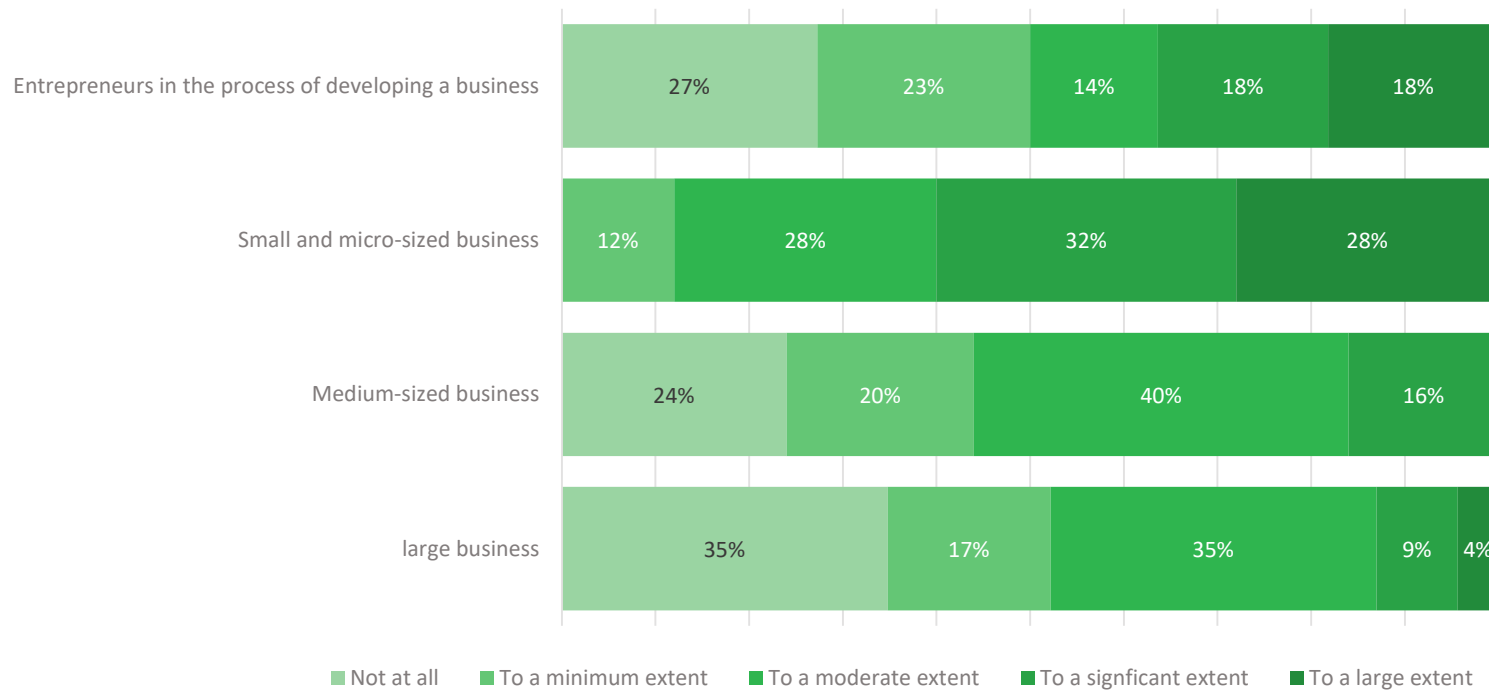


More than two thirds of Estonian academics (68%) cooperate with up to four businesses or less while 18% have established relations with 5- 10 business partners and 14% with more than 10 businesses. UBC requires effort and is time-consuming. Estonian academics do not have resources to devote themselves to multiple cooperation partners. If the cooperation is related to the execution of funded grants or projects, then cooperation with businesses is more active.

Size of cooperating partners

Size of cooperating partner

'With whom do you collaborate?' – as answered by cooperating academics



The smaller the business the more likely it is to cooperate with an Estonian academic. 60% of cooperating academics in Estonia engage to a significant or large extent with small- and micro-sized businesses. This cooperation is reduced to 16% for medium businesses and to 13% for large businesses.

94% of all companies registered in Estonia are small and micro-sized businesses.² This is leading to the fact that Estonian academics cooperate mostly with these companies as their number is the highest.

36% of universities report collaboration with entrepreneurs in the process of developing their business. Estonia has one of the highest rates of startups per capita in Europe and is called "Startup Paradise".³ Nascent entrepreneurs being in the process of developing business often end up in university-based technoparks and (pre)incubators and get infrastructural and scientific support from academia. These enterprises most often fall into the category of small and micro-sized businesses.

²Statistics Estonia (2018). Retrieved from: https://www.stat.ee/artikkel-2018-05-23_majandususte-arv-mullu-suurenes

³e-Estonia(2017).Retrieved from: <https://e-estonia.com/why-is-estonia-a-startup-paradise/>

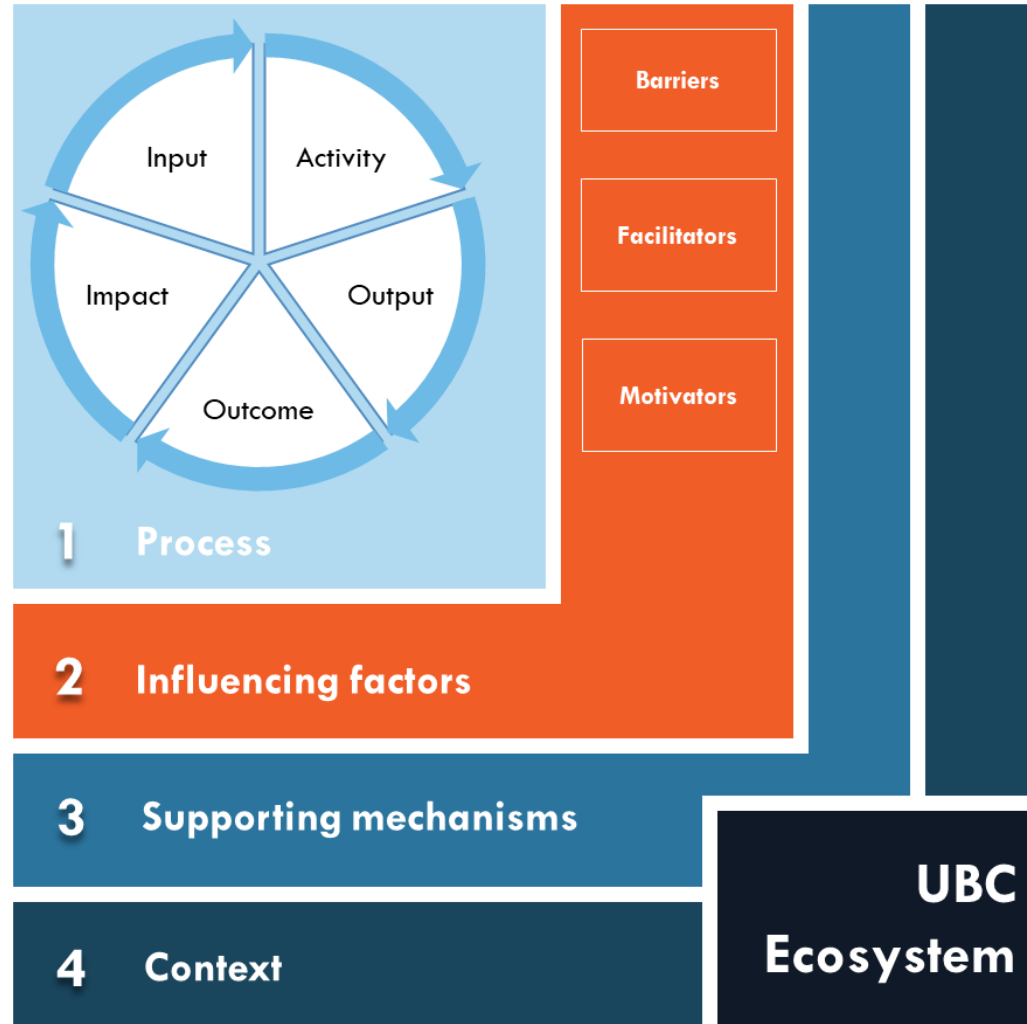
Factors influencing UBC

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

Barriers

What is inhibiting your cooperation with business?’ – as answered by academics



	Academics collaborating with business	Academics not collaborating with business
1.	Limited resources of SMEs	Limited resources of SMEs
2.	Limited business funding for UBC	Insufficient work time allocated by the university for academics' UBC activities
3.	Lack of government funding for UBC	Differing motivation / values between university and business
4.	Insufficient work time allocated by the university for academics' UBC activities	The focus on producing practical results by business
5.	The focus on producing practical results by business	Lack of business funding for UBC
<i>Lowest</i>	UBC conflicts with my teaching and research responsibilities	Frequent staff turnovers within my university or the business

The perspectives of cooperating and non-cooperating Estonian academics differ in relation to barriers hindering UBC. Cooperation needs resources from the both sides. As businesses are acting in a situation of limited resources, the academics perceive that businesses do not have enough idle resources that could be devoted to cooperation activities.

Both cooperating and non-cooperating academics are primarily hindered by the limited resources of SMEs. Moreover, lack of funding is at the top of the list for cooperating academics while internal and cultural aspects prevail as barriers for the non-cooperating academics. The UBC projects are expensive for businesses often due to an institution's overheads. Also, as UBC is not a priority for academics, they do not feel the urge to be competitive in price and are following "prestige pricing" principles, which makes their services more expensive compared to the market. It is accompanied with a perception that businesses do not have enough resources to consume university offered services.

While cooperating academics point out that conflict of UBC with teaching and research responsibilities is the weakest barrier, for non-cooperating counterparts frequent staff turnovers within university or business is the weakest barrier.

Estonian academics perceive most barriers higher than their European counterparts, with some exceptions.

Limited resources of SMEs is the main barrier for both Estonian and European academics, but this is more accentuated in Estonian case.

Moreover, lack of business and government funding for UBC are also considered to be higher in the Estonian higher education system. Government spending on science and research represent less than 1% of GDP.⁴ Almost half of Estonia research & development expenditure comes from business sector positioning Estonia on the average level among the EU members.⁵ This indicates that expenditure on UBC is moderate both from government and business side.

The focus on producing practical results by business and limited absorption capacity of businesses also exceed the EU average significantly. Businesses are mostly interested in applied research and do not expect basic research from academia as, in their view, it lacks competency to transform research knowledge into a business opportunity.

Frequent staff turnover and conflicting of UBC with teaching and research are the weakest barriers for both groups, but they are also less hindering for Estonian academics than for European academics.

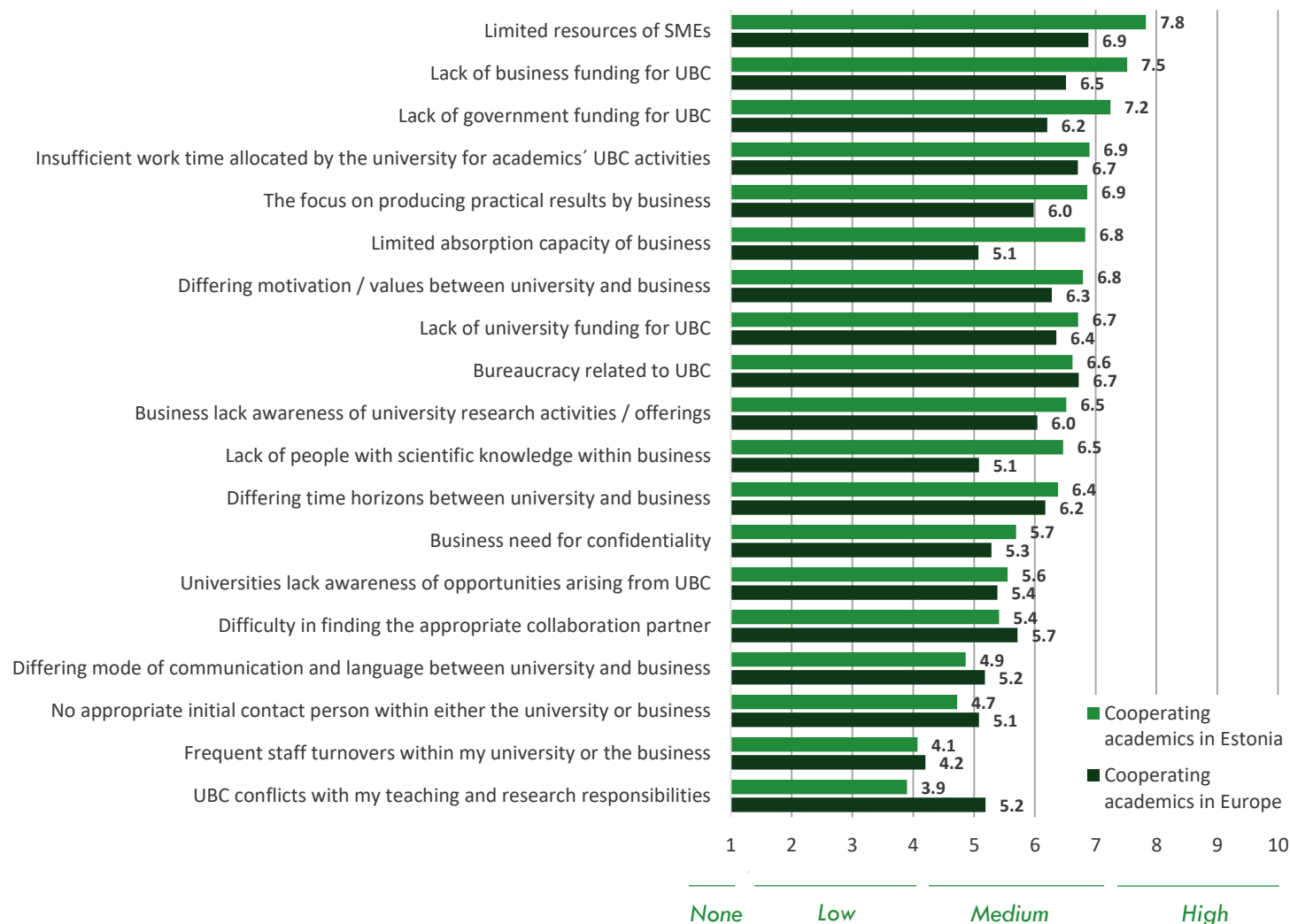
⁴Novaator (2018). Retrieved from: <https://novaator.err.ee/886116/kokkulepe-teadus-saab-rahajuurde-kuid-paranema-peab-koostoo-ettevotlusega>

⁵Statistics Estonia (2018). Retrieved from: https://www.stat.ee/article-2018-05-08_research-and-development?highlight=research%2CGDP

Barriers hindering UBC

Barriers

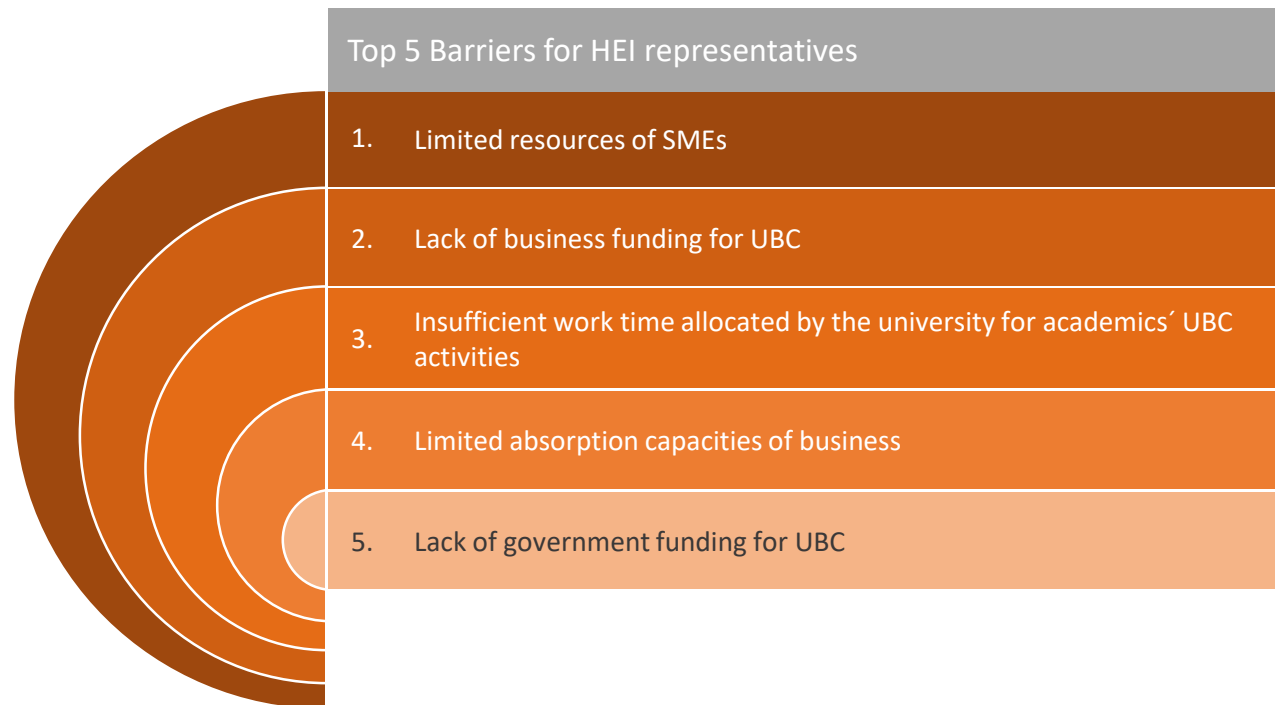
'What is inhibiting your cooperation with business?' – as answered by cooperating academics



Barriers hindering UBC

Barriers

'What is inhibiting your HEI cooperation with business?' – as answered by HEI representatives



Estonian HEI representatives are inhibited to engage in UBC mainly by a lack of resources. Just as for the cooperating academics, the limited resources of SMEs emerges as the major barrier to UBC. UBC is driven by big companies and corporations as a strategic partnership rather than by SMEs, which do not have enough foundation for long-term investments and taking risks.⁶

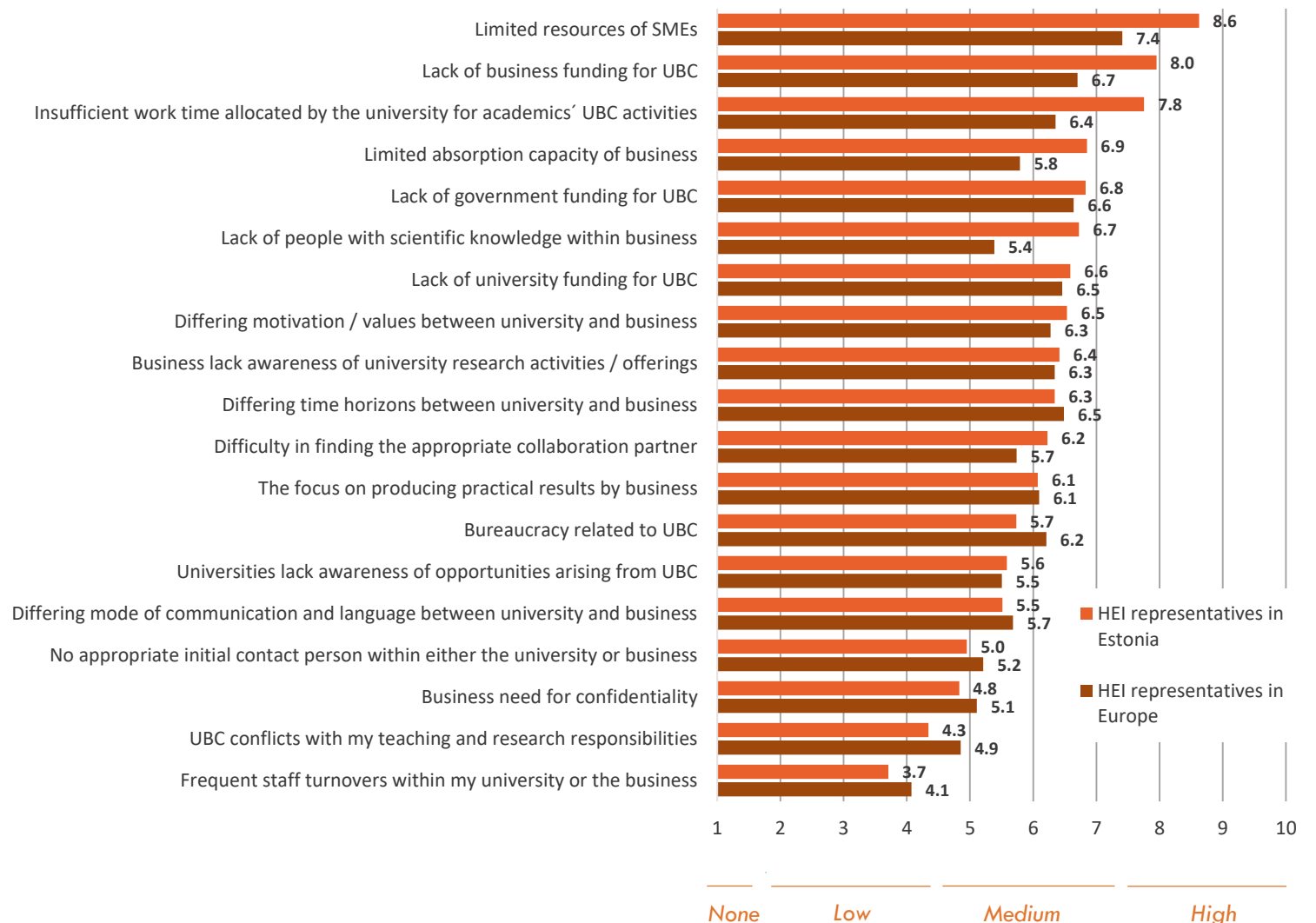
In the same vein, lack of business funding for UBC and insufficient work time allocated by the university for academics' UBC activities are other two notable barriers. The main responsibility of academic staff in Estonia is research and education – cooperation with businesses is lower on the priority list.

Moreover, lack of government funding is another barrier, though not rating as high as other funding-related obstacles.

Barriers hindering UBC

Barriers

‘What is inhibiting your cooperation with business?’ – as answered by academics and HEI representatives



For both Estonian and European HEI representatives resources and time related factors are the most inhibiting, though the barriers are perceived as more aggravating for Estonians.

Bureaucracy related to UBC is significantly less inhibiting for Estonian HEI representatives. Estonia is named the world's foremost digital society with minimal level of unnecessary bureaucracy⁷ and government is actively working on the so-called Zero—Bureaucracy initiative to reduce the bureaucratic burden on businesses and in the public sector.⁸ This shows that Estonia has been constantly working on reducing bureaucratic pressure, which in turn has an effect on UBC as well.

The frequent staff turnover within the university or in businesses is the weakest UBC barrier for both groups and it is less of a barrier for Estonian HEI representatives. Estonia is a small country and relationships between cooperating partners are enduring regardless of affiliation. Thus, staff turnover does not affect UBC and does not hinder partnerships.

⁷e-Estonia (2017). Retrieved from: <https://e-estonia.com/all-estonian-public-e-services-to-function-invisibly/>

⁸Ministry of Economic Affairs and communications (2019). Retrieved from: <https://www.mkm.ee/en/zero-bureaucracy>

Drivers stimulating UBC

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.


The main factors that facilitate UBC for both Estonian academics and HEI representatives are relatively similar.

Four out of the five facilitators focus on the relationship aspect of UBC, highlighting the importance of mutual trust, mutual commitment, shared goal and existence of prior relations for successful UBC.

The existence of funding to undertake UBC is also recognised by both groups, though perceived as of more importance by academics. As mentioned earlier in the report, research & development activities are under-funded in Estonia, and academics feel that in particular as they cannot focus on activities that are not covered by science funding.

Facilitators

'What is facilitating your cooperation with business?' – as answered by academics and HEI representatives



	Academics cooperating	HEI representatives
1.	Existence of funding to undertake the cooperation	Existence of mutual commitment
2.	Existence of a shared goal	Existence of a shared goal
3.	Interest of a business in accessing scientific knowledge	Existence of mutual trust
4.	Existence of mutual trust	Existence of funding to undertake the cooperation
5.	Prior relation with the business partner	Interest of a business in accessing scientific knowledge

Drivers stimulating UBC

European and Estonian perceptions of UBC facilitators are somewhat similar.

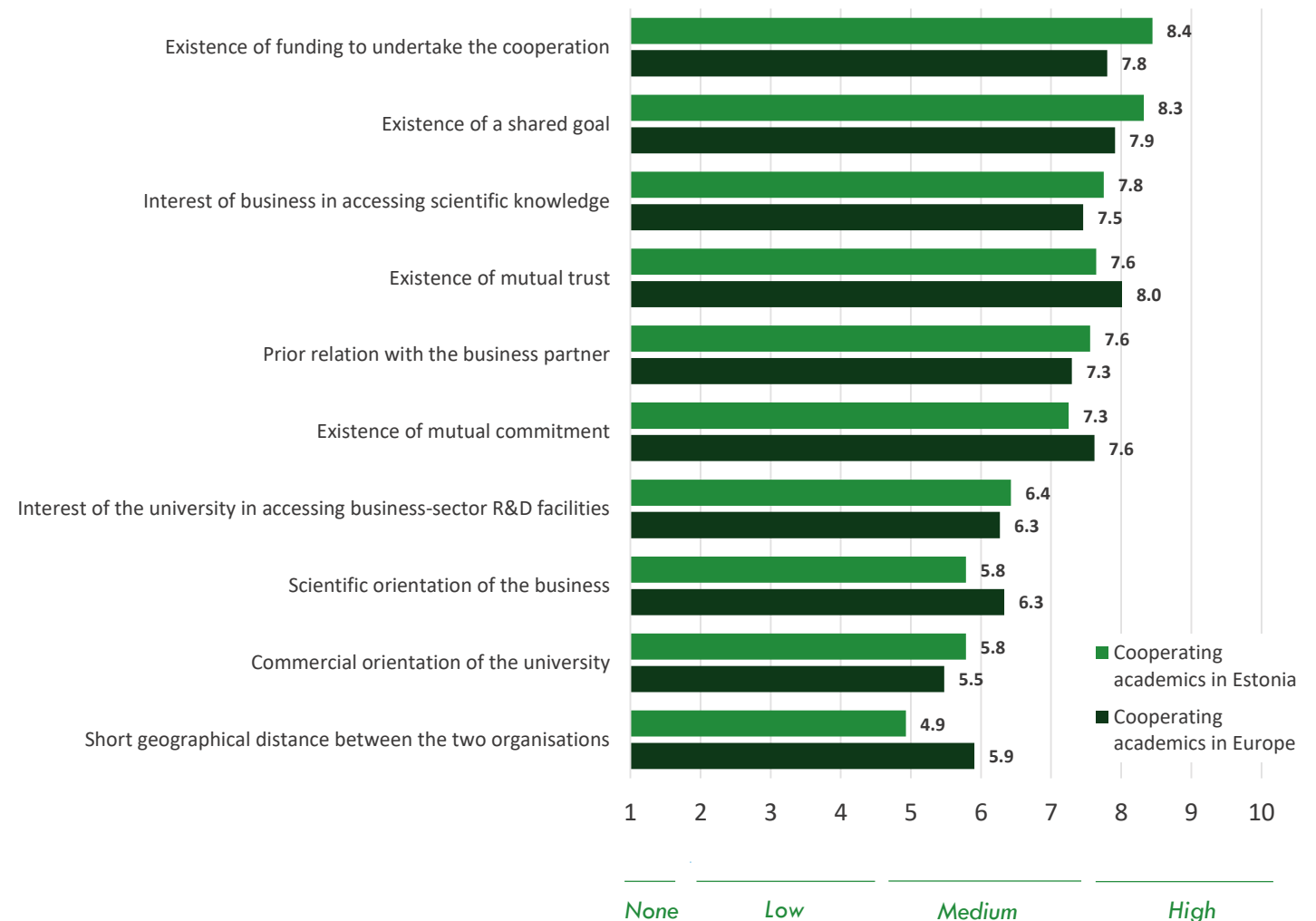
For both groups, the most important facilitators are those related to funding and the relationship dimensions. The academics highlighted the existence of mutual goal and trust and a prior relation with the business partner to be among the most important facilitators positively influencing their cooperation with businesses. Indeed, academics in Estonia are open for cooperation if partnership activities with businesses are funded, goals are aligned, trust is established and there is prior positive cooperation experience.

The interest of the business in accessing scientific knowledge emerges as a further facilitator for Estonian academics. In order for academics to devote themselves to cooperation projects, they want to be sure that businesses are ready to apply results of scientific cooperation into practice.

Short geographical distance between the organisations is the least important facilitator for both groups. Estonia is a small country and science clusters and businesses are concentrated in the same regions. Therefore, geographical distance is not hindering UBC.

Facilitators

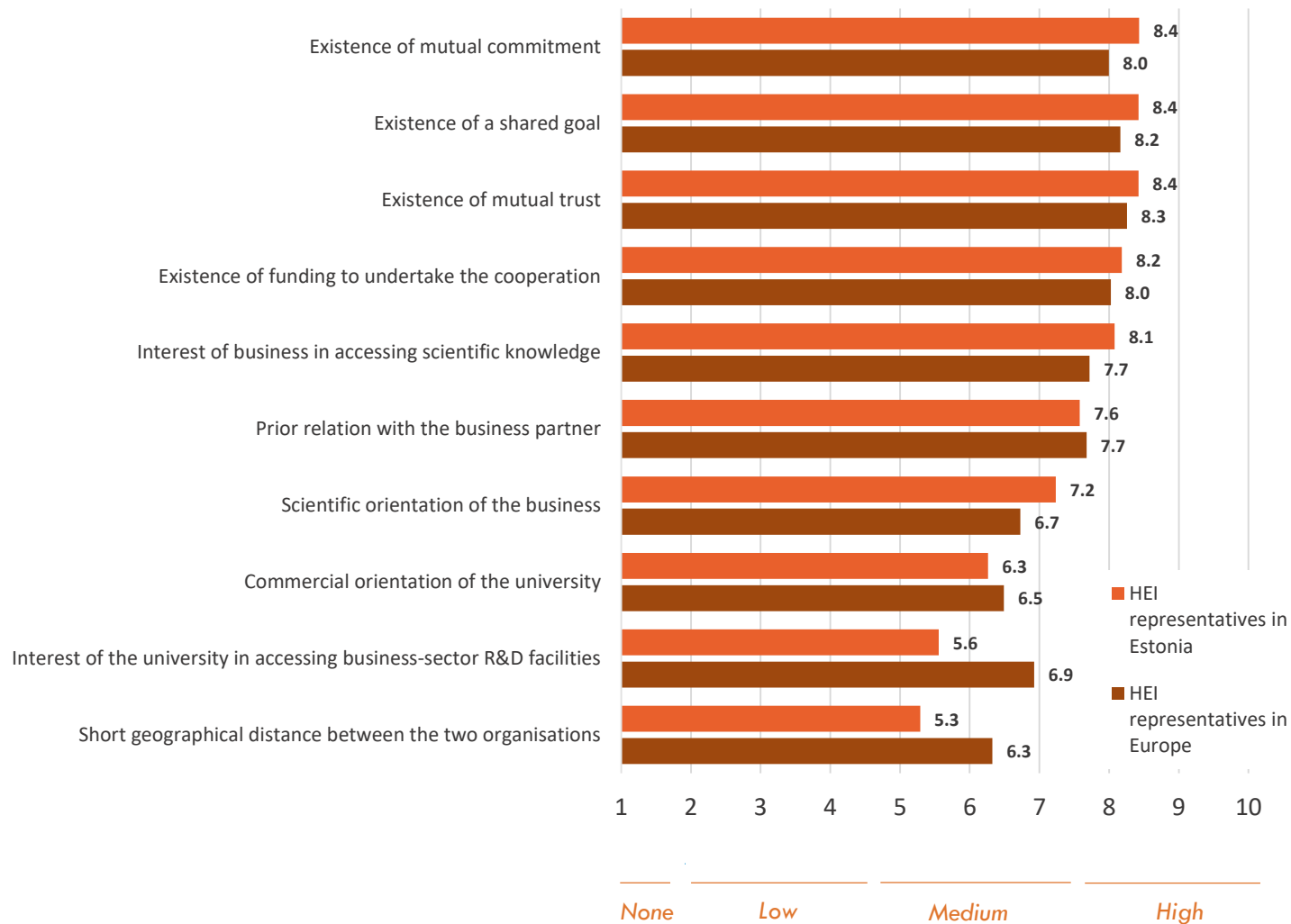
'What is facilitating your cooperation with business?' – as answered by cooperating academics



Drivers stimulating UBC

Facilitators

'What is facilitating your cooperation with business?' – as answered by HEI representatives



Estonian HEI representatives and their European counterparts perceive the facilitators in a very similar way.

For both groups, the most important facilitators also relate to the relationship aspects of UBC and funding. This is consistent with the perception of Estonian academics.

The interest of business in accessing scientific knowledge also plays an important role. HEIs are increasingly adding UBC in their strategic agendas. For example, University of Tartu reports that 10.4 million euros was the value of business contracts signed and more than 60 enterprises were involved in the University of Tartu partnership programmes in 2018.⁹ The increasing interest of HEIs towards UBC should be still supported by the interest of business to access and apply scientific knowledge.

Drivers stimulating UBC

Estonian cooperating and non-cooperating academics have different views on motivators that drive them to undertake collaboration with business.

While cooperating academics highlight teaching and research motivations, such as improving teaching and gaining new insights, their non-cooperating counterparts perceive the drivers for UBC to be the improvement of graduate employability and provision of funding. UBC is a great source of examples to use in teaching activities and provides ideas for research which stem from genuine needs of businesses.

Furthermore, both cooperating and non-cooperating academics are motivated by the willingness to contribute to the mission of the university. Despite the fact that performance of academics is not evaluated by the degree of UBC, partnerships with businesses are increasingly becoming an important point of strategic agendas of HEIs and mission of the HEIs to contribute to the development of the country.

Motivators

'What motivates you to cooperate with business?'- as answered by academics

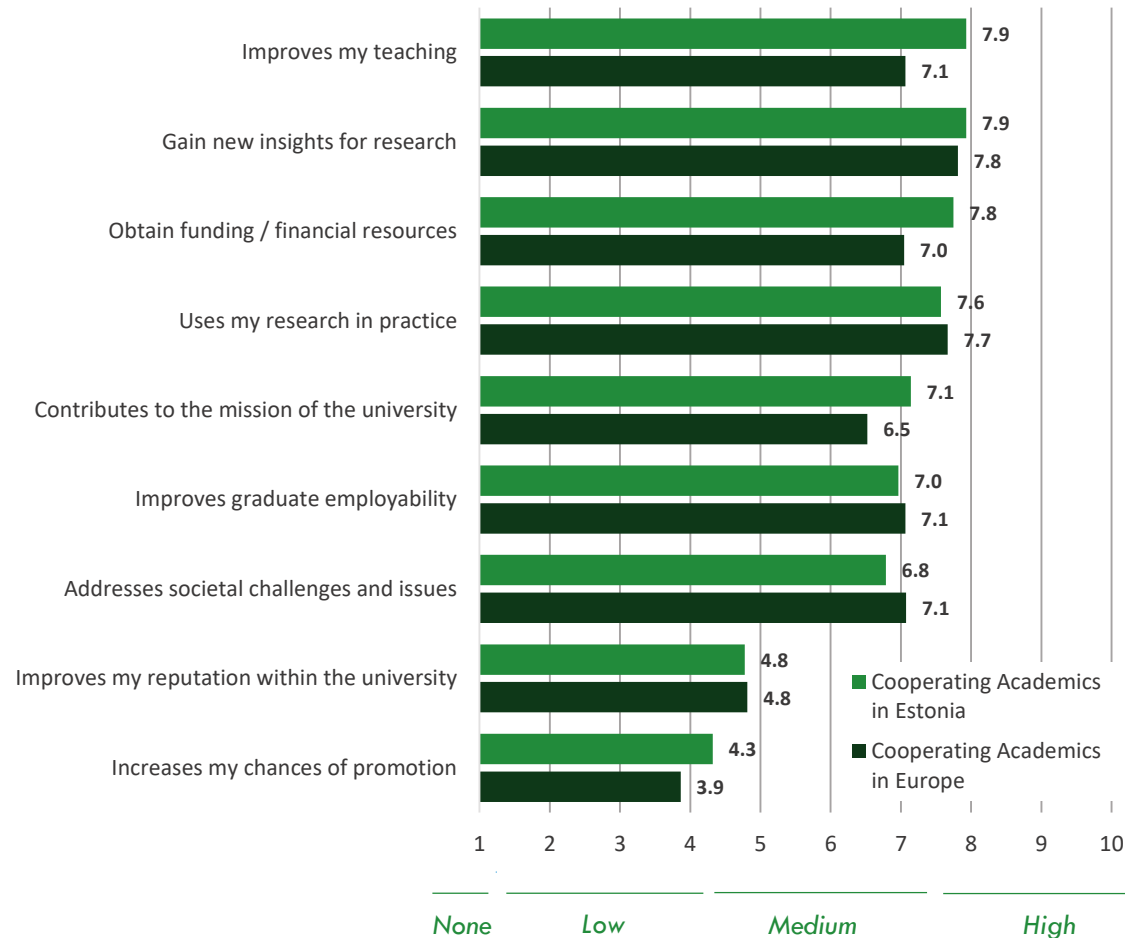


	Academics who cooperate	Academics who <u>do not</u> cooperate
1.	Improve my teaching	Improve graduate employability
2.	Gain new insights for research	Provides funding / financial resources
3.	Obtain funding / financial resources	Contribute to the mission of the university
4.	Use my research in practice	Addresses societal challenges and issues
5.	Contribute to the mission of the university	Improves my teaching

Drivers stimulating UBC

Motivators

'What motivates you to cooperate with business?'- as answered by cooperating academics



The perceptions of UBC motivators of Estonian and European academics are somewhat similar. Both groups have similar perceptions on the importance of UBC for gaining new insights for research and using research in practice.

On the other hand, Estonian academics rate significantly higher the possibility to improve teaching via UBC. What is more, this is the primary motivator for Estonian academics. Estonian academics see UBC as a source of examples they can use during teaching activities.

Furthermore, Estonian academics value the possibility to obtain funding higher than EU counterparts.

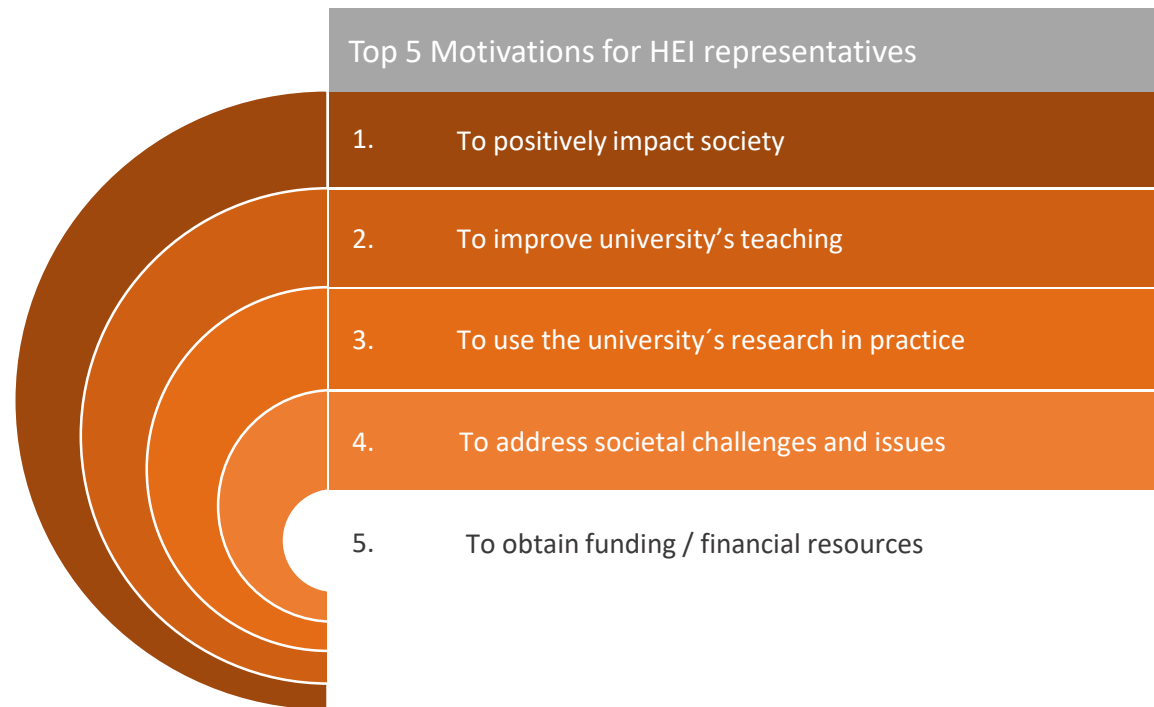
Notably, promotion and reputation related motivators are the weakest drivers stimulating UBC for both groups. Promotion of academics in Estonia is greatly related to the number of the publications in highly ranked journals, rather than the level of UBC.

Drivers stimulating UBC

HEI representatives are motivated by societal aspects as well as teaching- and research-related aspects of UBC. They are further motivated by the possibility of obtaining funding. UBC represents one source of making an impact on the development of the country, as well as funding for HEIs.

Motivators

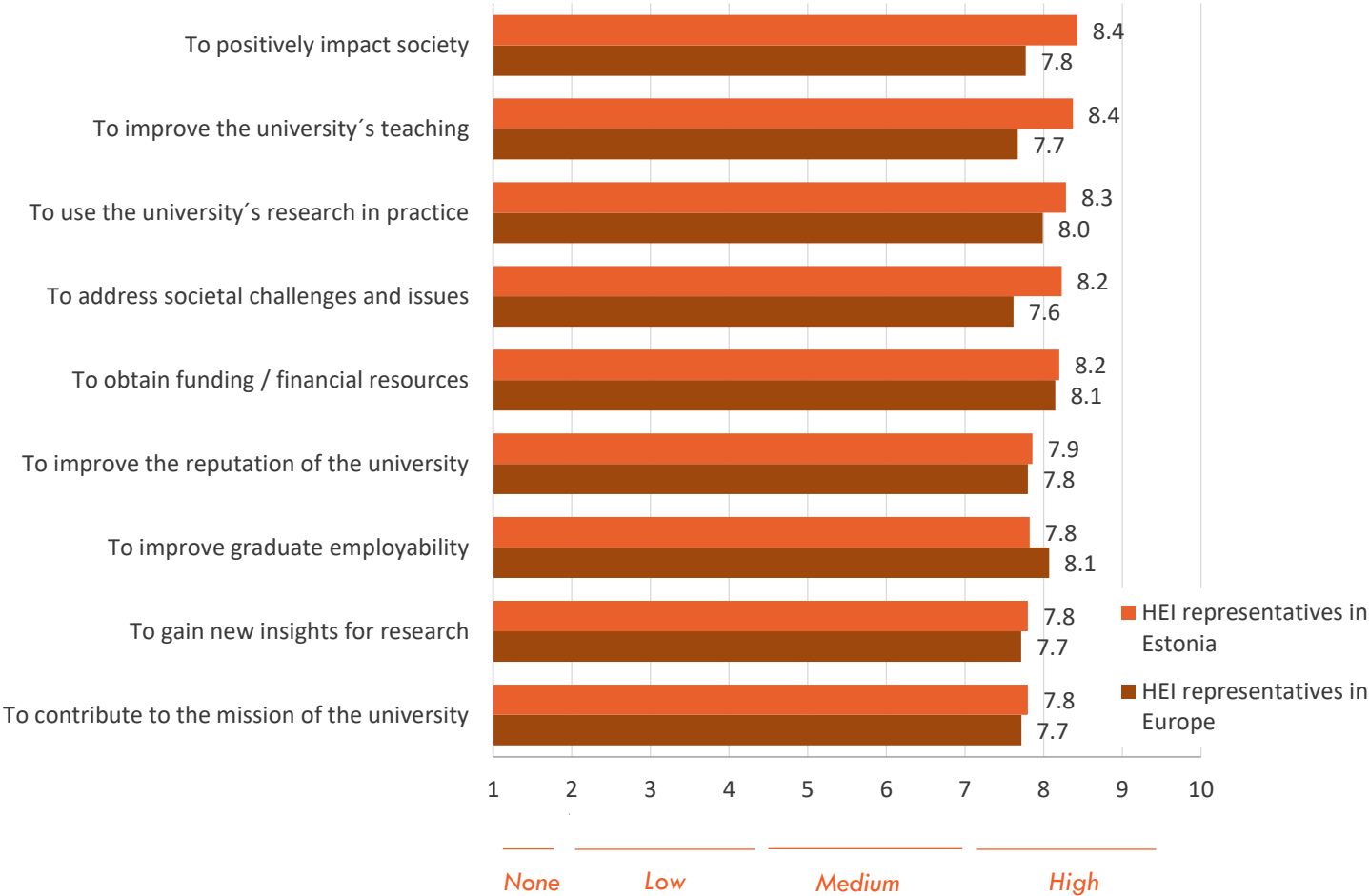
'What motivates your HEI to cooperate with business?'- As answered by HEI representatives



Drivers stimulating UBC

Motivators

'What motivates your HEI to cooperate with business?'- as answered by HEI representatives



Estonian HEI representatives perceive motivators relatively similarly to their European counterparts.

Impacting the society positively is perceived as the strongest motivator for Estonian HEI managers and it exceeds the EU average. HEIs main role is perceived to be the contribution to the community through research and education.

Improving the teaching and using research in practice are further important motivators, which are also higher than it is the case for other HEI representatives in Europe.

Addressing societal challenges and obtaining funding are also rated high for Estonian HEI representatives.

Benefits of UBC

Estonian academics and HEI managers have different perceptions about the stakeholders that benefit from UBC.

While academics perceive businesses as the stakeholder group that benefits from UBC the most, for HEI representatives these are the students. Academics are executing UBC and thus see how the cooperation benefits businesses while HEI representatives see that UBC contributes to student development through teaching activities.

Academics perceive the society to be benefiting the least from UBC while HEI representatives think the same for the government.

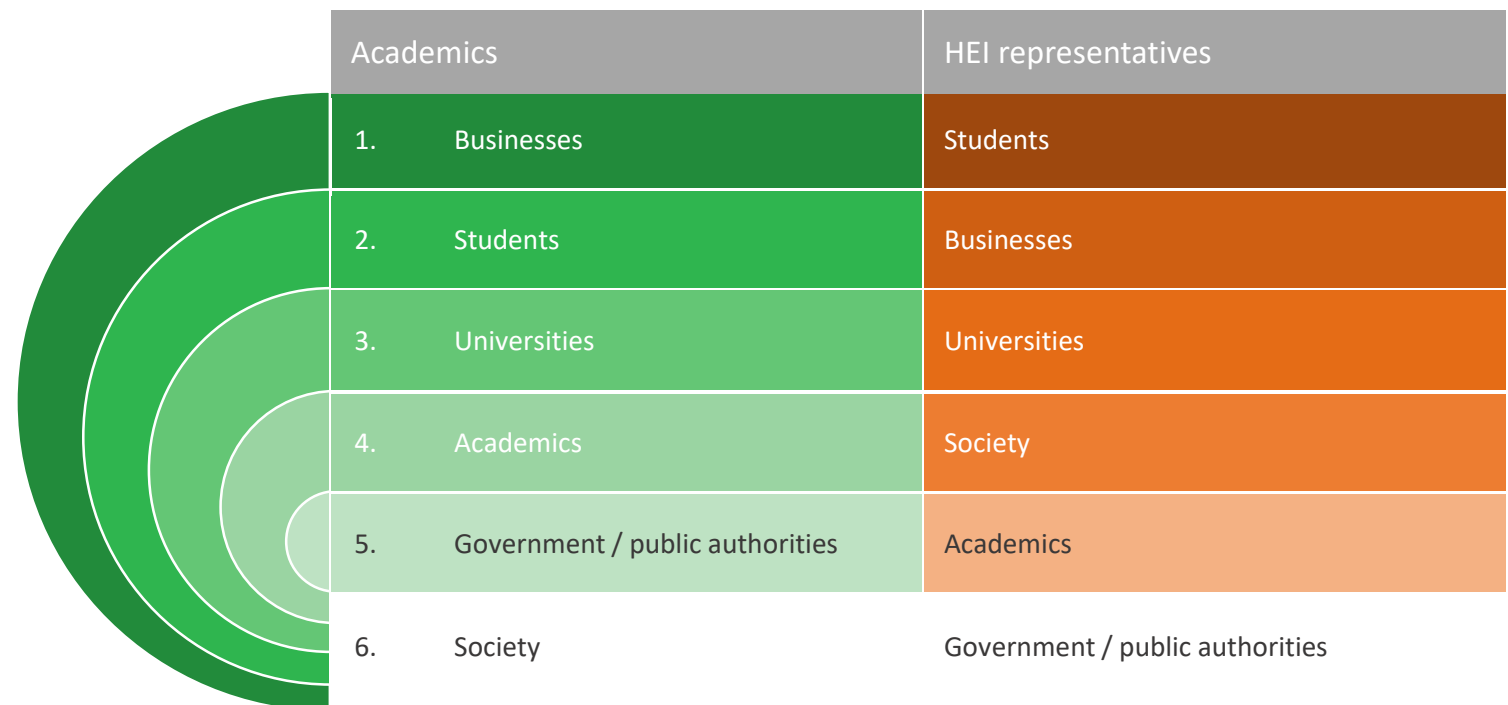
Benefits are the perceived positive outcomes (financial and non-financial) from undertaking UBC as relevant for the different stakeholder groups that can potentially participate in UBC.

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

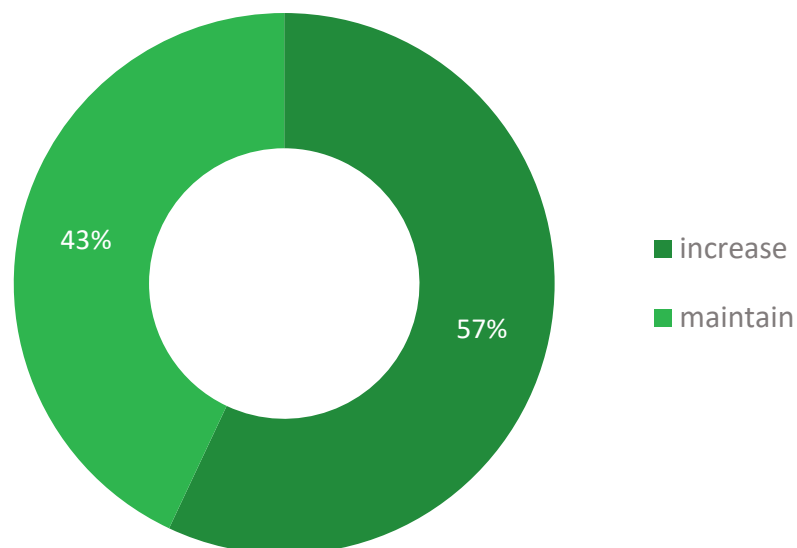
'Who receives the benefits of UBC?' - as answered by academics and HEI representatives



Future intentions

Future UBC intentions – Estonia

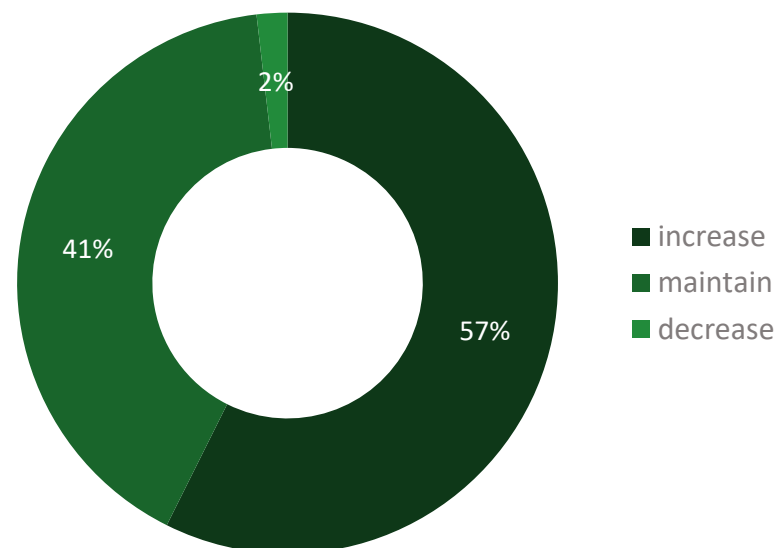
As answered by Estonian cooperating academics



Estonian academics showed a very strong commitment to the UBC, with 43% of them expecting to maintain and 57% increase their cooperation. As UBC is in strategic plans of universities, the academics see that it might affect their performance in the future and they seek to diversify their profile.

Future UBC intentions – EUROPE

As answered by European academics



Academics in Europe expressed the same commitment, with 57% of responding academics expecting to 'increase' their cooperation.

Willingness to recommend UBC

The willingness of Estonian cooperating academics to recommend to a colleague to engage in UBC is very high both for research and education domains.

Estonian academics are more satisfied with UBC in research than their European counterparts (NPS=34). While 55% of them would promote it positively, 21% would do it negatively.

Both Estonian and European academics are less satisfied in education-related UBC (NPS = 30 for Estonian and -13.8 for European academics). Still, in Estonian sample the NPS is positive, showing that there are more promoters than detractors. Estonian academics often involve business in teaching activities and finding topics for final theses in cooperation with businesses.

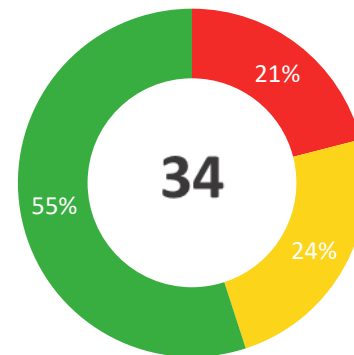
Willingness to recommend to an academic colleague cooperation with business in R&D and education

As answered by academics

	Detractors	Passives	Promoters	Net promoter score
Academics cooperating in E&T	28%	14%	58%	30
Academics cooperating in R&D	21%	24%	55%	34

Satisfaction in cooperation with businesses (net promoter score)

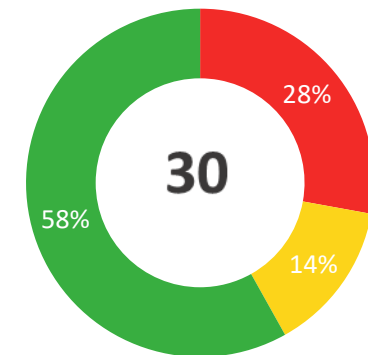
Academics cooperating in research



■ Detractors ■ Passives ■ Promoters

European academics' NPS result: 17

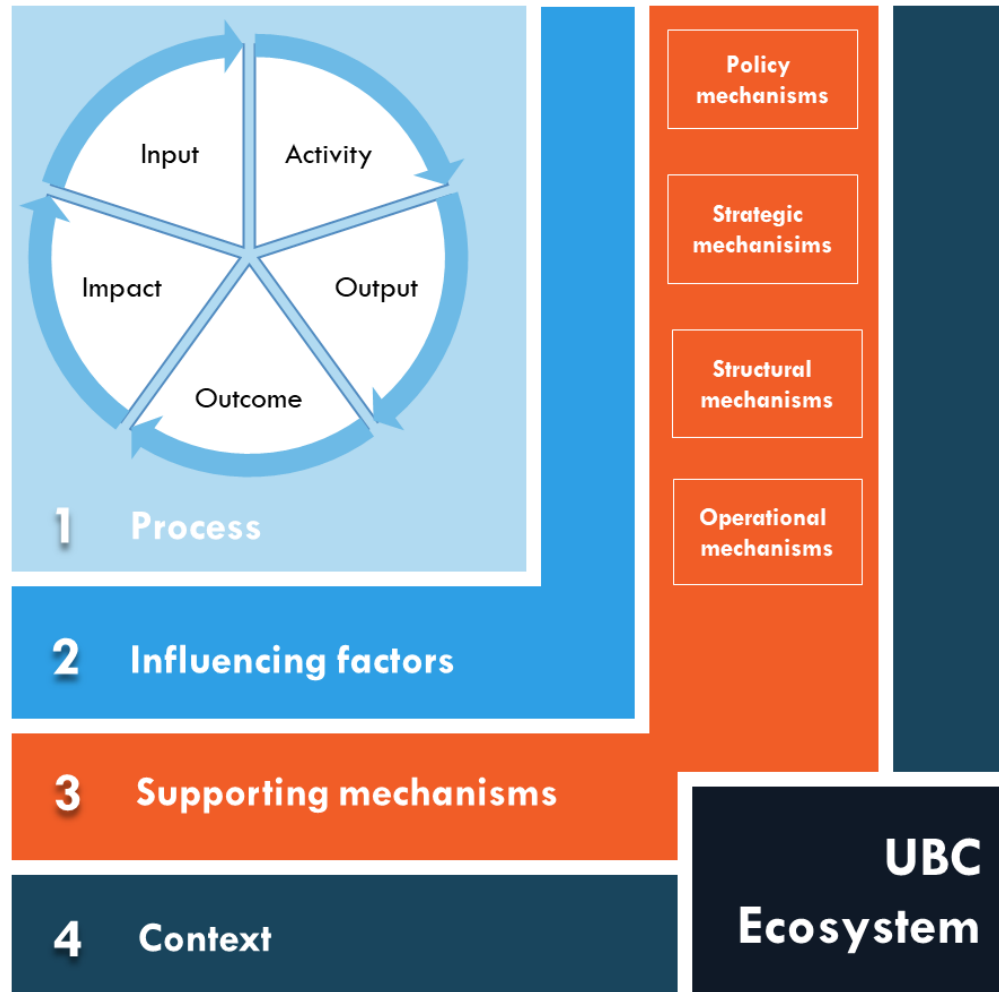
Academics cooperating in education



■ Detractors ■ Passives ■ Promoters

European academics' NPS result: -13.8

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

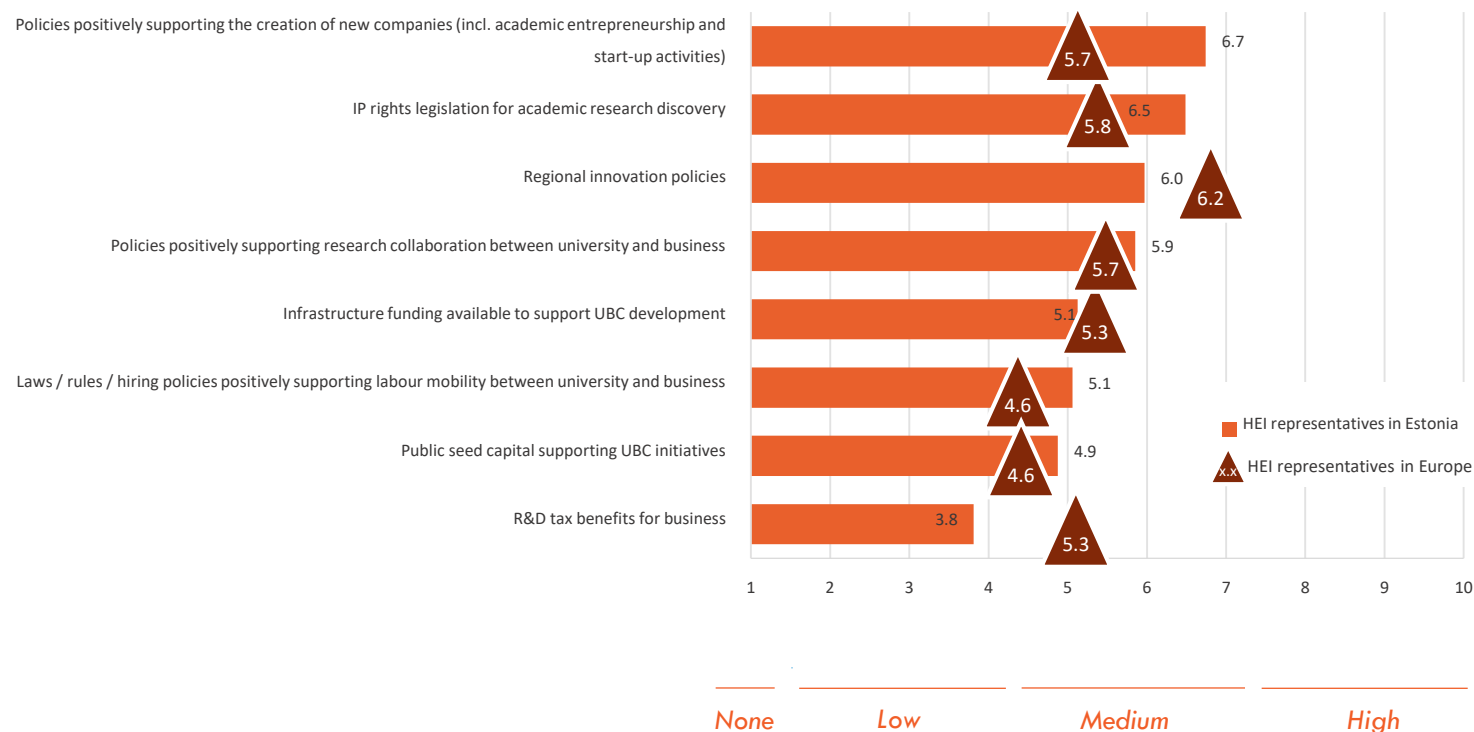
This section outlines the extent to which UBC supporting mechanisms are developed in this sample from the HEI perspective.

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

Supporting mechanisms for UBC

Policy mechanisms

'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



Estonian HEI representatives perceive policy mechanisms to be developed to a medium level. These perceptions are somewhat similar to those of their European counterparts.

Policies positively supporting the creation of new companies are perceived as the most developed mechanism by Estonian HEI representatives (6.7), exceeding thus the EU average. As mentioned before, starting a company in Estonia is quite easy - it takes only about 20 minutes to found a company online and 99% of banking is done online.¹⁰

IP rights legislation for academic research discovery are also substantially developed (6.5). Many universities have a strong support for protecting IP and patenting inventions. For example, University of Tartu is helping scientists to apply for a patent and help with commercialisation of intellectual property.¹¹

R&D tax benefits for businesses is perceived as the least developed mechanism by Estonian HEI representatives. This is simply due to the fact is that there are no R&D tax benefits for businesses in Estonia.

¹⁰Study in Estonia (2019). Retrieved from: <https://studyinestonia.ee/en>

¹¹University of Tartu (2019). Retrieved from: <https://en.eik.ut.ee/for-scientists/>

Supporting mechanisms for UBC

Strategic mechanisms

'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



Overall, the development of the strategic mechanisms is relatively lower in Estonian HEIs compared to the European average.

Notably, the paper strategies are more developed than implementation strategies, showing the official commitment of Estonian HEIs to UBC above the actual dedication of resources.

The least developed mechanisms relate to the reduction of teaching time (4.0) and the practice of recruiting business professionals into the careers/alumni office (4.2).

Supporting mechanisms for UBC

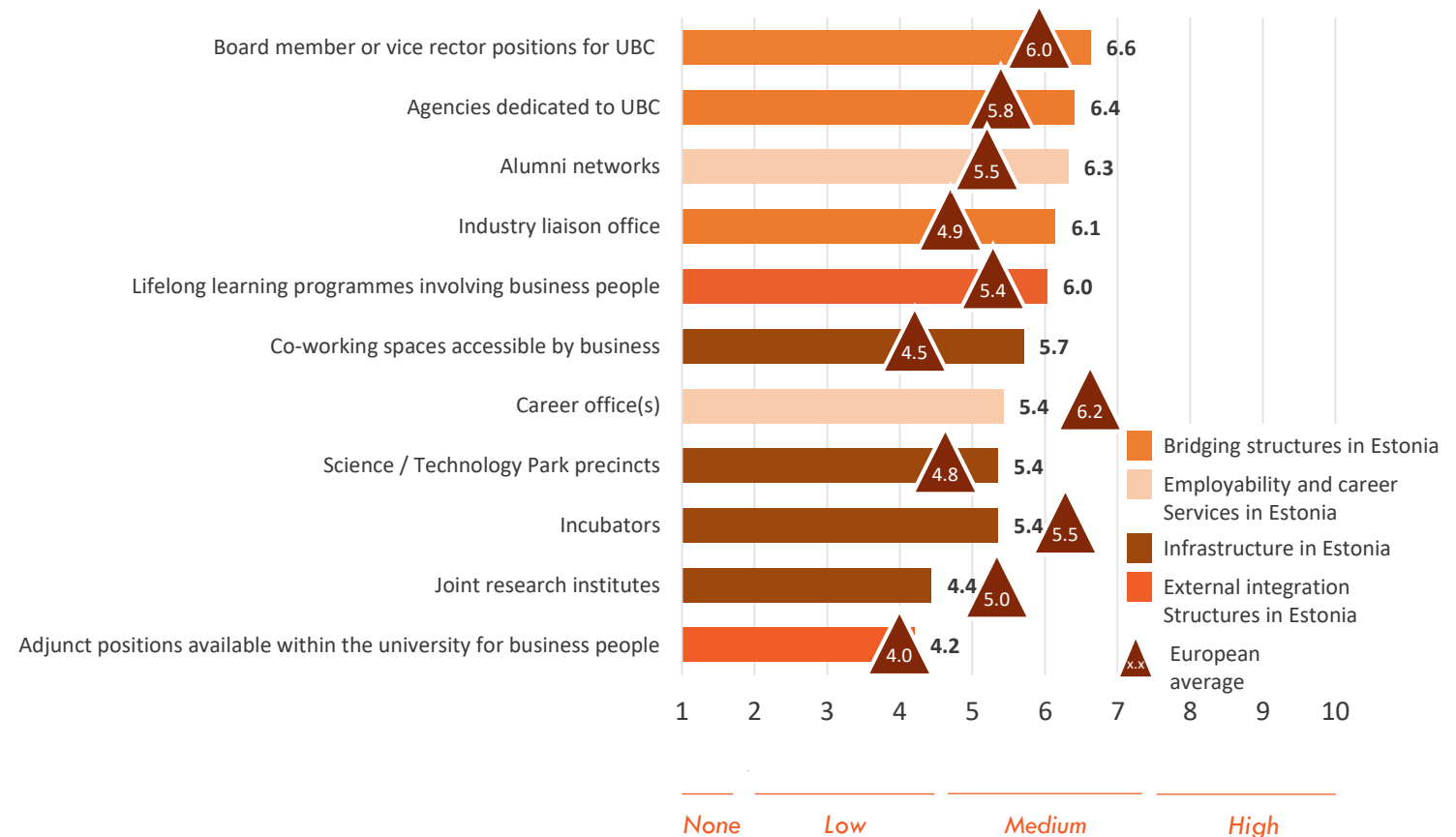
The development of structural mechanisms is quite different in Estonian HEI's than in EU ones.

The most developed structural mechanisms in Estonian HEIs include board member or vice rector positions for UBC and agencies dedicated to UBC and lifelong learning programmes (6.6 and 6.4 respectively).

In both European and Estonian HEI representatives, adjunct positions within the HEI for business people (4.2) are present to a limited extent. In Estonia, it is not common to create adjunct positions for business representatives.

Structural mechanisms

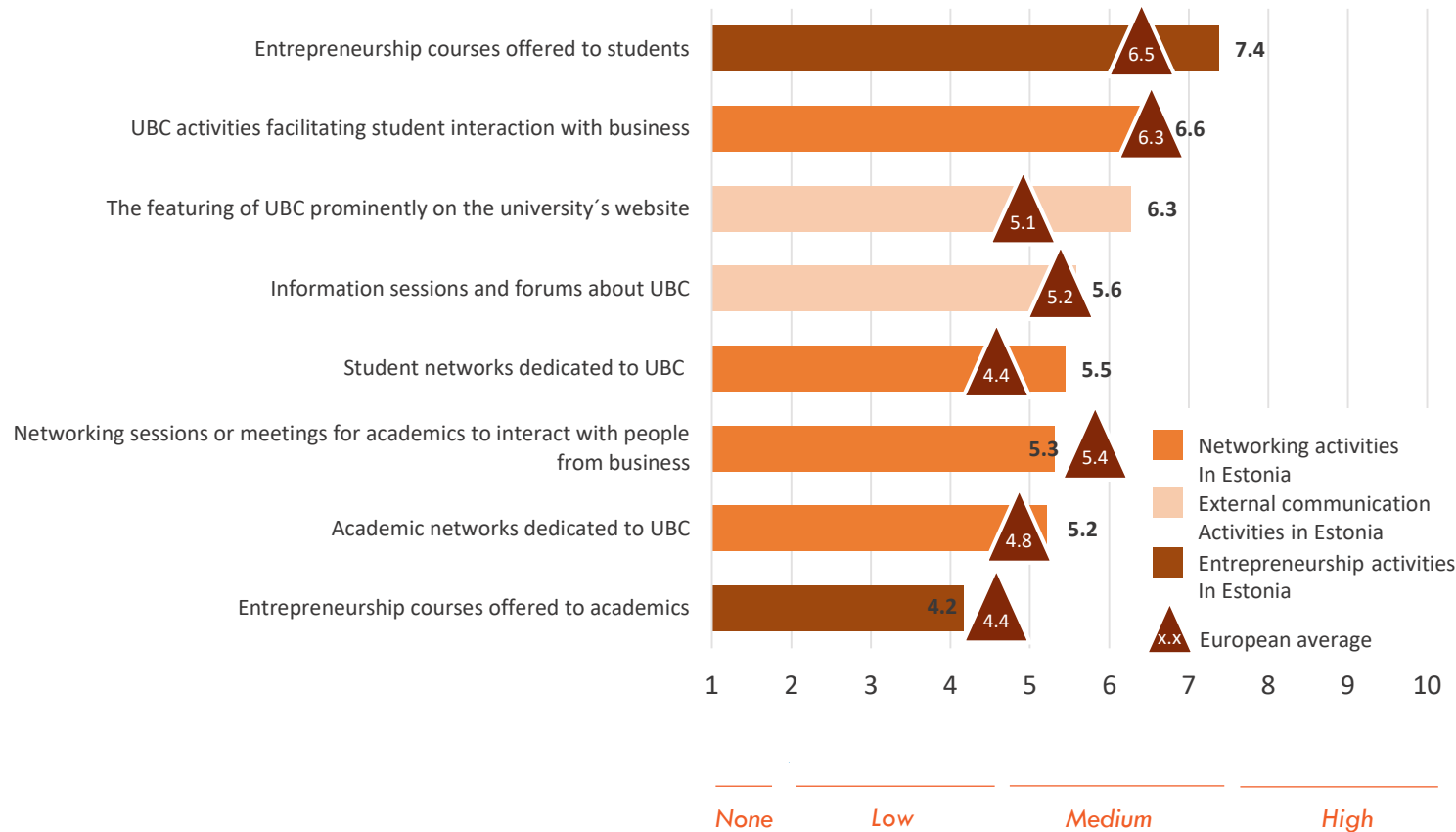
'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



Supporting mechanisms for UBC

Operational mechanisms

'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



The perspectives of Estonian and European HEI representatives differ with respect to the development of operational mechanisms.

Student-centred activities are the most developed operational mechanisms, with entrepreneurship courses offered to students (7.4) and UBC activities facilitating student interaction with businesses (6.6) ranked the highest. Ministry of Education and Research in Estonia is running a national program to develop entrepreneurship education on all education levels.¹² This has shifted focus of educational institutions to offer entrepreneurship courses to students including HEIs.

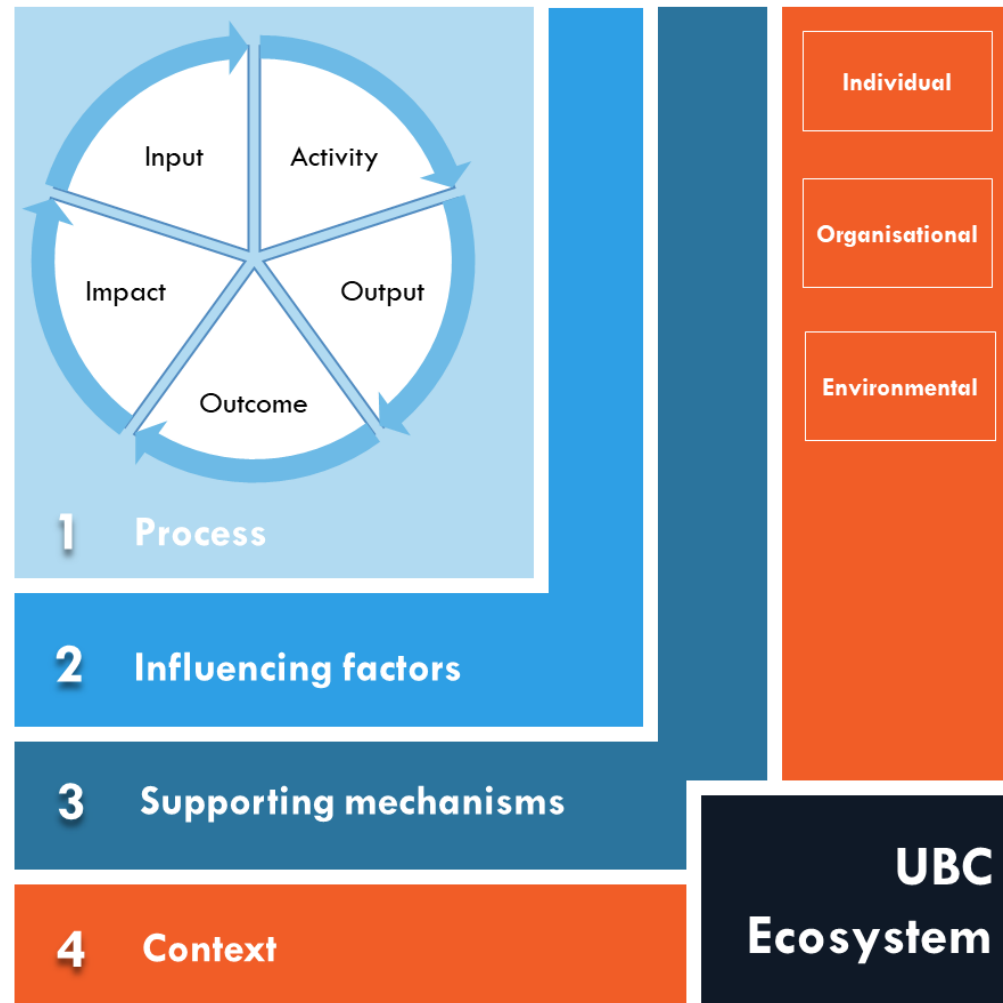
The least developed are academic-related mechanisms with academic networks scoring 5.2 and entrepreneurship courses scoring 4.4. Nevertheless, HEIs are moderately dedicated to building support systems to create networks and provide entrepreneurship education for academics.

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.).

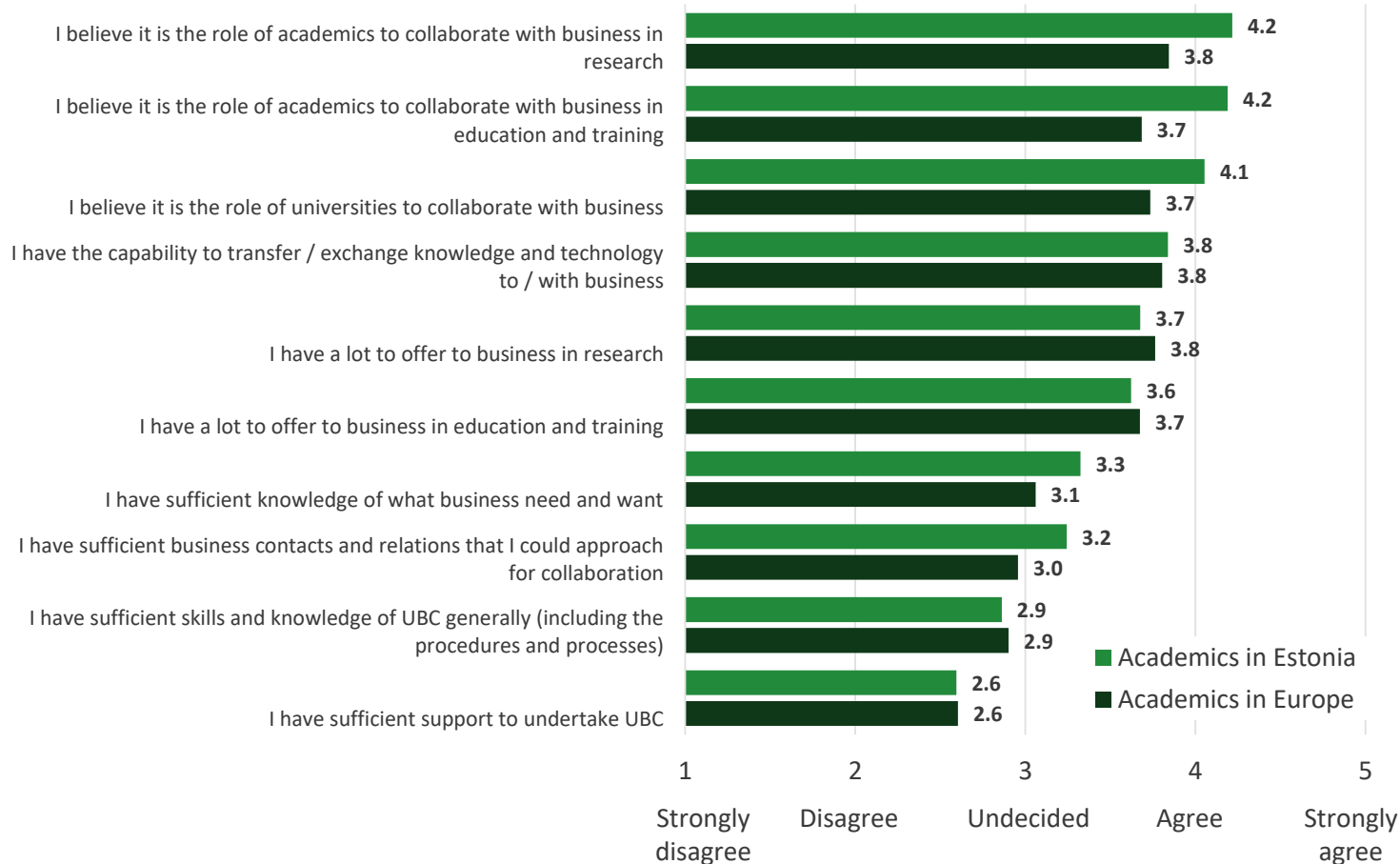
This section outlines how some contextual factors influence UBC in the country.



UBC capabilities

Capabilities for UBC

'To what extent do you agree or disagree with the following statements?' - as answered by cooperating academics



Estonian academics identified moderate capabilities for UBC and beliefs about the role of UBC. Their perception is similar to the one of their European counterparts.

Estonian academics identified their strengths in the ability to do research with/for business (4.1) and to exchange knowledge (3.8).

Yet, they perceive they lack knowledge on UBC in general, and overall have insufficient support (2.9 and 2.6 respectively) to undertake UBC.

Interestingly, academics think that they should initiate cooperation with businesses, while the majority of cooperation is initiated by businesses. For that reason, they feel that they do not know how to approach businesses and what kind of support mechanisms there are to enhance cooperation with businesses.

Context

European and Estonian academics have similar perception of contextual factor affecting UBC.

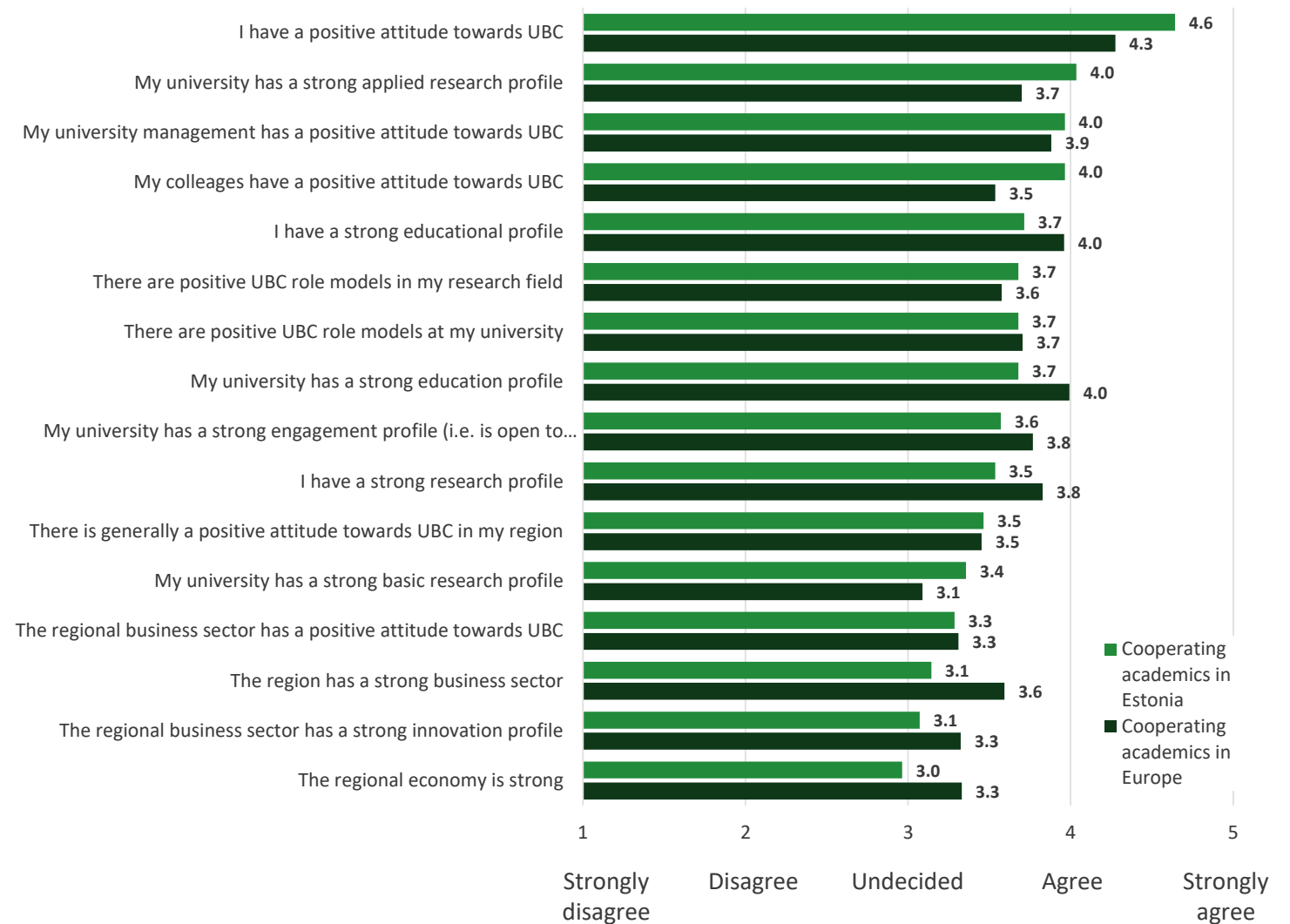
Both Estonian and European academics consider they have a positive attitude towards UBC (4.6) and their universities have a strong applied research profile (4.0).

Estonian academics report that they have positive UBC role models in their research fields and universities, similarly to the European average.

On the other hand, Estonian academics report that their regional economy is not as strong (3.0) and that the regional sector does not have as strong innovation profile as it is the case with the EU counterparts. Estonian business and innovation are focused in the capital of Estonia – Tallinn and the second largest city – Tartu. Other regions are rather poorly represented in terms of innovation and knowledge clusters.

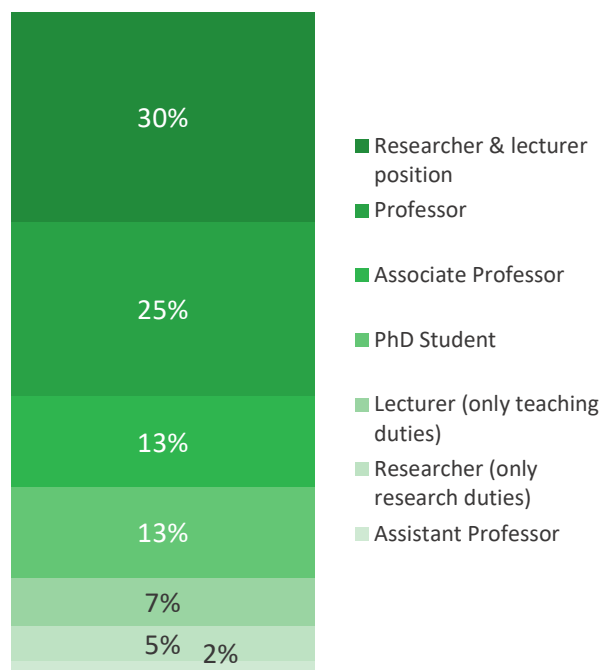
Contextual factors affecting UBC

'To what extent do you agree or disagree with the following statements?' - as answered by cooperating academics



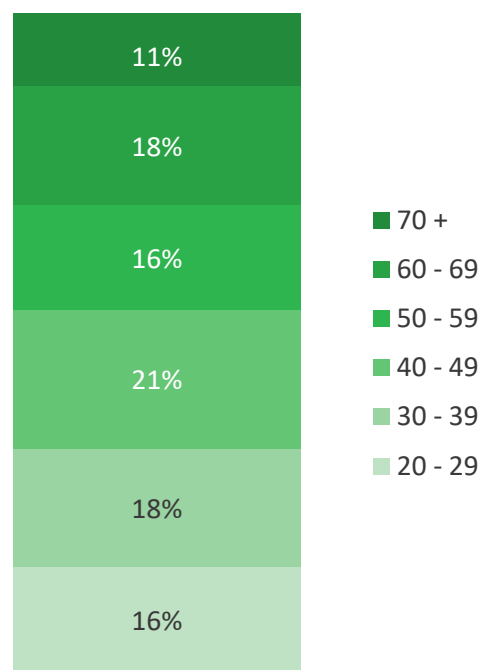
Respondent profile – academics

Position of respondent



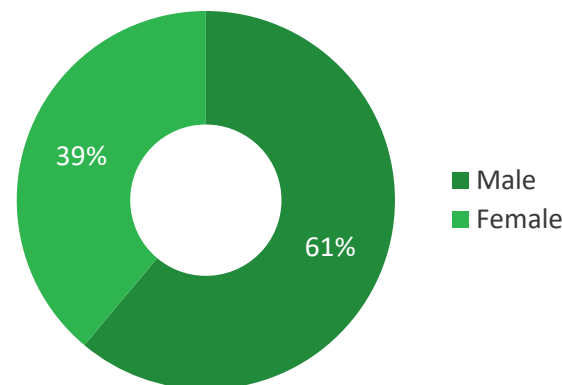
Researcher and lecturer positions comprise the largest group (30%), followed by professors (25%). The remaining academics identified themselves as PhD students and associate professors (13% each), lecturers (only teaching) with 7%, researchers only (5%) and assistant professors (2%).

Age of respondents



There is almost an equal distribution of Estonian academics according to the age groups. 21% of academics in the sample are between 40 and 49. Other significant groups are those aged 30-39 and 60-69 (18% each). These are followed by those aged 20-29 and 50-59 (16% each). Academics older than 70 are 11%.

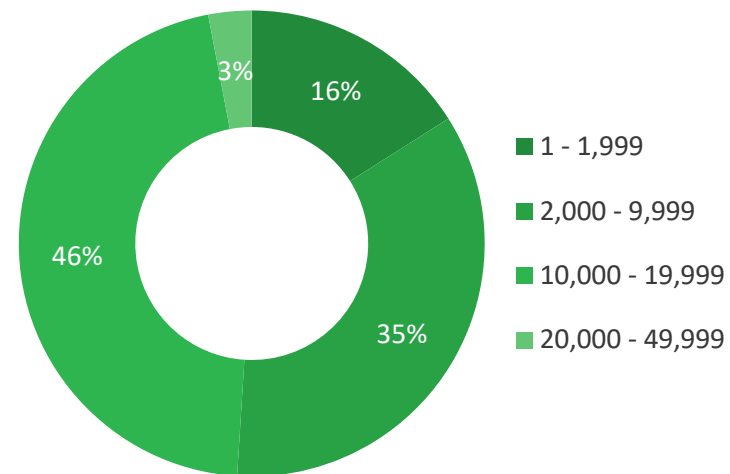
Gender of respondents



The emerged gender distribution is skewed towards male respondents, with 61% male and 39% female academics.

Respondent profile – academics

Number of students of the HEI

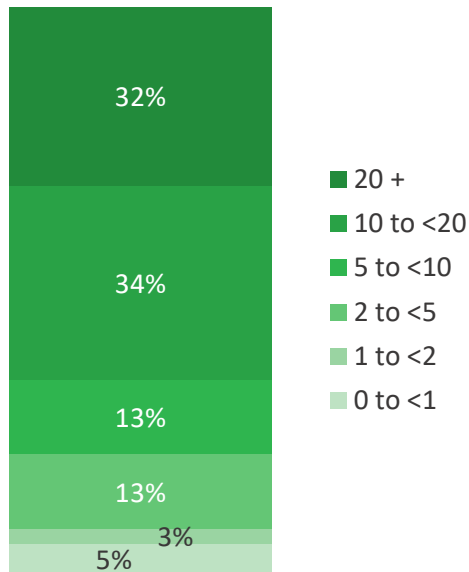


Around half of Estonian academics (46%) work for medium-sized HEIs (10,000 - 19,999 students). 35% are based in small HEIs (2,000 - 9,999 students) and 16% of them work for very small HEIs (under 1,999 students). Only 3% of the academics work at large HEIs (20,000 - 49,999 students).

Sample Size	
Estonian Academics	n=56
European Academics	n=10.836
Estonian HEI representatives	n=42
European HEI representatives	n=3.482

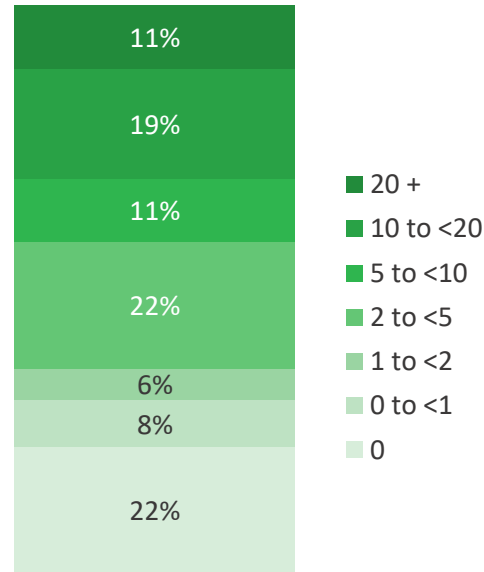
Respondent profile – academics

Years working in university



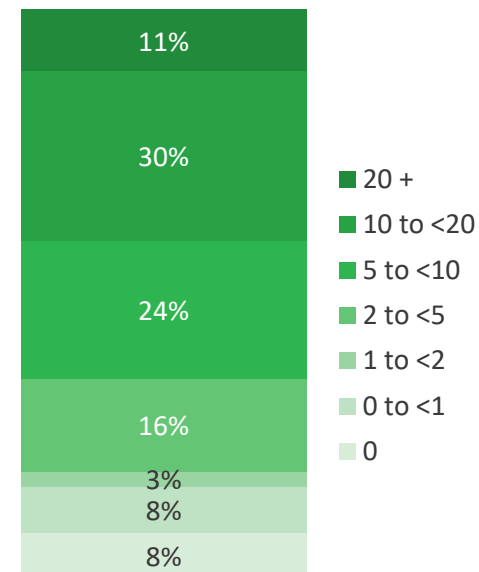
Most academic respondents have worked in academia for several years. More than half of them (66%) have worked in academia for over 10 years. 13% have 5-10 years of experience and 13% have worked in academia for 2-5 years. 8% has worked up to 2 years in academia.

Years working in business



Academic respondents are experienced in businesses. Two thirds (78%) of the Estonian academic respondents have worked in industry before. 22% of them have done so for 2 to 5 years. 11% worked for 5 to 10 years and 30% have more than 10 years industry experience. 14% worked for less than 2 years in business. 22% of the sample has no experience working in business.

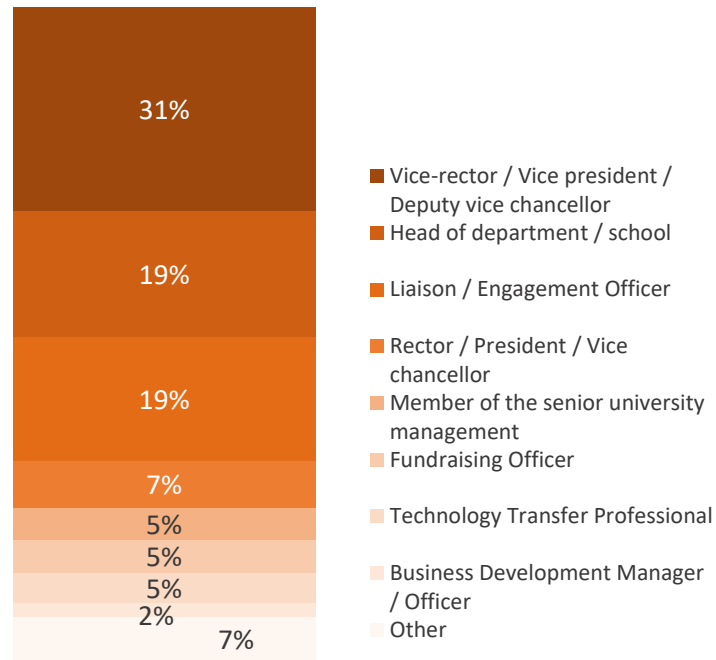
Years involved in UBC whilst working at a university or business



Most academic respondents in Estonia have some UBC experience. 11% have been involved in UBC for over 20 years, 54% have between 5 and 20 years of experience and 19% between 1 and 5 years of experience. 8% of academics in the sample have never engaged in UBC.

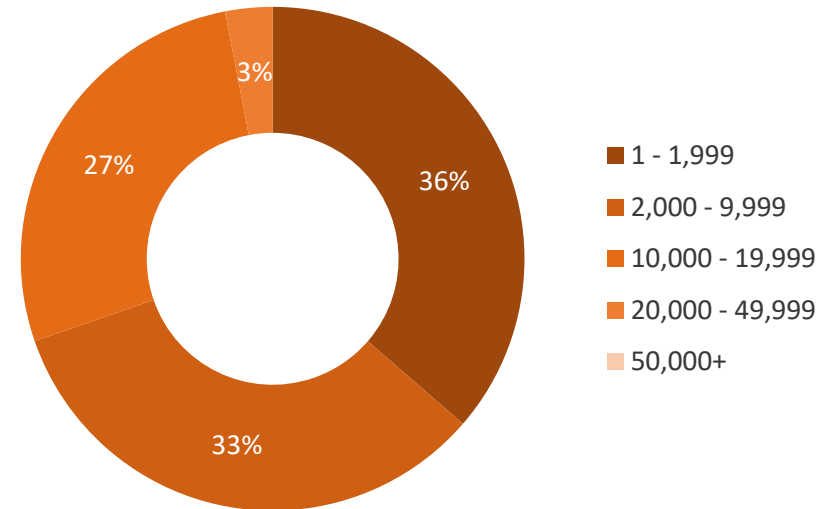
Respondent profile – HEI representatives

Position of respondent



Estonian HEI representatives hold a variety of roles. Almost one third of them (31%) are vice-rectors. Heads of departments and liaison officers are the second largest group (19% each), followed by rectors (7%). The smallest percentage belongs to members of the senior university management, fundraising/technology transfer officers (5% each) and business development officers (2%).

Number of students of the HEI



More than a third of HEI representatives work in very small universities (1-1,999 students), followed by 33% based in small HEIs (2,000-9,999 students). 27% of HEI representatives work for medium-sized HEIs (10,000-19,999 students). Only 3% work in large HEIs (10,000-19,999 students).

Contact us

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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.ubc-monitor.com