

State of University- Business Cooperation TURKEY

Business Perspective

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



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

Partners



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Executive summary

Summary

This report seeks to contribute to our understanding of the business perspective on university-business cooperation (UBC) in Turkey. Examining the perceptions of a wide range of businesses provides positive signs for the future, with 100% of businesses that cooperate with universities planning to maintain or increase their cooperation in the future. Yet, much more can be done, for example in supporting businesses with the development of initiatives and activities that can support their cooperation efforts, as well as in developing (actual and perceived) capabilities, particularly of those businesses not currently engaged in cooperation.

About the study

The results presented in this report reflect the perceptions of business people in Turkey with respect to cooperation between universities and business. 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 Turkish sample of 38 business responses. The study measured the perceptions of respondents with respect to their cooperation efforts, barriers, drivers, support mechanisms and perceived capabilities.

University-Business Cooperation

Turkish businesses engage with universities mainly

in activities in the research area, namely consulting (76,3%) and joint R&D (73,7%).

They also undertake cooperation in education, and particularly high is the cooperation in mobility of students (68,4%). Yet, the activities such as curriculum co-design and co-delivery are considerably less developed with 50% of respondents not cooperating at all. This low engagement can be explained by the rigid rules of the Turkish HE system. There are limited numbers of electives in the curricula and the appointment of lecturers from business is generally a subject to a series of procedures.

On the other hand, the cooperation in valorisation (e. g. academic and student entrepreneurship) is limited with nearly 45% of business respondents on average not undertaking any of these activities.

It is them, not us

Primary barriers identified by respondents relate to obstacles they perceive within universities, namely a lack of people with business knowledge within HEIs, their focus on producing scientific outcomes as well as a lack of awareness of opportunities arising from collaboration with business, complemented with differing motivations. The existence of these barriers can be explained by academic scientific orientation and differing priorities of universities and businesses. Businesses also mention the difficulty of finding the appropriate collaboration partner.

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 (third in the ranking), relational factors are much more prominent. Existence of a shared goal, mutual trust and mutual commitment alongside prior relations with the university partner are those factors that facilitate cooperation. These relational parameters are universally valid and build the essence of any cooperation. Any effort towards enabling cooperation between businesses and universities should therefore focus on relationship development as a key success factor.

Innovation is a driver

Turkish businesses see for themselves less benefits than for university stakeholders, including universities and academics. The lowest benefits are perceived to be for students, government and society.

But what motivates Turkish businesses to cooperate with universities? They are significantly driven by the willingness to improve their innovation capacity. Another important motivator is an increased access to new discoveries, technologies and knowledge as well as qualified graduates who will be able assist them in their efforts to improve their innovation capacities.

Strategy first

Strong emphasis has been placed on the development of UBC supporting mechanisms by universities; yet, little is known about such mechanisms in the business sector. This study indicates that strategic mechanisms are the most developed mechanisms, with around 40% of respondents indicating the existence of a collaboration strategy, the integration of presentations, lectures or mentoring as well as a structured R&D programme. As Turkish UBC is still in its infancy, some supporting mechanisms are however less common and developed compared to the European average.

More to learn

Turkish businesses perceive themselves as supportive towards cooperation with universities. In particular, they identified their strengths in the ability to absorb the knowledge and technology coming from HEIs and believe that they have a lot to offer to universities in education and training. In comparison to the European average, Turkish businesses are more certain about their responsibility to collaborate with universities in education. This increased awareness has been created since Turkish businesses are centrally encouraged by the state to actively take part in UBC.

Introduction

About the study

The study focusses 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

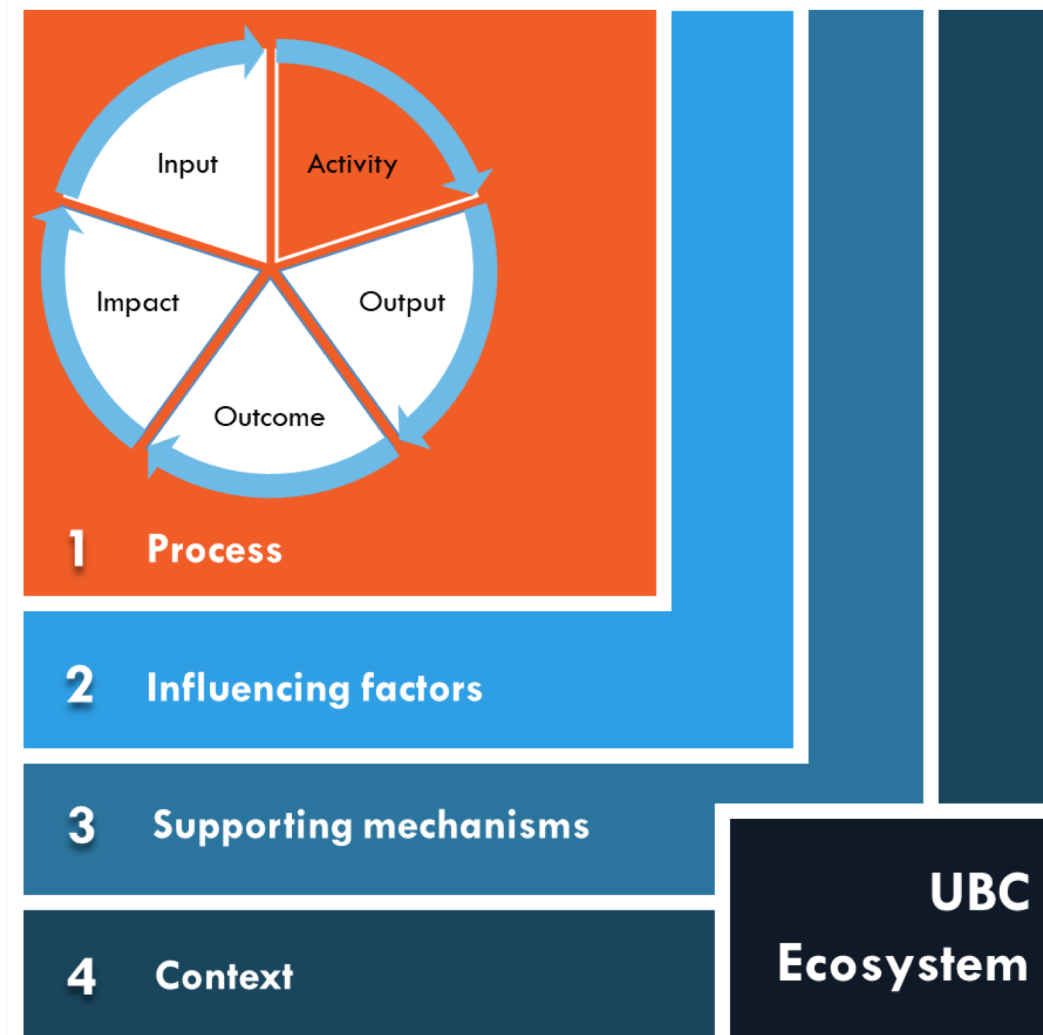
UBC activities

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 businesspeople 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

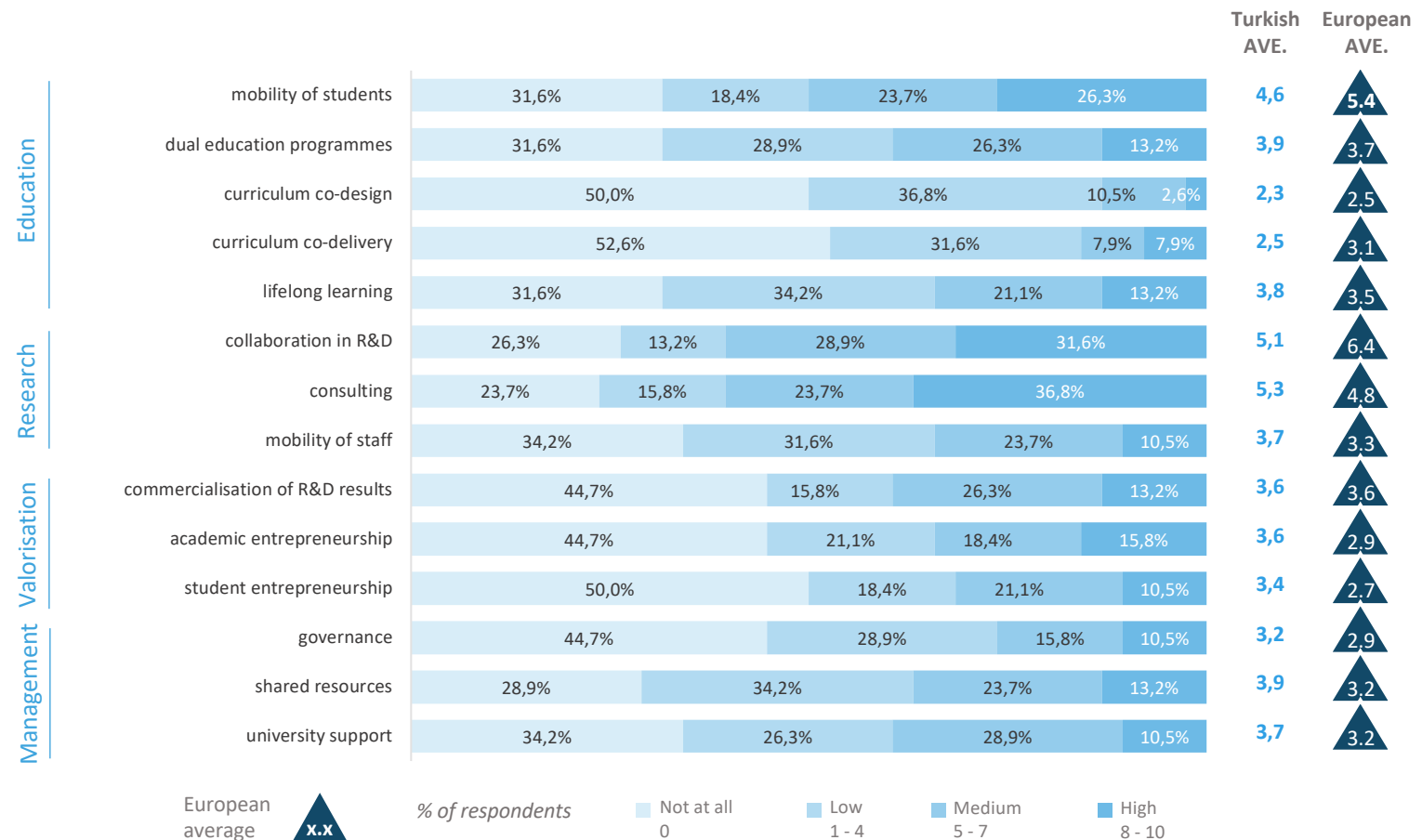
Turkish businesses engage mainly in consulting (5.3), collaboration in R&D (5.1) and mobility of students (4.6).

Particularly low are the activities related to curriculum co-design and co-delivery. This can be explained by the fact that the Turkish HE is generally seen as a rigid system of rules and regulations. As a consequence, appointment of lecturers from business is subject to a series of bureaucratic procedures.

Almost 45% of businesses do not undertake any valorisation related collaboration. Most Turkish businesses are not technologically mature nor financially secure enough to invest in valorisation related collaboration.

UBC activities development

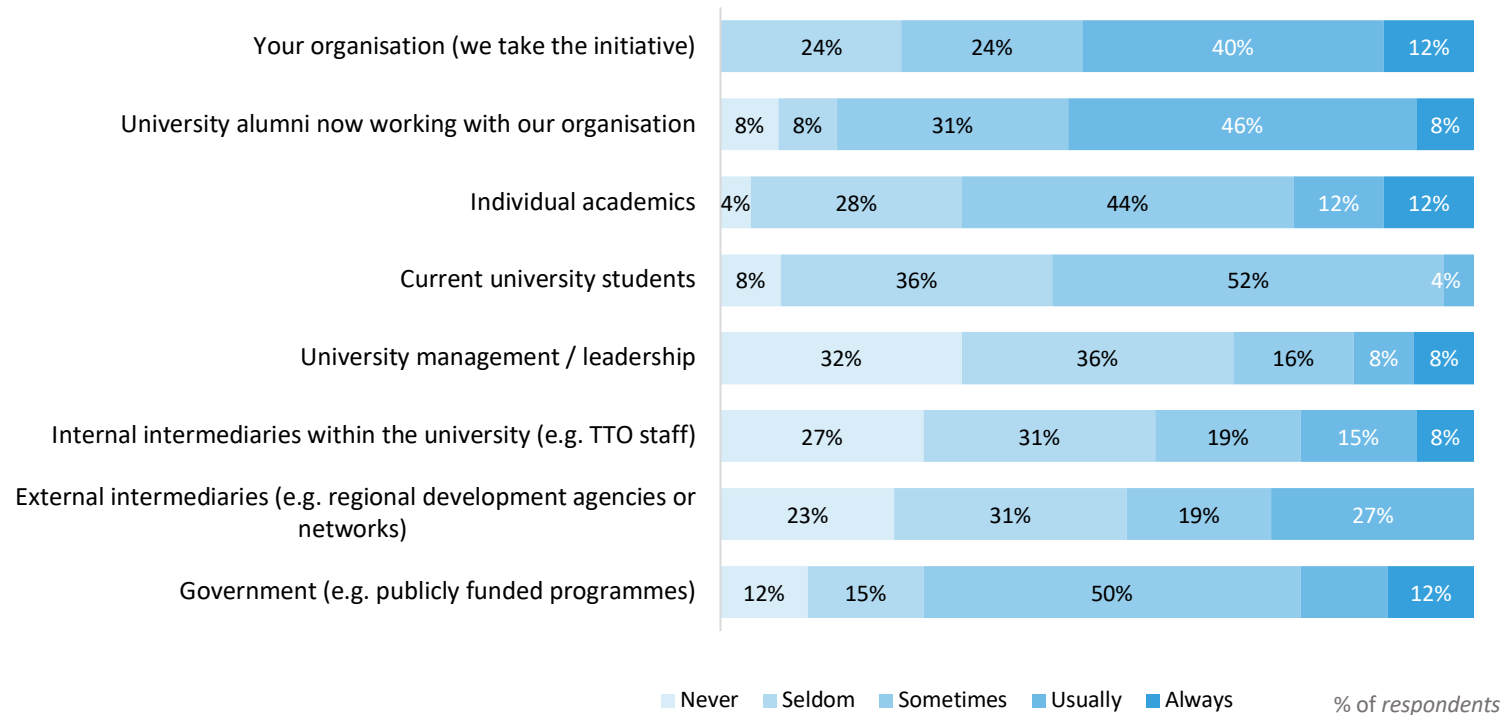
'Which UBC activities do you collaborate with universities in?'



Initiation of UBC

How UBC is initiated

'How often various stakeholders initiate UBC activities'



Turkish businesses see themselves and university alumni as the major initiators of cooperation with universities. 54% and 52% of businesses respectively state that these are the stakeholders that always or usually initiate UBC. Trust is the essence of all relationships, therefore alumni are able to provide a route to ensure this.

Individual academics and government (24% each) are also perceived as active in initiating UBC.

University management along with intermediaries (internal and external) are perceived as passive in UBC initiation with 68%, 58% and 54% of the businesses reporting that they never or seldom undertake any first actions towards UBC initiation respectively. TTOs, as UBC actors, have been recently established and most of universities do not yet have any intermediary units.

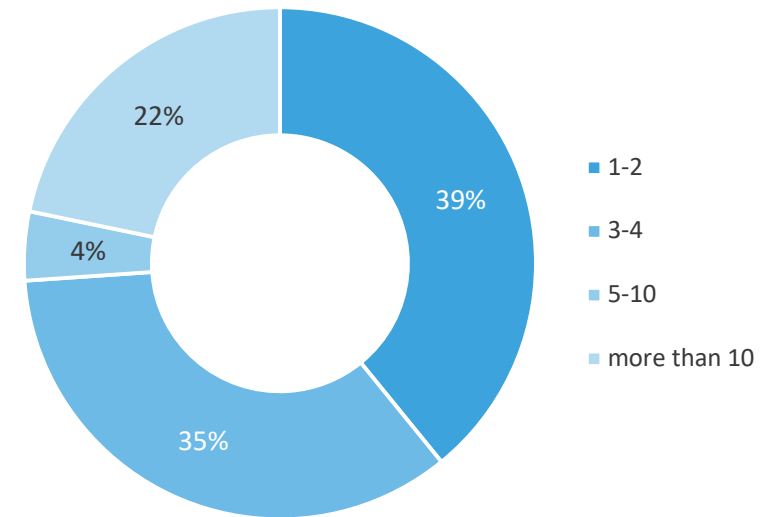
Geographical location still matters

Location of university partners

Percentage of cooperating businesses with...	
universities in their region	100%
universities in their country	100%
universities outside their country	73%

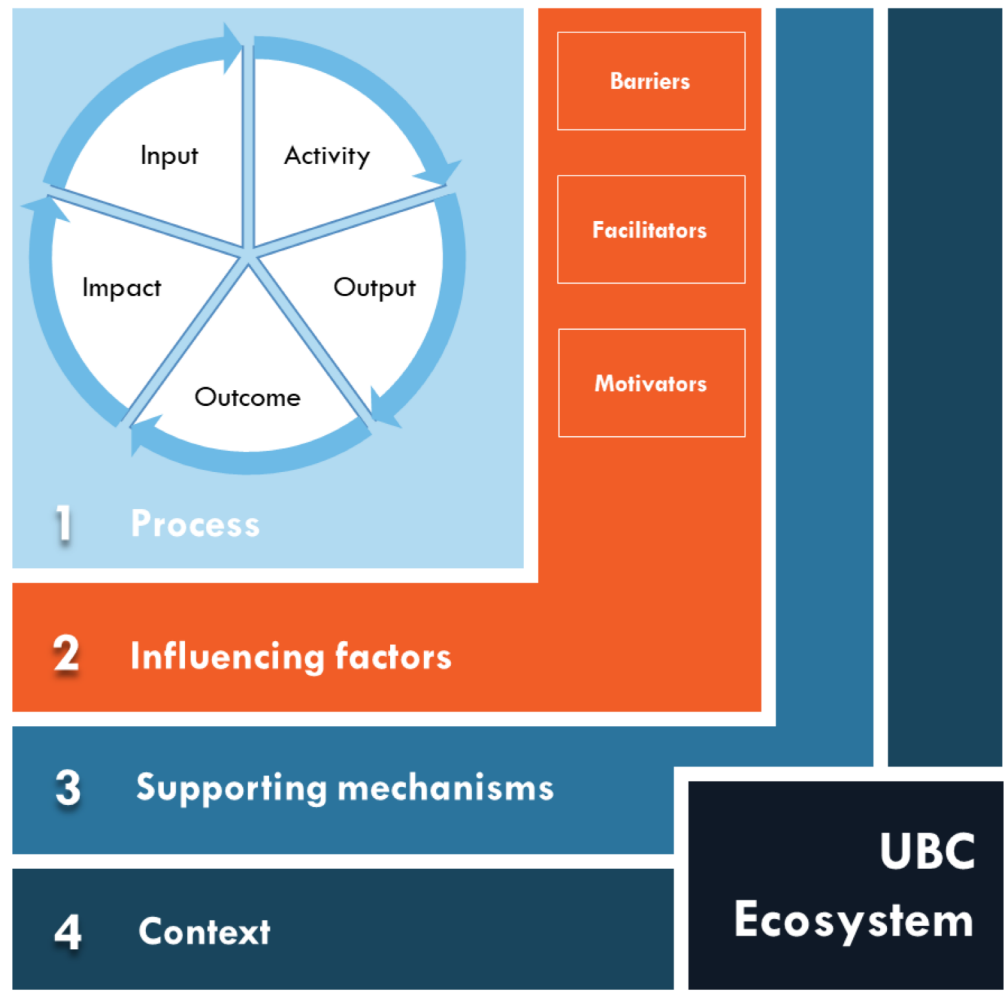
100% of Turkish businesses cooperate with regional and national universities. A lower percentage of them (73%) cooperates with international universities.

Number of university partners



More than 70% of the Turkish businesses cooperate with less than 4 university partners. 22% have established relations with over 10 universities and only 4% cooperate with 5- 10 partners.

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

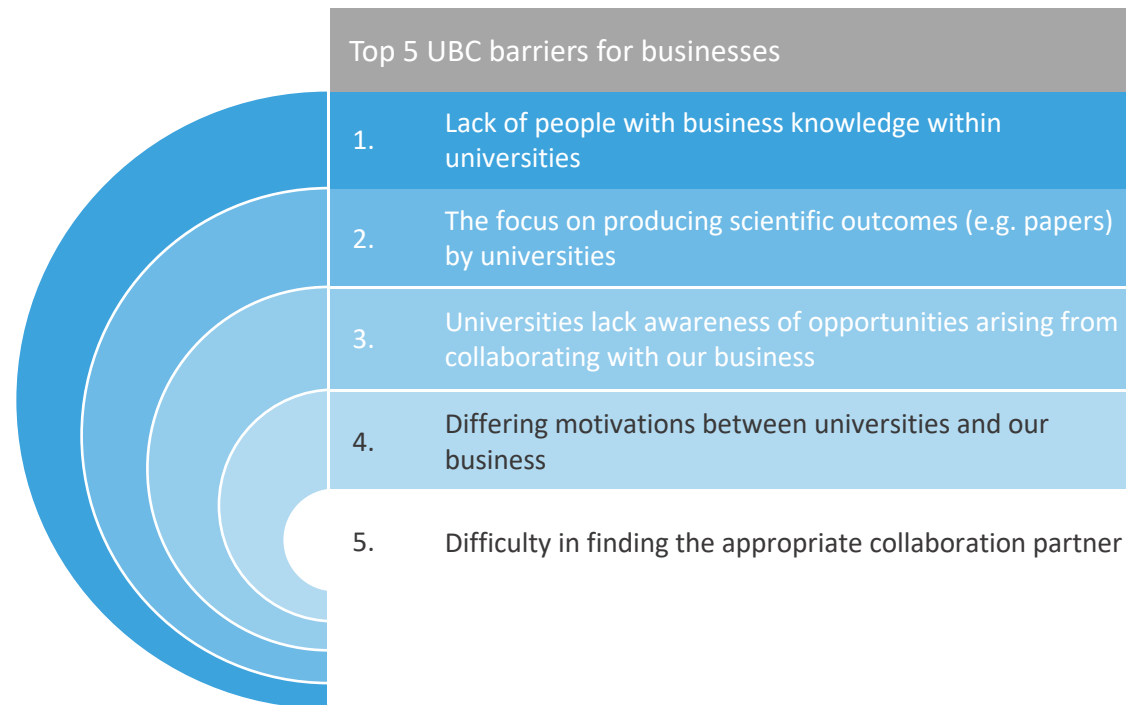
The main five factors inhibiting Turkish businesses to cooperate with universities are diverse.

The lack of people with business knowledge as well as the university's focus on producing scientific outcomes are considered as the main barriers. While Turkish academics focus on scientific publications as a means towards promotion, any business experience is not seen as a parameter for career advancement.

Turkish businesses also report the university's lack of awareness of opportunities arising from collaboration and differing motivations between universities and business as further obstacles for UBC. The difficulty in finding the appropriate collaboration partner also hinders UBC for Turkish businesses.

Barriers

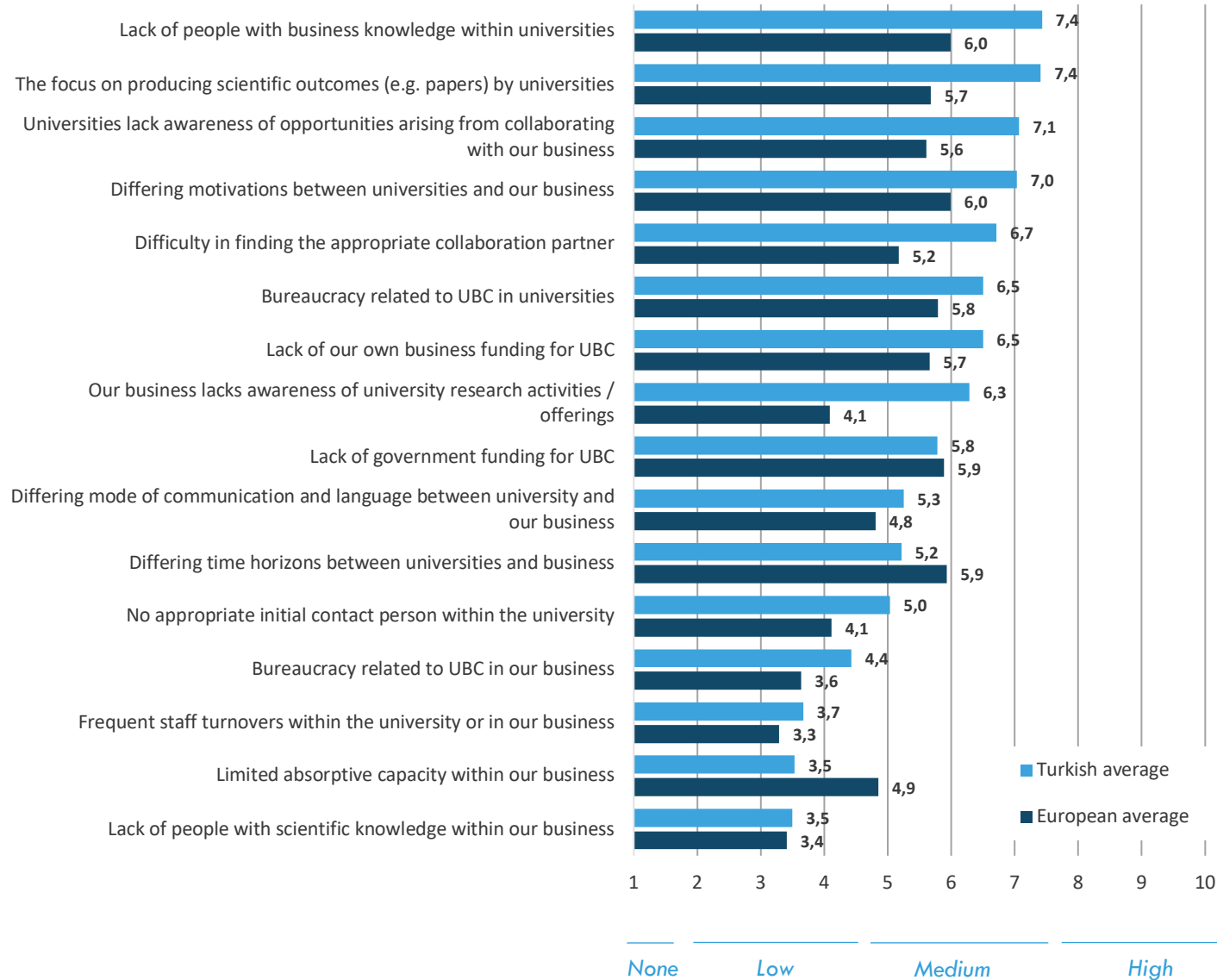
'What is inhibiting your cooperation with universities?'



Barriers hindering UBC

Barriers

'What is inhibiting your cooperation with universities?'



Overall, Turkish businesses perceive the barriers stronger than their European counterparts.

The lack of people with business knowledge within universities and the focus on producing scientific outcomes are significantly higher barriers for Turkish businesses than they are for European businesses.

Conversely, differing time horizons between two organisations along with limited absorptive capacity within the business are slightly more inhibiting for UBC in Turkey than in Europe. Those are the existing problems of the businesses in Turkey.

Lack of people with scientific knowledge within the business is perceived as a weak barrier by both groups.

Drivers stimulating UBC

The main factors that facilitate Turkish business cooperation with universities are related to their relationship and funding. These are parameters that are universally valid.

A relationship based on a shared goal, trust and commitment highly facilitates cooperation for Turkish businesses, resulting in smoother and more successful collaboration with universities. The existence of a prior relation with the university partner, as well as funding play an important role in facilitating UBC in the Turkish context.

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

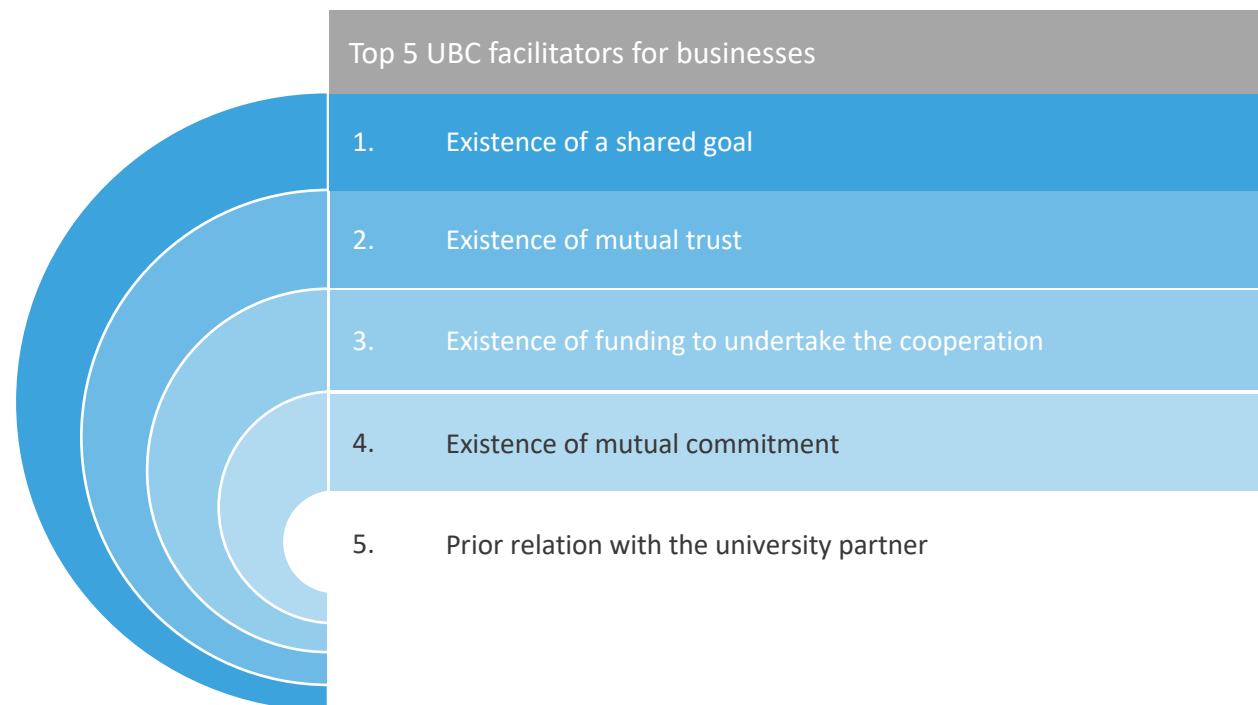
1. **Facilitators** – factors that enable or ease cooperation
2. **Motivators** – incentives or benefits that the respective stakeholders would like from the cooperation

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?'



Drivers stimulating UBC

Facilitators

'What is facilitating your cooperation with universities?'



Most facilitators are perceived higher by Turkish businesses than by European ones.

The existence of a shared goal, mutual trust and commitment, which are personal relationship facilitators that bear great importance in the advance of UBC, are higher for Turkish businesses than for their European counterparts.

Significant difference can further be seen in the interest of the university in accessing business knowledge, the business scientific orientation, attractive IP conditions and the commercial orientation of the university, where the Turkish average is also higher.

Drivers stimulating UBC

The main motivators for Turkish businesses to undertake UBC are related to innovation, competitiveness and funding.

Businesses cooperate with universities primarily to improve their innovation capacity. Turkish companies have an increasing awareness of their existing and potential competitive advantages. They have realised that cost-based competition is no longer sustainable, and they have to place a significant emphasis on innovation.

Turkish businesses are also motivated to get access to better qualified graduates and new technologies and knowledge. University graduates are able to assist them in their efforts to improve their innovation capacities.

A less important but still relevant motivation is to obtain funding/ financial resources. None of these outcomes can be achieved if there are no resources.

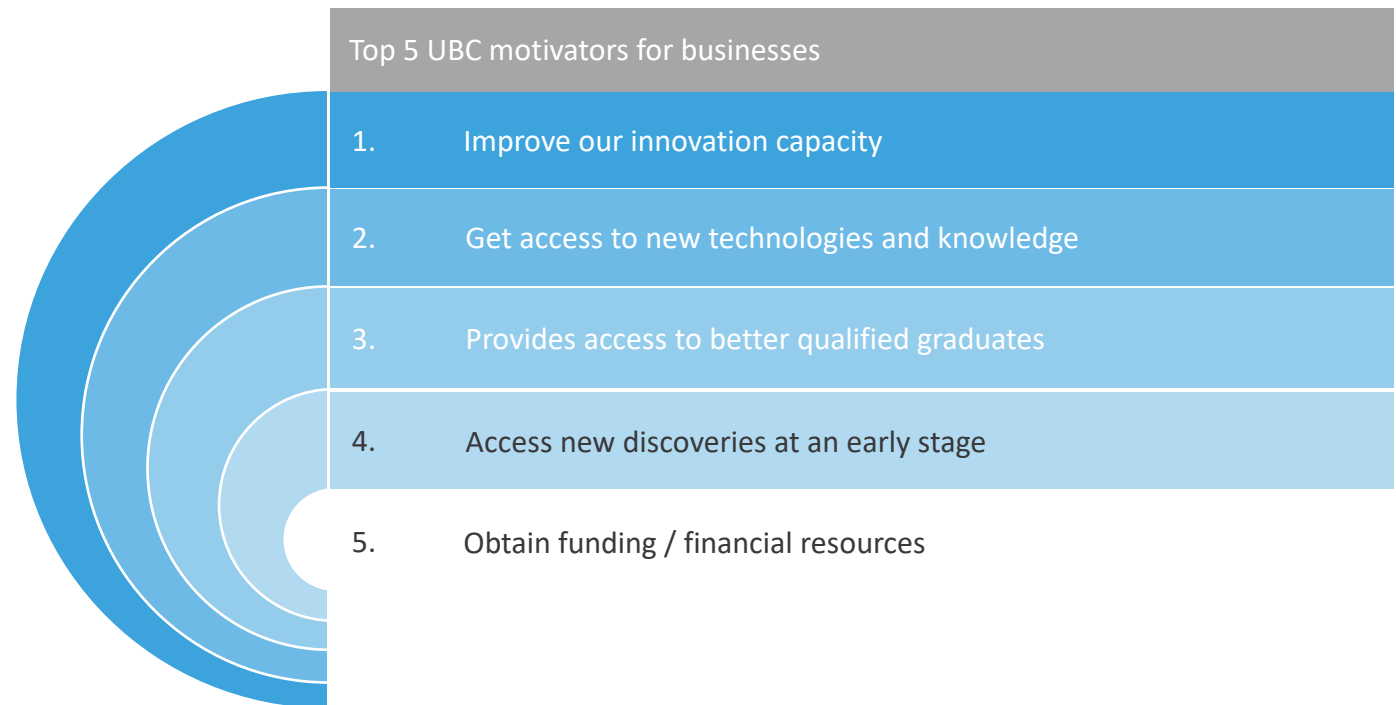
Motivations for UBC are the reasons why businesses collaborate with university.

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

Motivators

'What motivates you to cooperate with universities?'

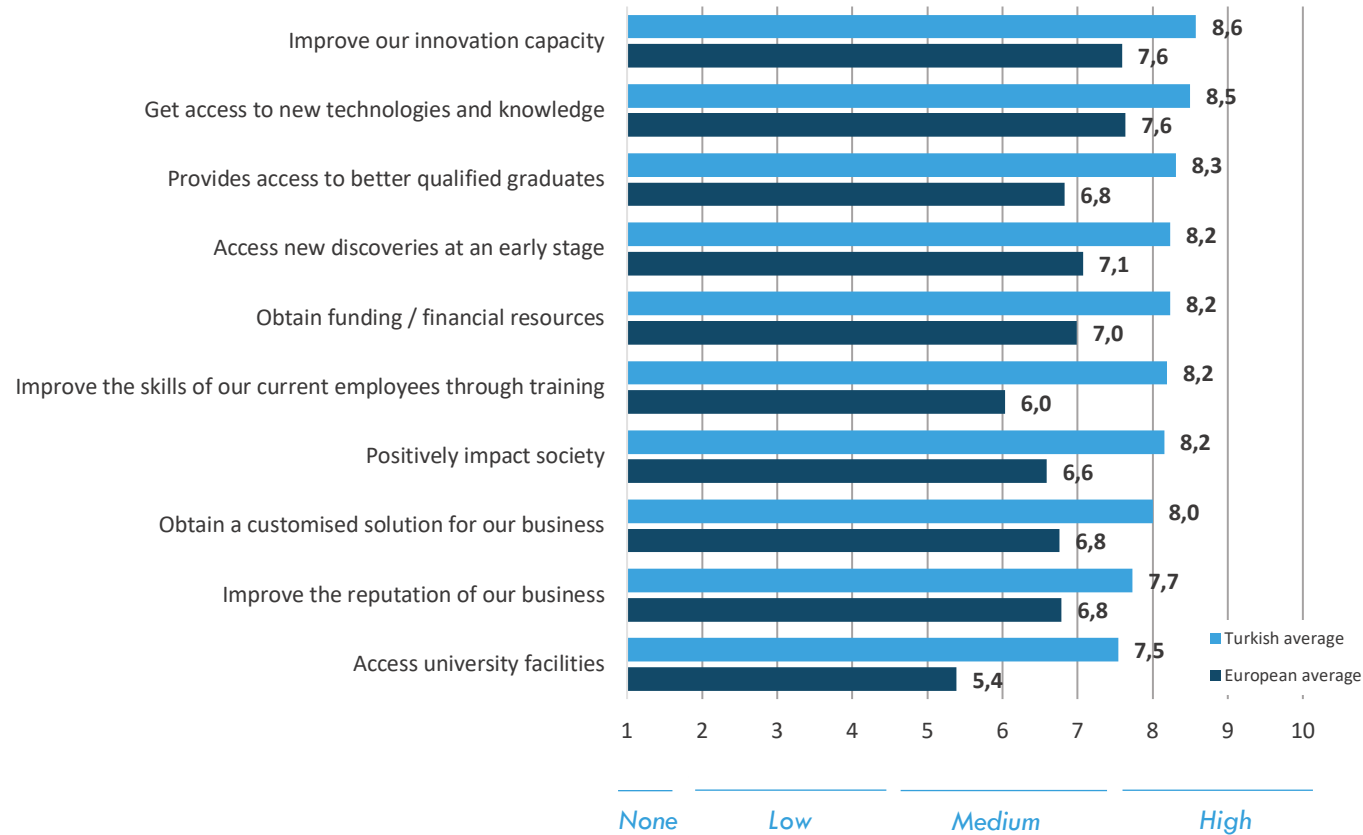
The ability of the collaboration to achieve these outcomes will have a substantial influence on the businesses' assessment of the success of their collaboration.



Drivers stimulating UBC

Motivators

'What motivates you to cooperate with universities?'



Overall, Turkish businesses perceive most motivations to cooperate with universities significantly higher than European businesses.

The motivation to get access to better qualified graduates is considerably higher for Turkish businesses than for European ones.

Significant difference can also be seen in the motivations to improve the skills of the current employees through training and to positively impact society. Turkish businesses are aware that they need a paradigm change with respect to competitiveness strategies.

On the other end, the least relevant motivation for both groups to engage in UBC relates to the willingness to access university facilities. However, Turkish average (7.5) is significantly higher than the European one (5.4).

Benefits of UBC

Turkish and European businesses have a different perception with respect to which stakeholder group benefits more or less from UBC.

Turkish businesses perceive universities as the primary beneficiaries followed by academics, whereas for European businesses, students and universities are the major beneficiaries. Both groups also perceive businesses as significant beneficiaries.

The lowest benefits are perceived to be for society and government. Increased profits for the businesses are the direct benefits, whereas societal impact is less obvious and the results can only be observed in the longer term.


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?'

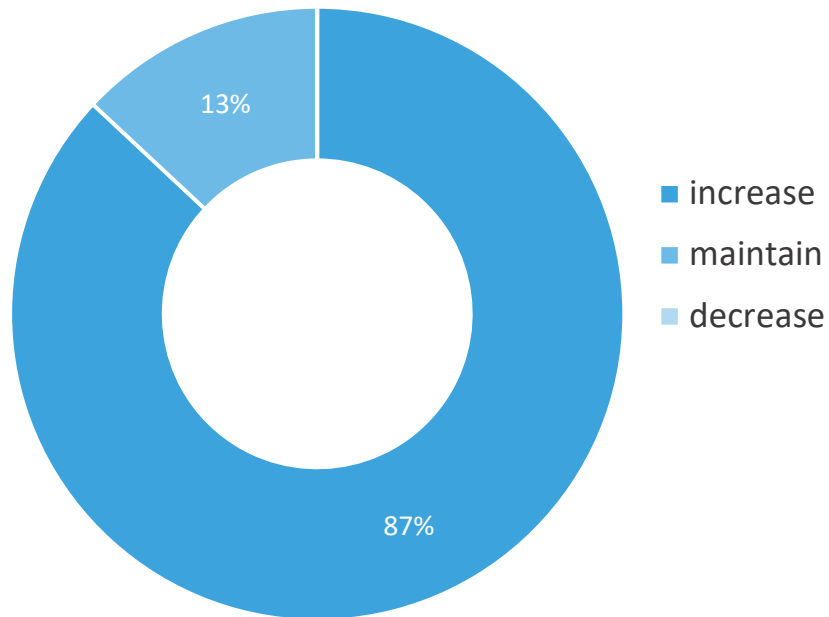


	Turkish businesses	European businesses
1.	Universities	Students
2.	Academics	Universities
3.	Businesses	Businesses
4.	Students	Academics
5.	Government/public authorities	Society
6.	Society	Government/ public authorities

Future intentions

Future UBC intentions – Turkey

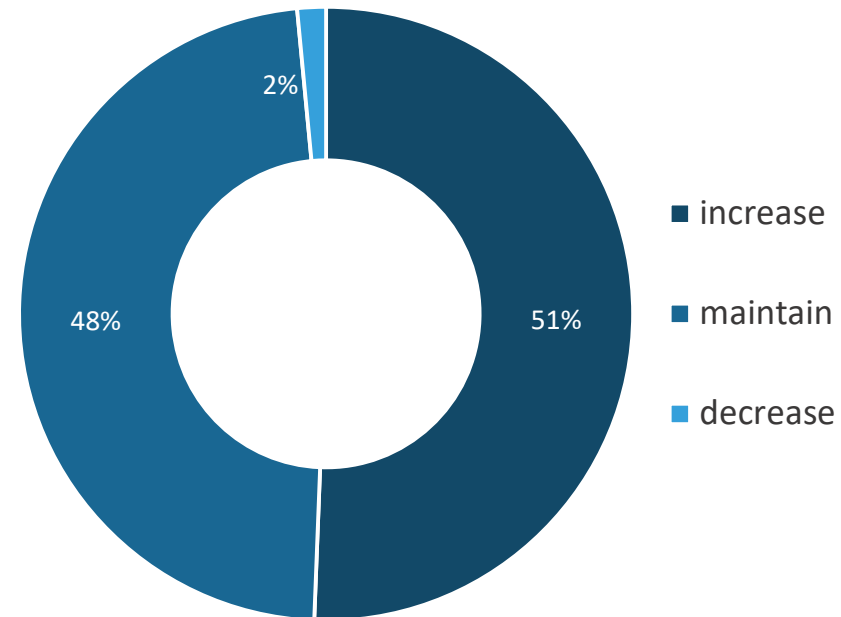
As answered by Turkish businesses



100% of businesses in the Turkish sample that cooperate with universities indicate that they plan to maintain (13%) or increase (87%) their cooperation with universities.

Future UBC intentions – EUROPE

As answered by European businesses



European businesses seem to be less confident in their future intentions towards UBC. 51% of business respondents plan to increase cooperation activities, and only 2% expect to decrease it.

Willingness to recommend UBC

The willingness of Turkish cooperating businesses to recommend to a colleague to engage in UBC does not vary much depending on whether this cooperation is in research or in education.

Turkish businesses are significantly more satisfied with UBC in research than their European counterparts (NPS=57). While 67% of them will promote it positively, only 10% would do it negatively.

Regarding cooperation in education, Turkish businesses are also more satisfied than their European counterparts (NPS=36). 45% would highly recommend it and only 9% will not recommend it. Businesses are eager to complement their knowledge and skills in whatever way they can.

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

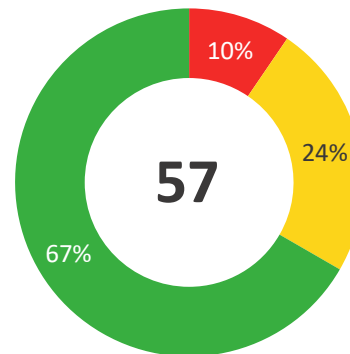
education and training (E&T). The *Net Promoter Score* metric offers a proxy for customer satisfaction.

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	10%	24%	67%	57
Business cooperating with universities in E&T	9%	45%	45%	36

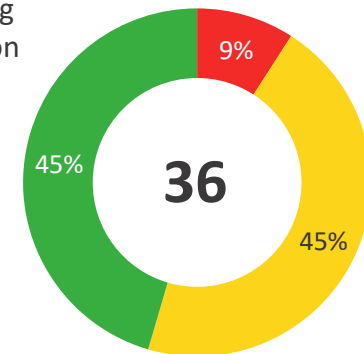
Satisfaction with cooperation with universities (net promoter score)

Business cooperating in research



■ Detractors ■ Passives ■ Promoters

Business cooperating in education

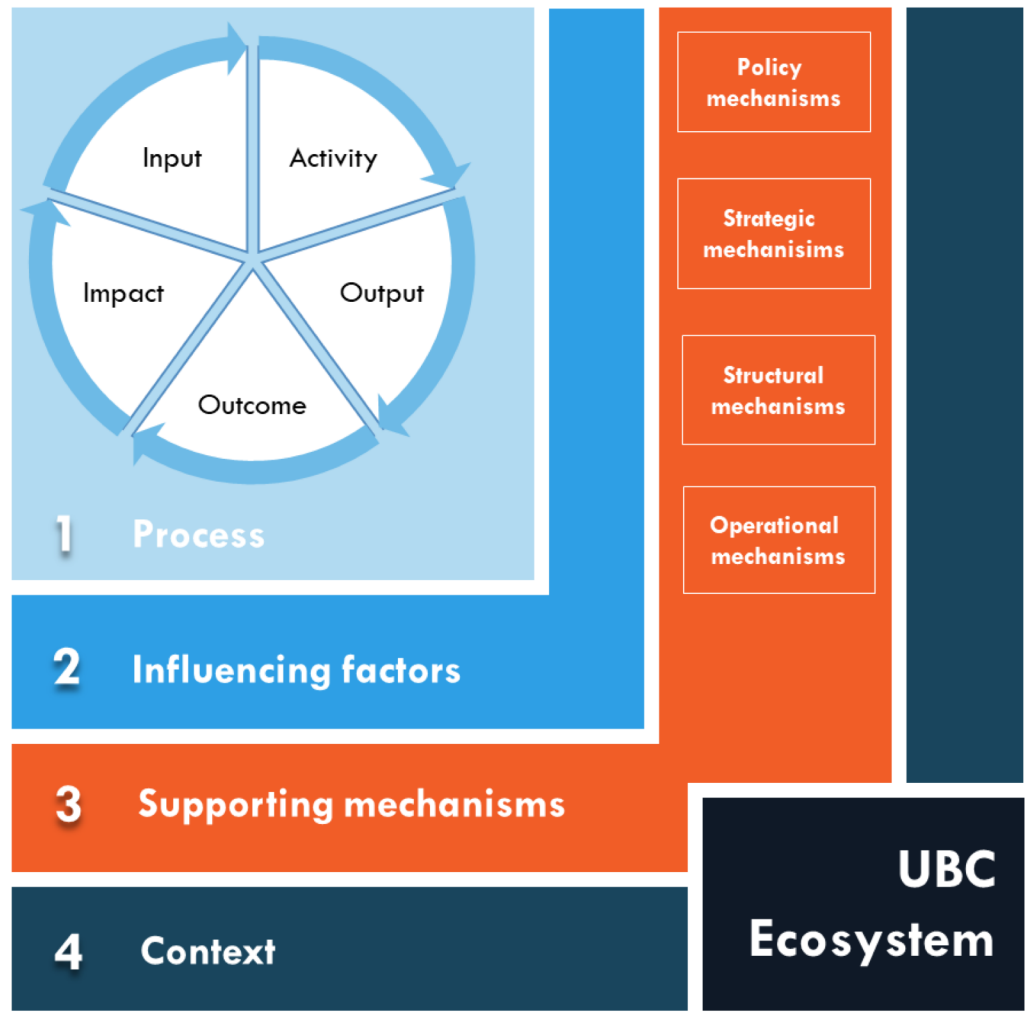


■ Detractors ■ Passives ■ Promoters

European business NPS result: 28.2

European business NPS result: -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

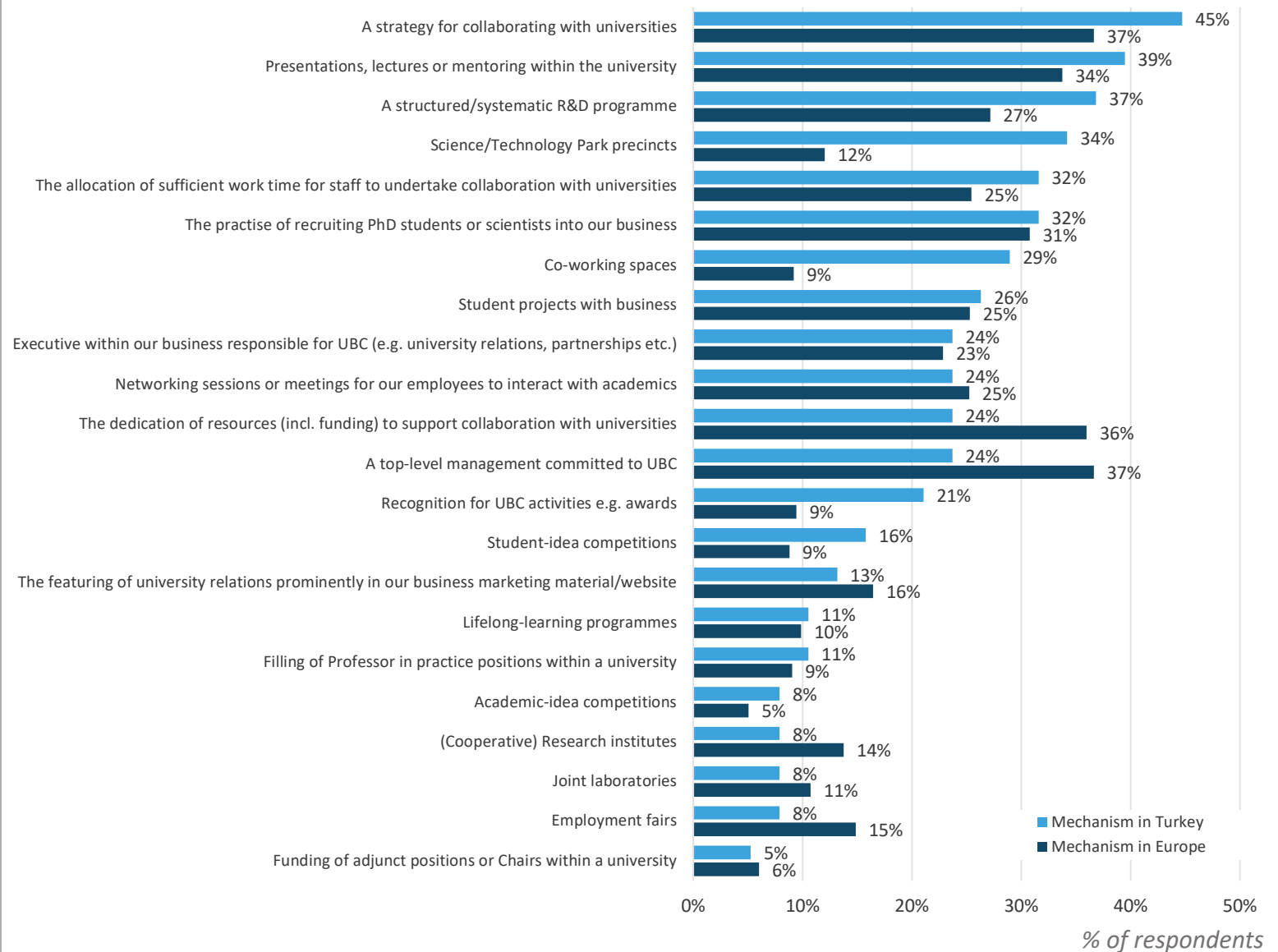
Turkish businesses can adopt a range of supporting mechanisms in their interaction with universities, but most of them are present in under a third of the businesses.

The top three most developed mechanisms in Turkish businesses, that are also higher than European average, relate to strategy for collaborating with universities (45%) along with presentations, lectures or mentoring (39%) and a structured R&D programme (37%). State incentives for UBC are very sophisticated in Turkey and businesses are centrally encouraged to actively take part in UBC.

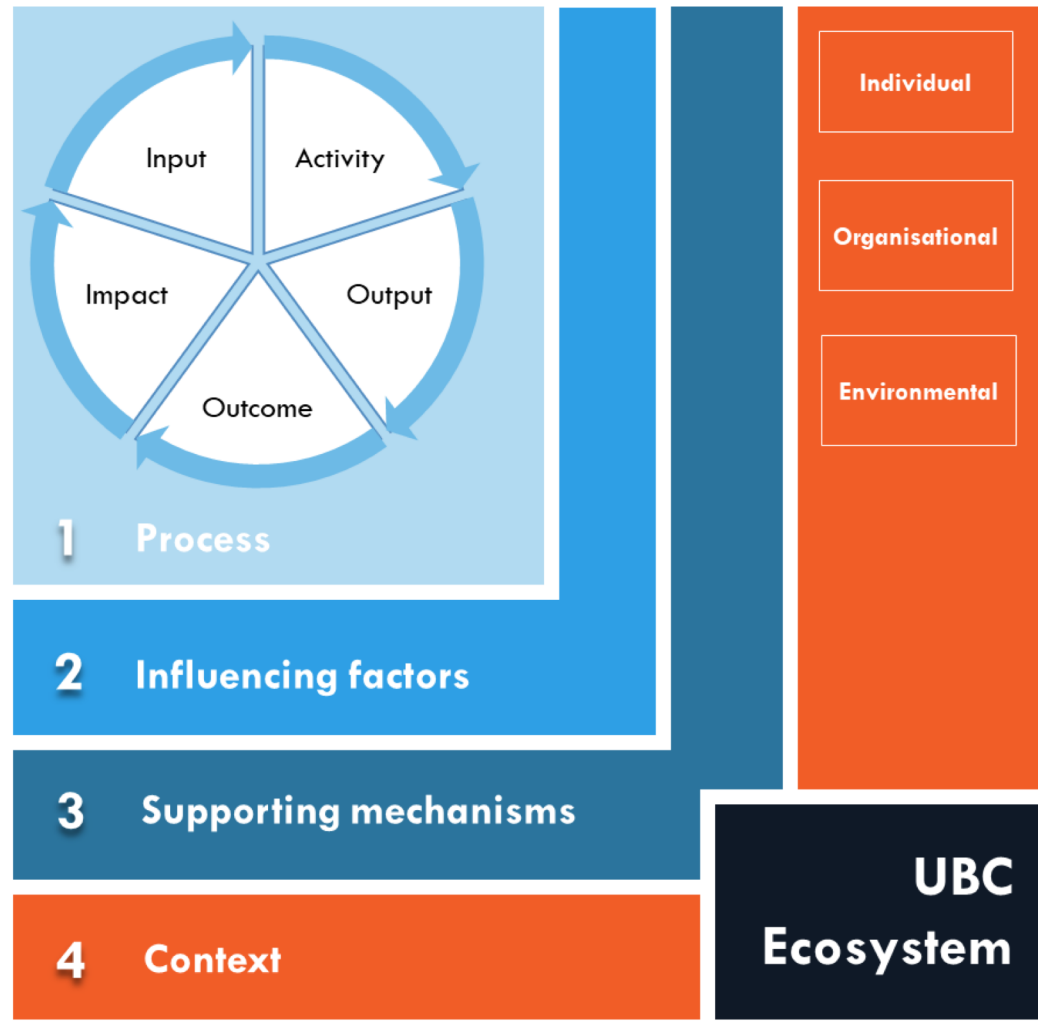
Compared to the European average, some UBC supporting mechanisms are less common. Particularly, top-level management commitment and the dedication of resources to support collaboration with universities. Since UBC is still at its infancy the younger generation is more aware of the needs and is dedicated to it. Top management of most Turkish companies is generally represented by an older generation that lacks this awareness in their conservatism.

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

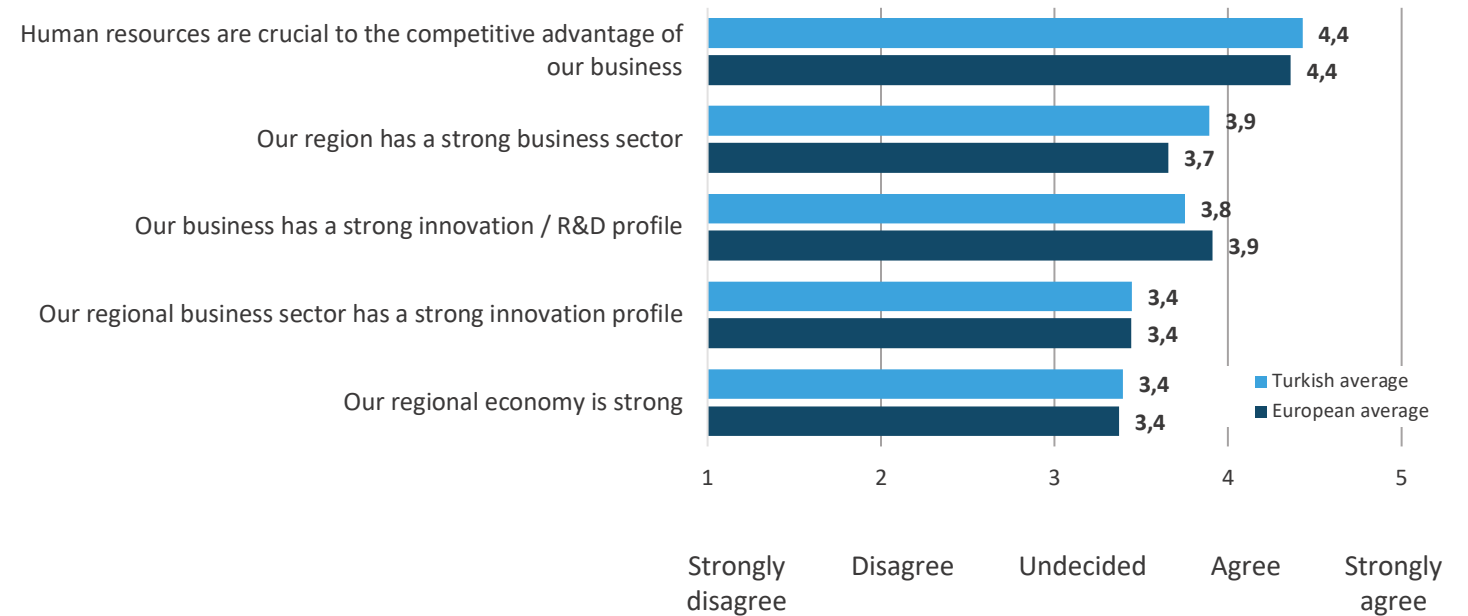
Turkish businesses cooperating with universities perceive their context similarly to European cooperating businesses.

Human resources are essential for their competitiveness and the regional business sector is seen as strong.

A lower perception emerges regarding the characteristics of the economy and the innovation profile of the regional business sector.

Contextual factors affecting UBC

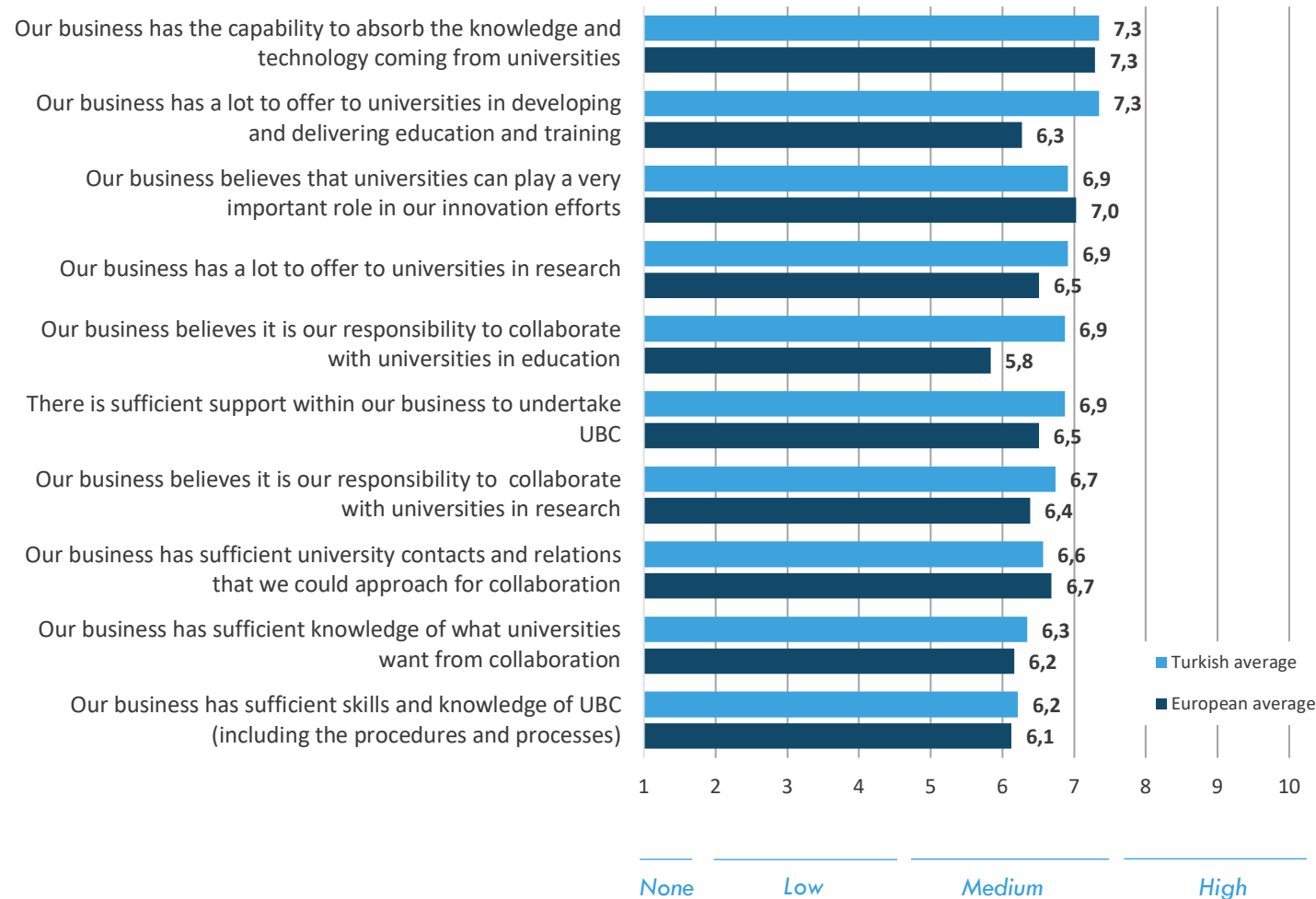
'To what extent do you agree with the following statements?'



UBC capabilities and beliefs

Supportive UBC environment

How supportive are your organisation and environment for UBC?'



Turkish businesses perceive themselves as supportive towards cooperation with universities.

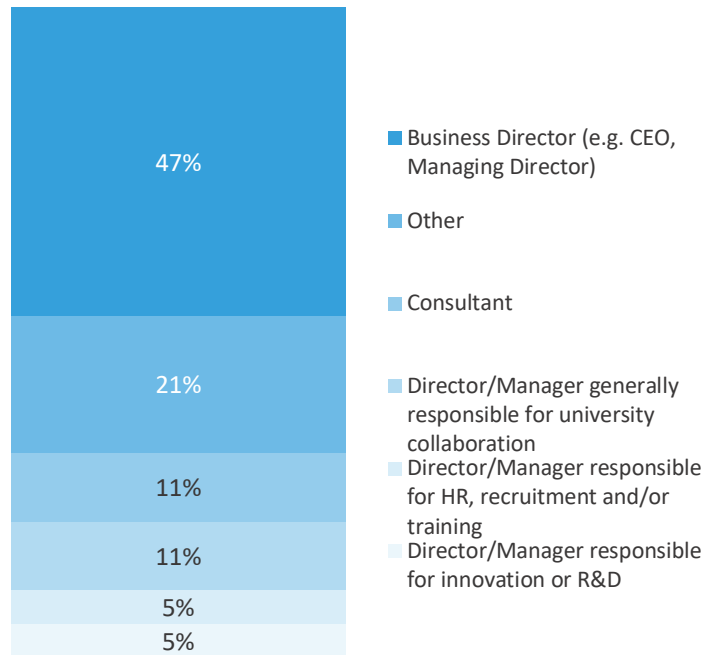
In particular they are capable of absorbing knowledge and technology from universities and have a lot to offer to universities in education and training.

When compared to European average, Turkish businesses are more certain about their responsibility to collaborate with universities in education. Turkish businesses are centrally encouraged by the state to actively take part in UBC. This has created an increased awareness.

Overall, Turkish businesses perceive themselves in a more positive way in comparison to European average.

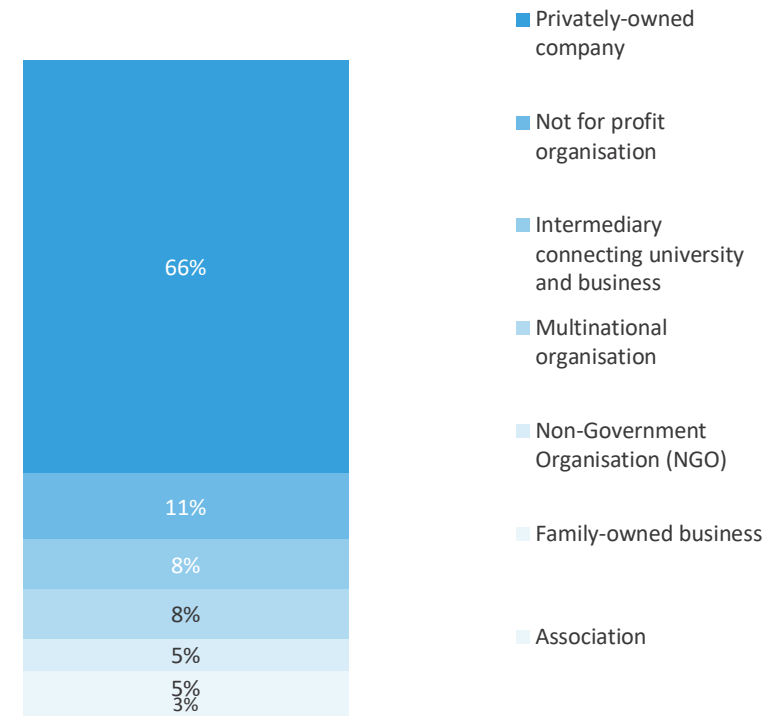
Respondents profile

Position of respondent



47% of the Turkish sample are business directors, which represent the largest group. The remaining respondents identified themselves as consultants and directors responsible for university collaboration (both with 11%) as well as directors of HR, recruitment and training and directors responsible for innovation or R&D (both with 5%). 21% of Turkish business respondents hold 'other' positions.

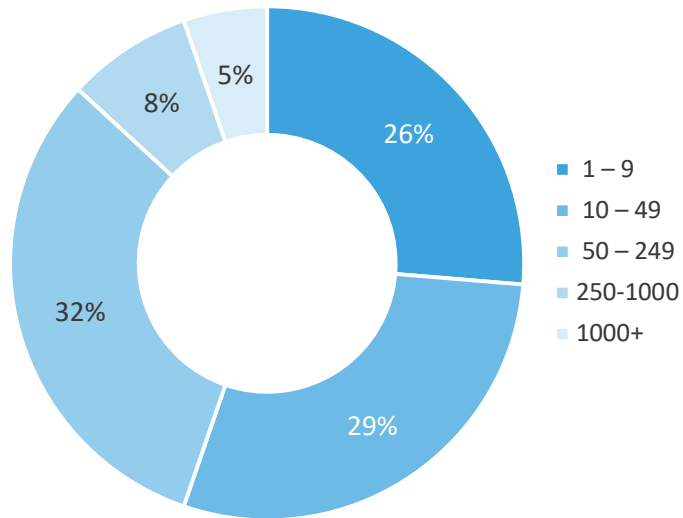
Type of business



A wide variety of businesses were represented in the Turkish sample, with privately-owned companies forming the largest group (66%), followed by not for profit organisations(11%). The type of businesses with less than 10% representation included intermediaries connecting university and businesses, multinational organisations, NGOs, family-owned businesses and associations.

Respondents profile

Business size



Sample Size	
Turkish business representatives	n = 38
European business representatives	n = 3.113

More than half (55%) of the Turkish business sample is comprised by either small firms (10 to 49 employees) or micro-companies (less than 9 employees). 32% of business managers work for medium-sized companies and large companies (250 to 1000+ employees) are represented by 13% of the business managers in the sample.

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.uni-engagement.com