



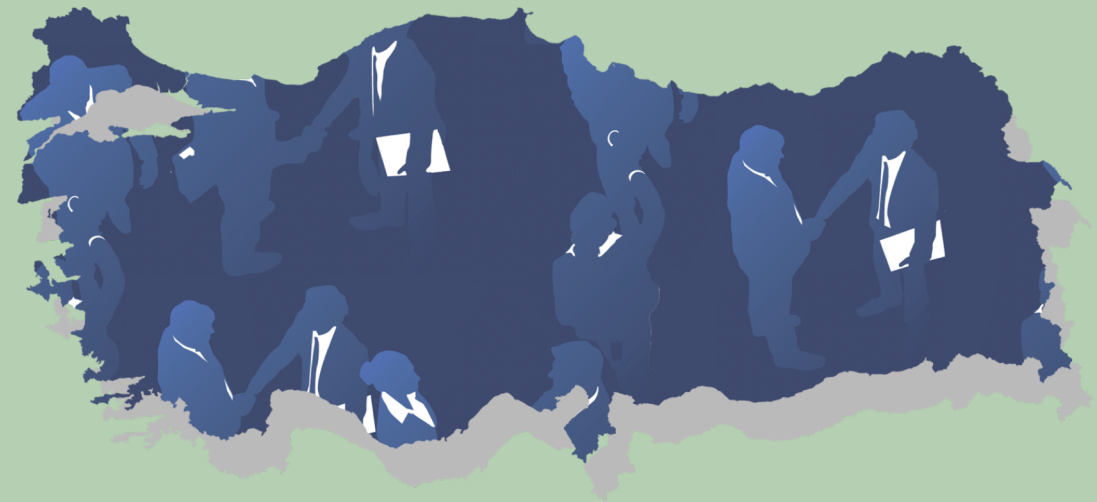
UNIVERSITY-BUSINESS
COOPERATION IN EUROPE

State of University- Business Cooperation

TURKEY

University Perspective

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



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

Partners



Authors: Thomas Baaken, Todd Davey, Serdal Temel, Hamit Serbest, Arno Meerman, Victoria Galán-Muros, Balzhan Orazbayeva and Mihai Melonari.

For further information about the State of European University-Business Cooperation project, national reports or the Global Engagement Monitor, please contact Todd Davey (davey@uiin.org) or Arno Meerman (meerman@uiin.org)



Executive summary

Summary

This report provides the findings of a study on the university-business cooperation (UBC) in Turkey from the perspective of higher education institutions (HEIs). Examining the perceptions of academics, HEI managers and knowledge transfer professionals (KTP) provides positive signs for the future, with 100% of respondents currently cooperating with businesses planning to maintain or increase it in the future. However, the extent of Turkish UBC is very low and significantly less developed compared to the European average, leaving much room for improvement.

About the study

The results presented in this report reflect the perceptions of academics, HEI managers and KTP in Turkey with respect to cooperation between HEIs and business. Data was collected by means of an online survey and distributed via email to all registered European HEIs in 33 countries during October-November 2016, leading to a total of 562 Turkish responses. The study measured the perceptions of respondents with respect to their cooperation efforts, barriers, drivers, support mechanisms and perceived capabilities.

University-Business Cooperation

Overall, UBC activities in all four areas examined are significantly less developed for Turkish academics than for their European counterparts. Nearly 12% of respondents indicated that most commonly they engage with business in mobility of students,

consulting and collaboration in R&D. However, almost 90% of them do not engage in these activities at all.

The further UBC activities in other areas of UBC are even less developed. More than 90% of Turkish academics are not engaged in these activities at all. The least developed activity is the commercialisation of R&D results with almost 92% of respondents not at all cooperating with business in this field. This high percentage can be explained by differing priorities of the Turkish academics and the fact that these activities have recently started to become institutionalised through TTOs.

Cultural differences still matter

Independent of whether academics are currently cooperating with business or not, primary barriers to UBC relate primarily to cultural issues, namely differing motivations between two organisations, businesses' focus on producing practical results as well as a differing mode of communication and language between university and business. Both academics (cooperating and non-cooperating) perceive it difficult to find the appropriate cooperation partner.

Barriers most strongly perceived by HEI management are very similar to the ones of academics and relate primarily to cultural issues as well as a lack of resources. The differing motivations between university and business is the largest barrier which is consistent with the perception of the Turkish academics.

NOTE: 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.

UBC is a people's game

The main factors facilitating UBC for both Turkish academics and HEI representatives are very similar. While funding to undertake cooperation emerges as one of the top five facilitators, relational factors are as the most prominent facilitators. It is the existence of a shared goal and mutual trust that facilitate and thus drive cooperation. These results confirm that any effort dedicated to enable and increase UBC should focus on relationship development as a central ingredient. Moreover, the interest of business in accessing scientific knowledge is also recognised by both groups.

Research and society matters

What motivates Turkish HEI respondents to engage in UBC? While cooperating academics highlight research interests, academics not engaging in UBC are more driven by the willingness to contribute to the mission of the university and addressing societal challenges. Interestingly, on the contrary, HEI representatives are highly motivated to improve graduate employability and perceive this as their social responsibility since graduate unemployment rates are very high in Turkey. Moreover, research-related motivations, such as gaining new insights and applying research, also bear high importance for Turkish HEI representatives.

Strategy first

Universities in Turkey are seen to place a strong emphasis on developing support mechanisms for UBC. As evident in the data, high-level strategic

developments, such as a top-level management committed to UBC and a documented mission/vision embracing UBC, are perceived as well developed. The least developed mechanisms relate to the recognition of academics for their UBC activities and the reduction of teaching time.

Most highly developed structural mechanisms in the given sample include agencies related to UBC as well as board member or vice-rector positions in this context. This can be explained by the fact that there is a high need for strong administrative commitment to set the right ecosystems in the respective HEIs.

When examining the development of specific activities, entrepreneurship courses offered to students is the most developed mechanism in Turkish HEIs as this activity is considered a solution to unemployment and is thus being encouraged at all levels.

Cooperating with conviction

Respondents already cooperating with business have a positive view of their abilities to undertake UBC. They believe to have a lot to offer to businesses in research and to be capable of transferring knowledge and technology to business. Also, they believe in the social responsibility of universities to collaborate with business in the research-related activities.

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, 51 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.



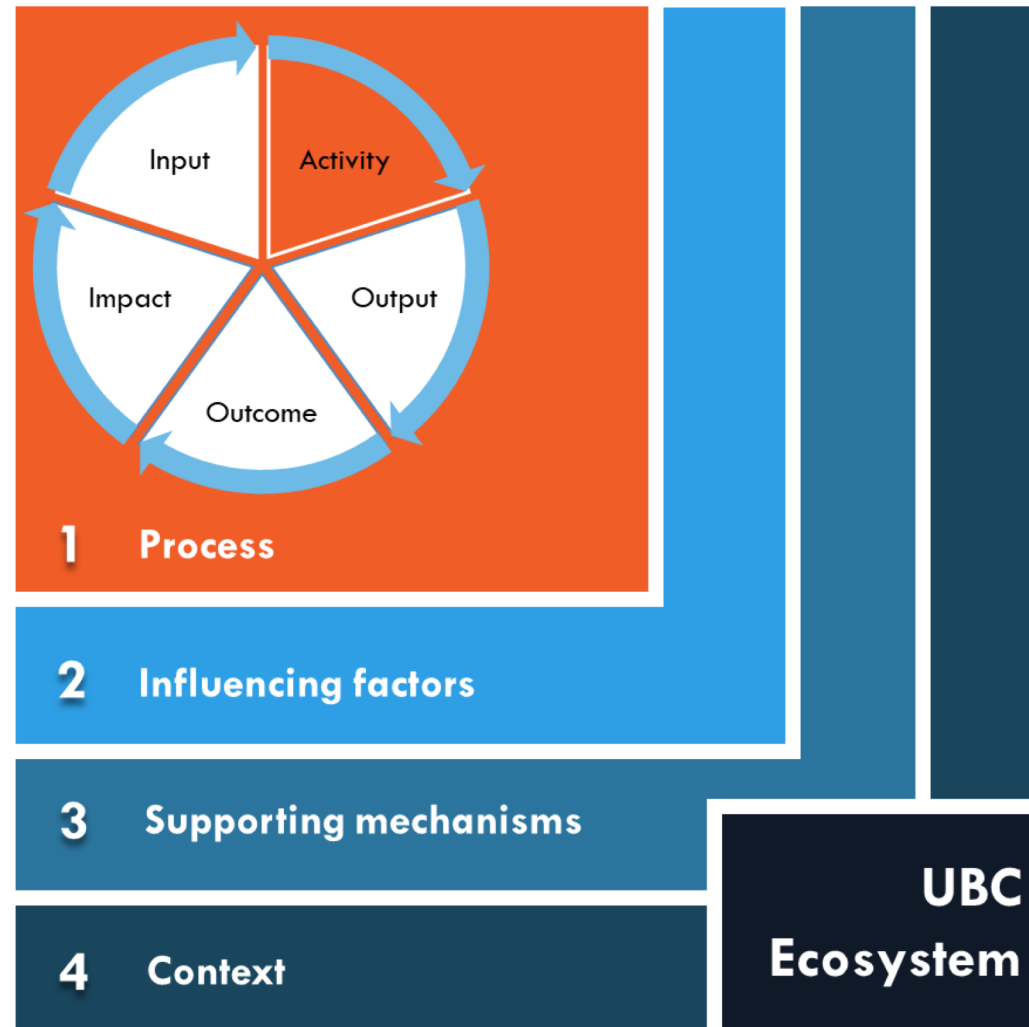
UBC activities

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

Overall, UBC activities are significantly less developed for Turkish academics than for their European counterparts.

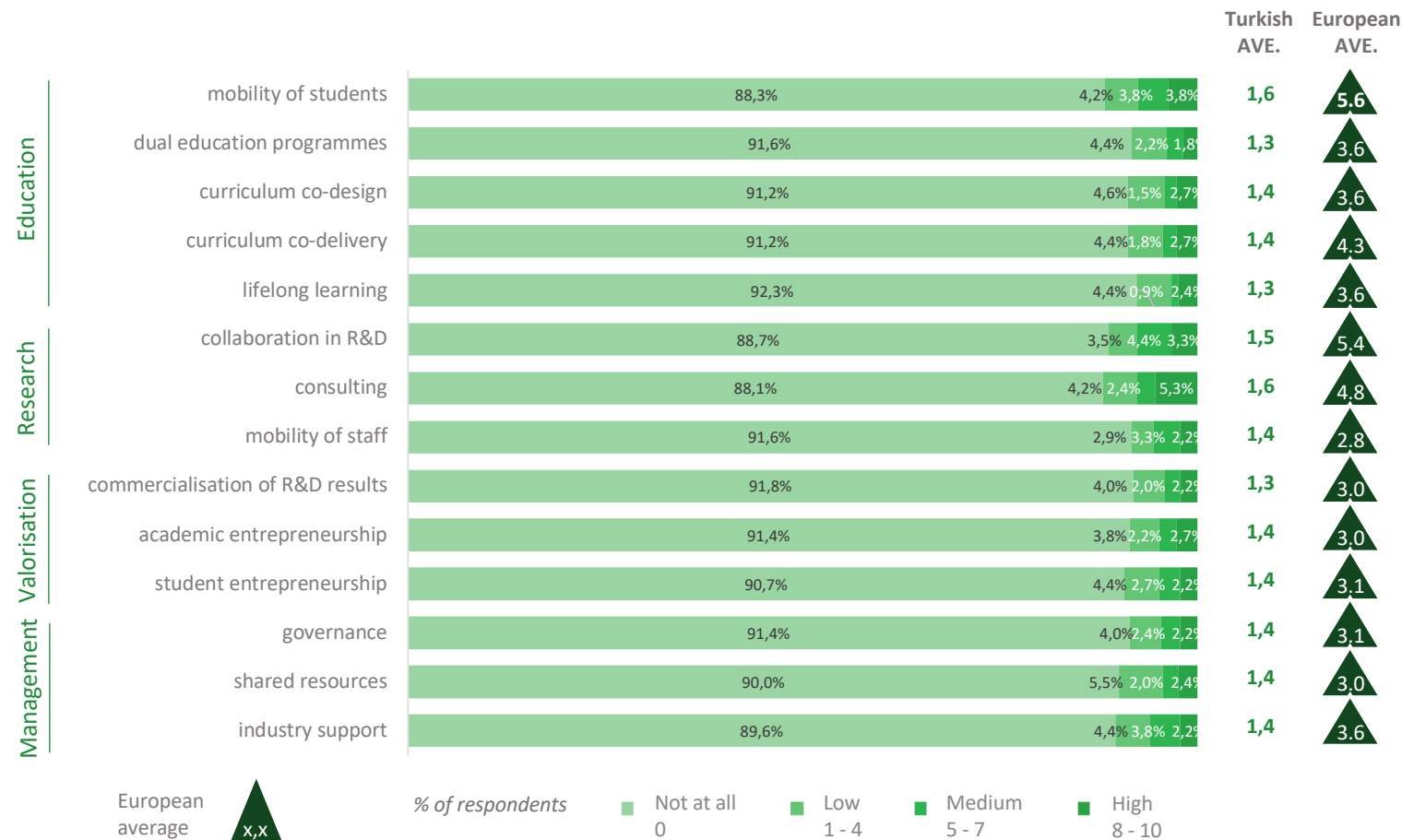
Turkish academics most commonly engage with business in mobility of students (1.6), consulting (1.6) and collaboration in R&D (1.5). However, more than 85% of them do not engage in these activities at all, as career advancement of a Turkish academic doesn't depend on the extent of UBC, he or she undertakes.

The further UBC education and research activities as well as the valorisation and management activities are less developed. More than 90% of Turkish academics are not engaged in these activities at all.

Generally, collaborative activities in the Turkish UBC context have recently started to become institutionalised by universities through their TTOs, therefore the role of academics is limited in this respect.

The extent of development of UBC activities

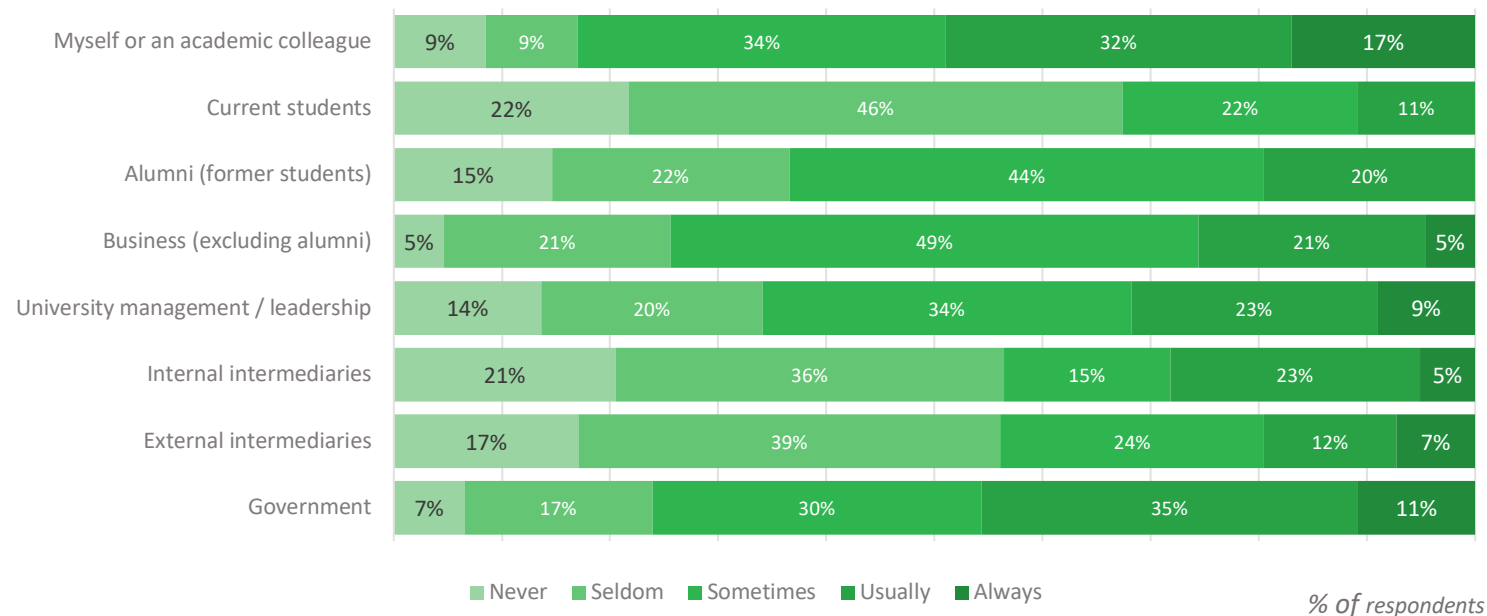
'Which UBC activities do you collaborate with businesses in?' – as answered by academics



Initiation of UBC

How UBC is initiated

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



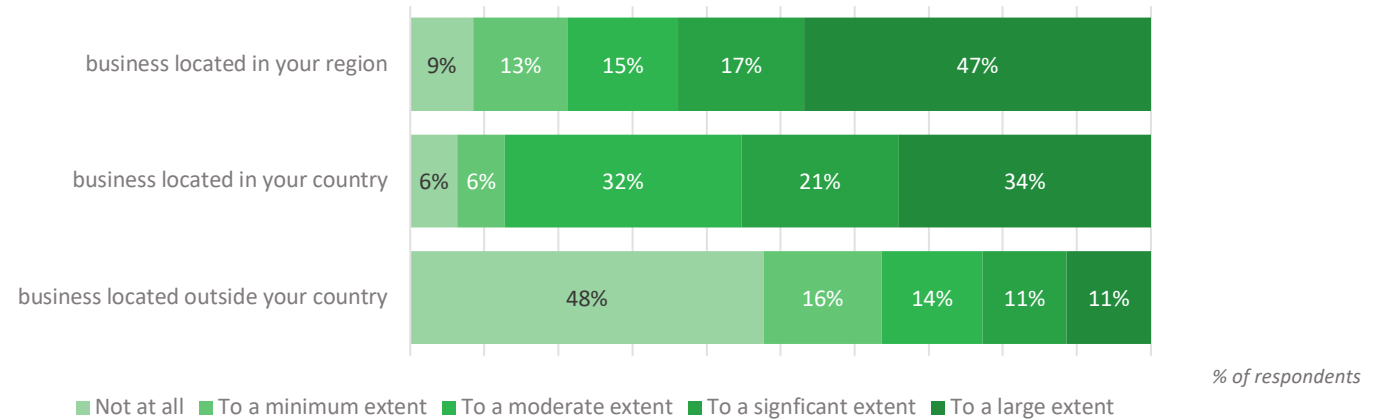
Almost half of Turkish academics (49%) consider that they themselves or their colleagues always or usually initiate UBC. This can be explained by the prevailing understanding of UBC in academic circles, which considers collaboration 'softer' forms of activities rather than development of technologies.

Government (46%) and university management (32%) are also considered initiators most times, as they make the rules and regulations, and can therefore initiate UBC top-down. At the same time university management can also hinder UBC through its strict regulations limiting collaborative activities. Therefore university management should adopt a more flexible approach to catalyse UBC.

Contrary, Turkish academics perceive that current students and intermediaries (internal or external) are those stakeholders that less often initiate UBC. This is because TTOs have been recently established and most of the universities do not yet have any intermediary units.

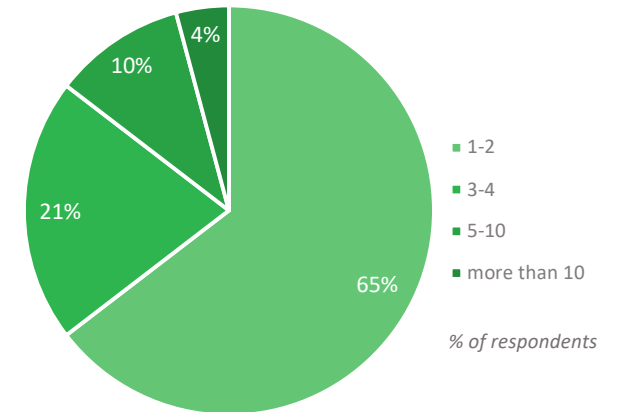
Location of cooperating partners

Location of business partners



Turkish academics undertake significant to high levels of cooperation with regional businesses (64%). However, collaboration with national businesses is not far behind with 55%. Only 11% of academics collaborate to a high extent with international businesses and about 50% do not collaborate at all, due to logistic and language reasons.

Number of business partners

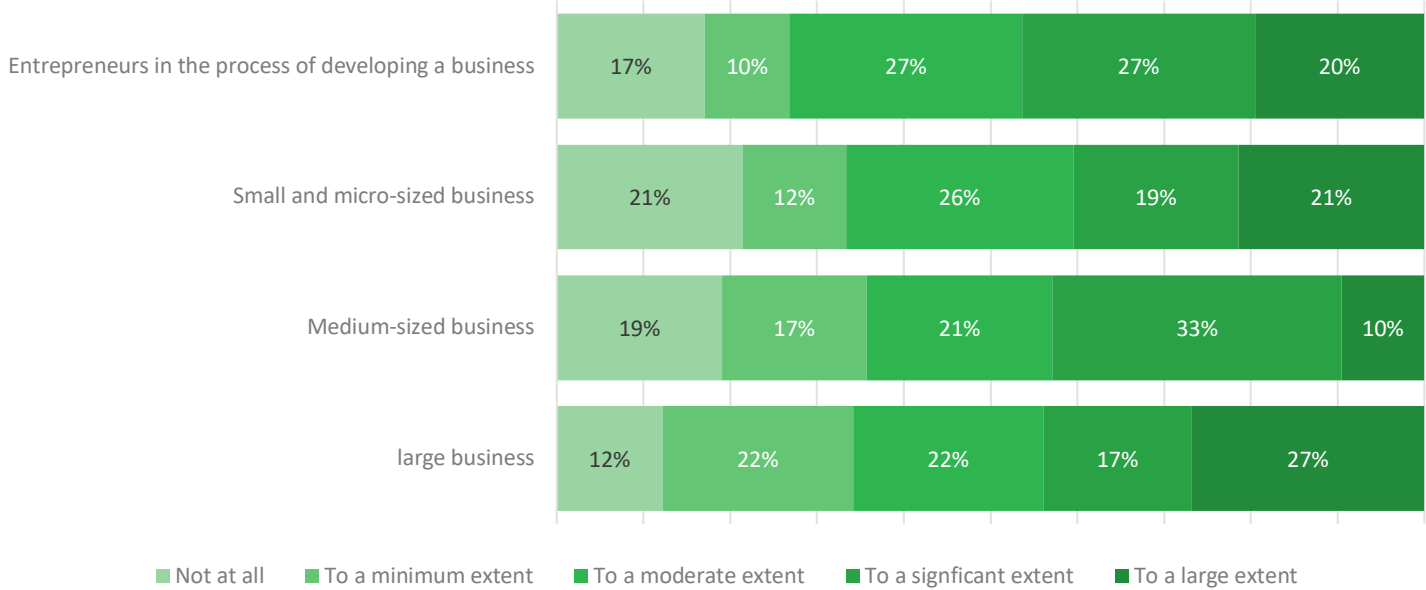


65% of Turkish academics cooperate with only 1 or 2 business partners, as they are overloaded with long teaching hours and other academic commitments. 21% have established relations with 3-4 businesses. The remaining 14% have partner relations with 5 or more partners.

Size of cooperating partners

Size of cooperating partner

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



Academics in Turkey collaborate in a greater extent with entrepreneurs. Almost half of cooperating academics in Turkey (47%) engage to a significant or large extent with entrepreneurs in the process of developing a business.

44% of cooperating academics in Turkey engage to a significant or large extent with large businesses, followed by medium-sized businesses (43%). This cooperation is reduced to 40% for small and micro-sized businesses. The innovation capacity and financial resources of small and micro-sized business prevent them from getting involved in long term professional engagements with academics.

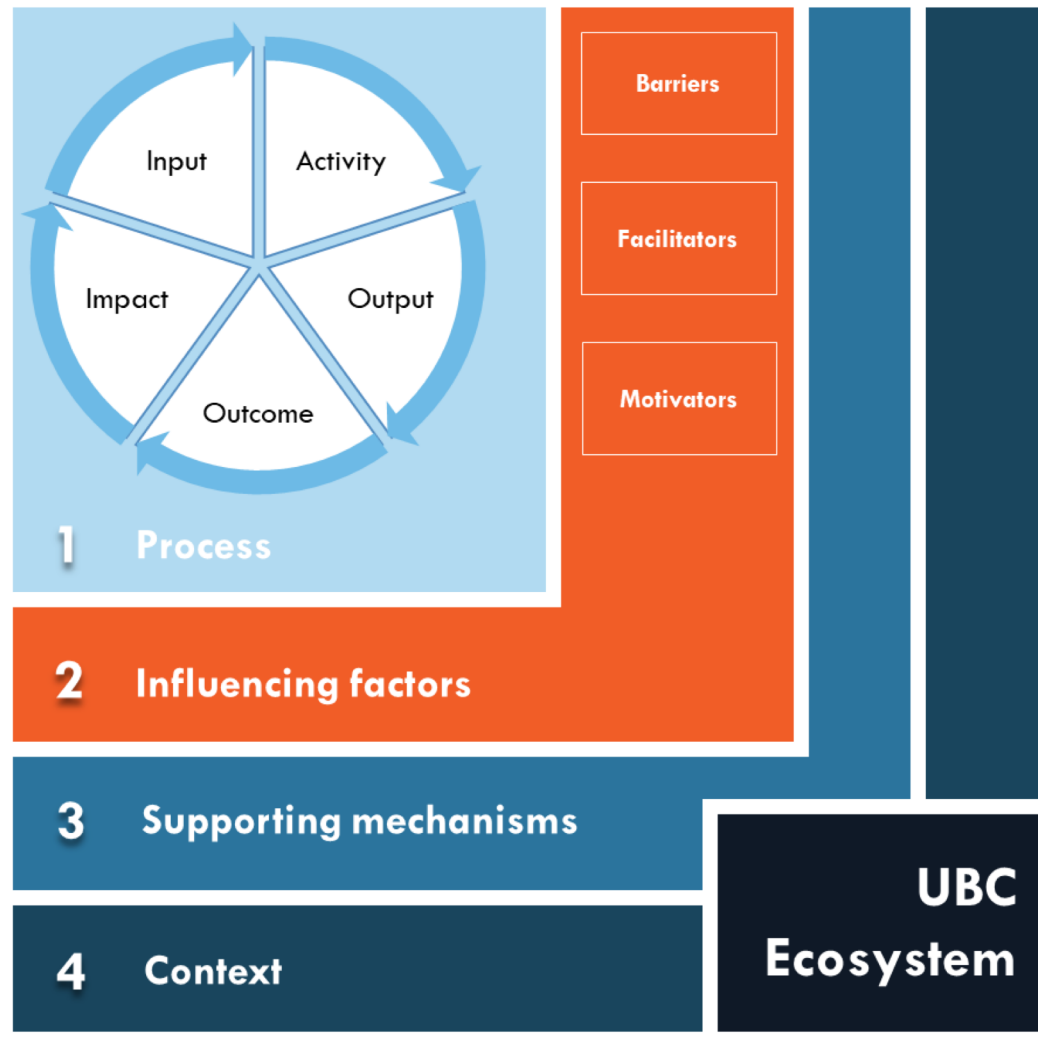
Factors influencing UBC

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 sufficiently present.



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.	Differing motivation / values between university and business	Differing motivation / values between university and business
2.	The focus on producing practical results by business	The focus on producing practical results by business
3.	Business lack awareness of university research activities / offerings	Differing mode of communication and language between university and business
4.	Difficulty in finding the appropriate collaboration partner	Difficulty in finding the appropriate collaboration partner
5.	Differing mode of communication and language between university and business	No appropriate initial contact person within either the university or business
<i>Lowest</i>	Frequent staff turnovers within my university or the business	Frequent staff turnovers within my university or the business

The top five barriers for both collaborating and non-collaborating academics in Turkey are very similar. They are related mainly to cultural issues.

The most relevant barrier to cooperation for both groups is related to the differing motivations between two organisations, followed by the business' focus on producing practical results. Academics and businesses come from different worlds and have different priorities.

Communication issues between business and university as well as the difficulty in finding the appropriate partner are also major barriers. While collaborating academics see the lack of business awareness of the university research activities as a factor hindering UBC, not collaborating ones perceive the lack of an appropriate initial contact person as a relevant barrier and are seen to use this as a neat excuse for not collaborating. However, the establishment of university TTOs across Turkey has made this excuse redundant.

Barriers hindering UBC

Turkish academics perceive most barriers stronger than their European counterparts.

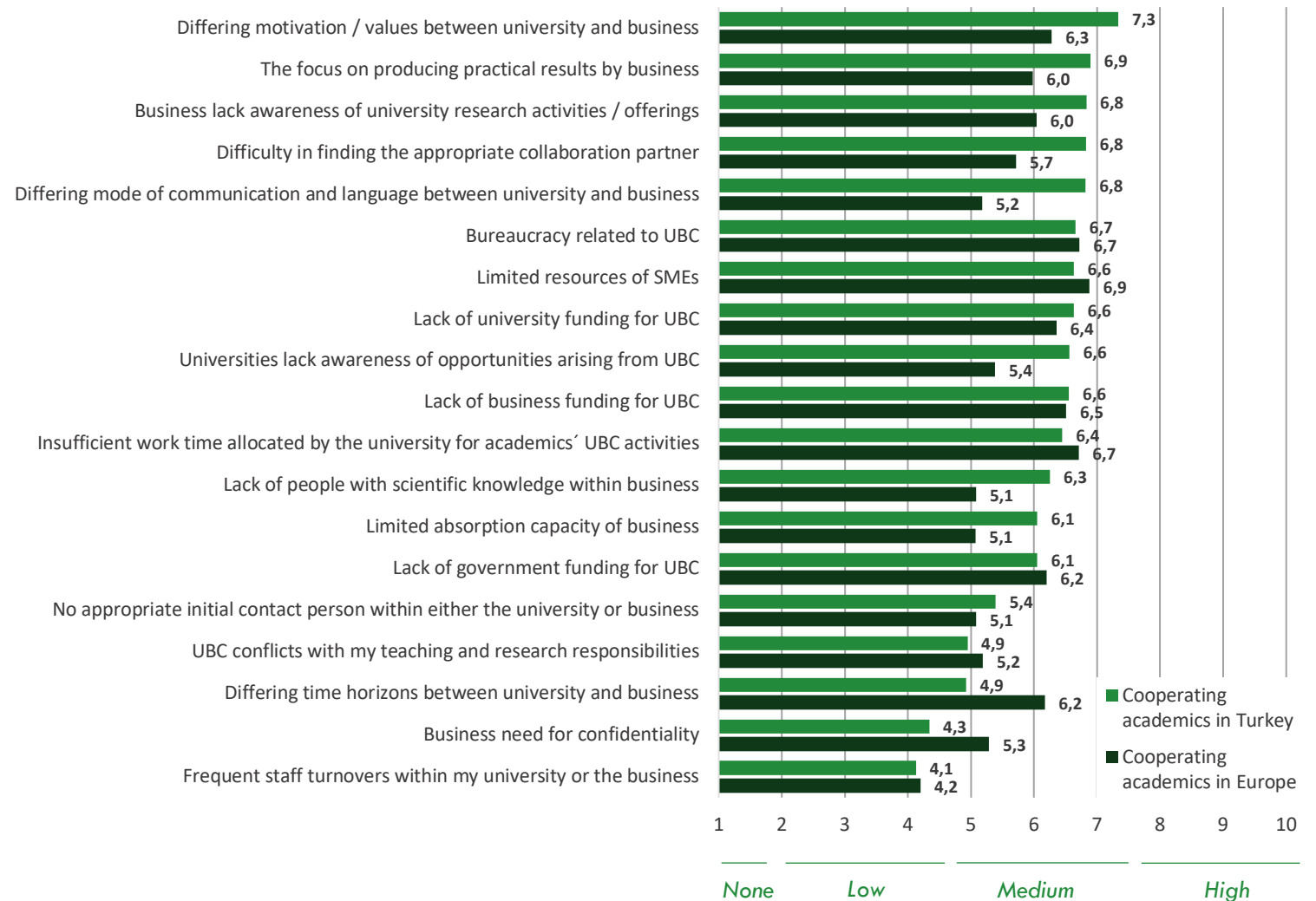
In Turkey, academics are more hindered than their European counterparts by the differing motivations, the difficulty in finding the appropriate collaboration partner and the differing mode of communication between two organisations.

The universities' lack of awareness of opportunities arising from UBC, the lack of people with scientific knowledge within business along with the business limited absorption capacity are also more inhibiting for Turkish academics than for European ones.

However, they are less hindered than their European counterparts by the different time horizons between two organisations and the business' need for confidentiality. Those Turkish academics who manage to establish a ground for collaboration generally sustain this through compromises with business partners.

Barriers

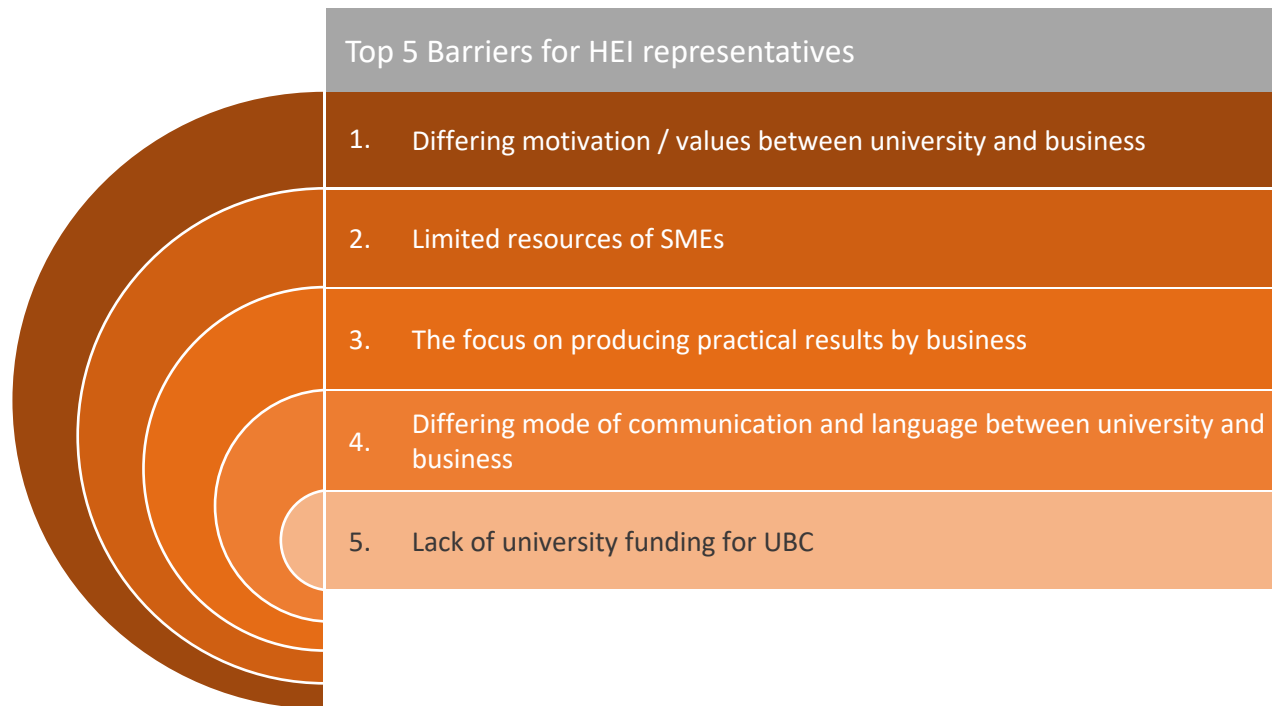
'What is inhibiting your cooperation with business?' – as answered by academics



Barriers hindering UBC

Barriers

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



Turkish HEI representatives are inhibited to engage in UBC by the lack of resources and cultural differences.

The differing motivations between university and business is the largest barrier. This is consistent with the perception of the Turkish academics.

HEI representatives also recognise cultural issues like the business focus on practical results and the differing language and communication modes between university and business as major barriers. Generally, in Turkey there is no a widespread collaboration culture with very scarce success stories.

At the same time, SMEs limited resources and the lack of university funding can also significantly inhibit UBC in Turkey. Any serious collaboration requires a funding to produce outputs.

Barriers hindering UBC

Overall, most barriers are perceived similarly by Turkish HEI representatives and their European counterparts.

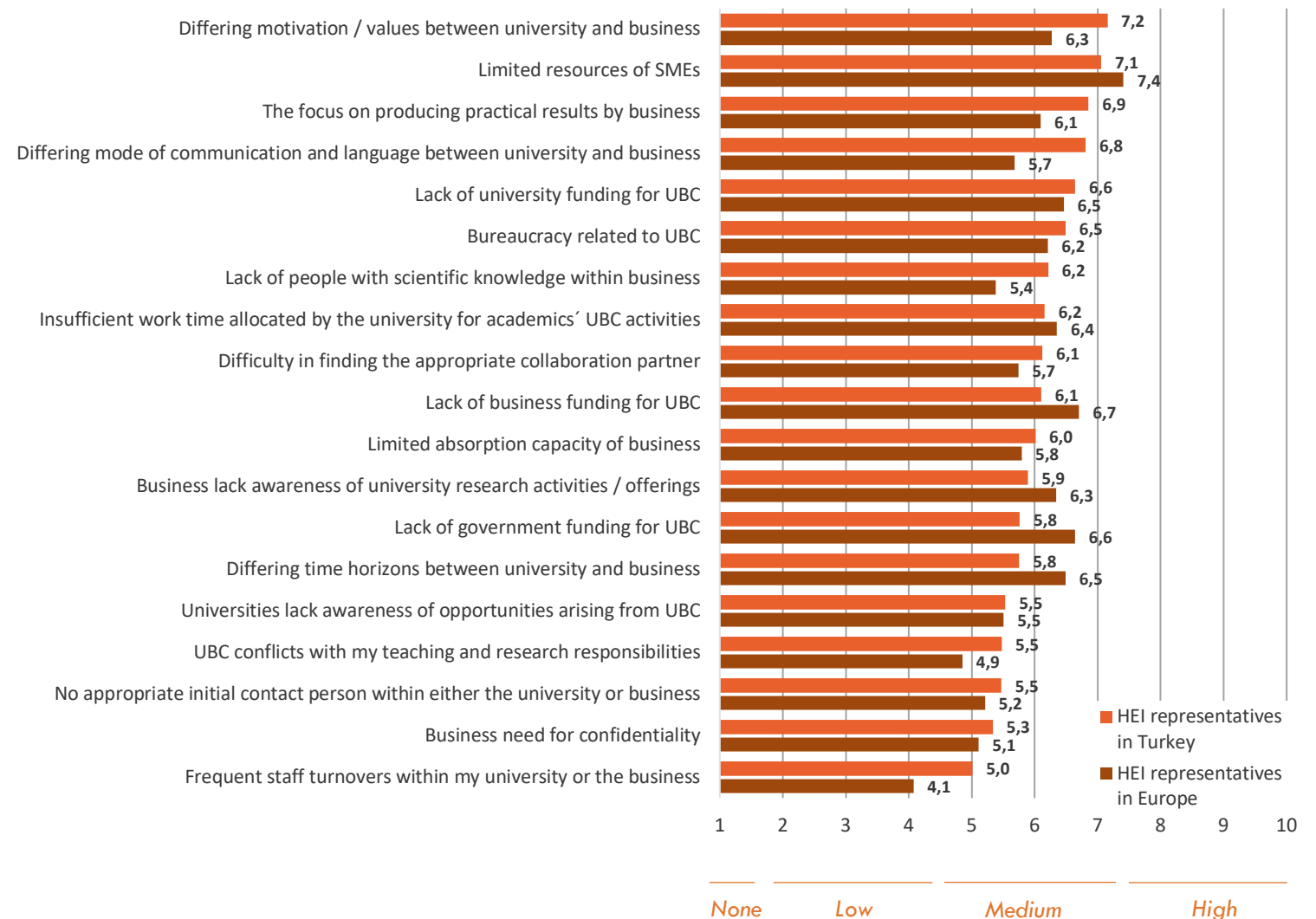
The business' focus on producing practical results and communication issues are perceived as more inhibiting barriers by Turkish HEI representatives than by their European counterparts. Turkish companies focus on short-term result-oriented R&D which conflicts with academic interests.

The lack of business and government funding is less inhibiting for Turkish HEI representatives, as there is a substantial amount of state funding for UBC in Turkey.

The frequent staff turnovers within the university or in businesses is the weakest UBC barrier for both groups, although it is perceived significantly stronger by Turkish HEI representatives.

Barriers

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



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 Turkish academics and HEI representatives are very similar.

The main facilitators focus on the existence of funding and relationship aspect of UBC, highlighting the importance of trust and a shared goal for successful UBC. The interest of business in accessing scientific knowledge is also recognised by both groups.

The existence of interest of the university in accessing business-sector R&D facilities is crucial for UBC according to academics, whilst HEI representatives perceive the existence of a prior relation with the business partner as an important driver.

Facilitators

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



	Academics	HEI representatives
1.	Existence of funding to undertake the cooperation	Existence of mutual trust
2.	Existence of a shared goal	Existence of funding to undertake the cooperation
3.	Interest of business in accessing scientific knowledge	Interest of business in accessing scientific knowledge
4.	Interest of the university in accessing business-sector R&D facilities	Prior relation with the business partner
5.	Existence of mutual trust	Existence of a shared goal

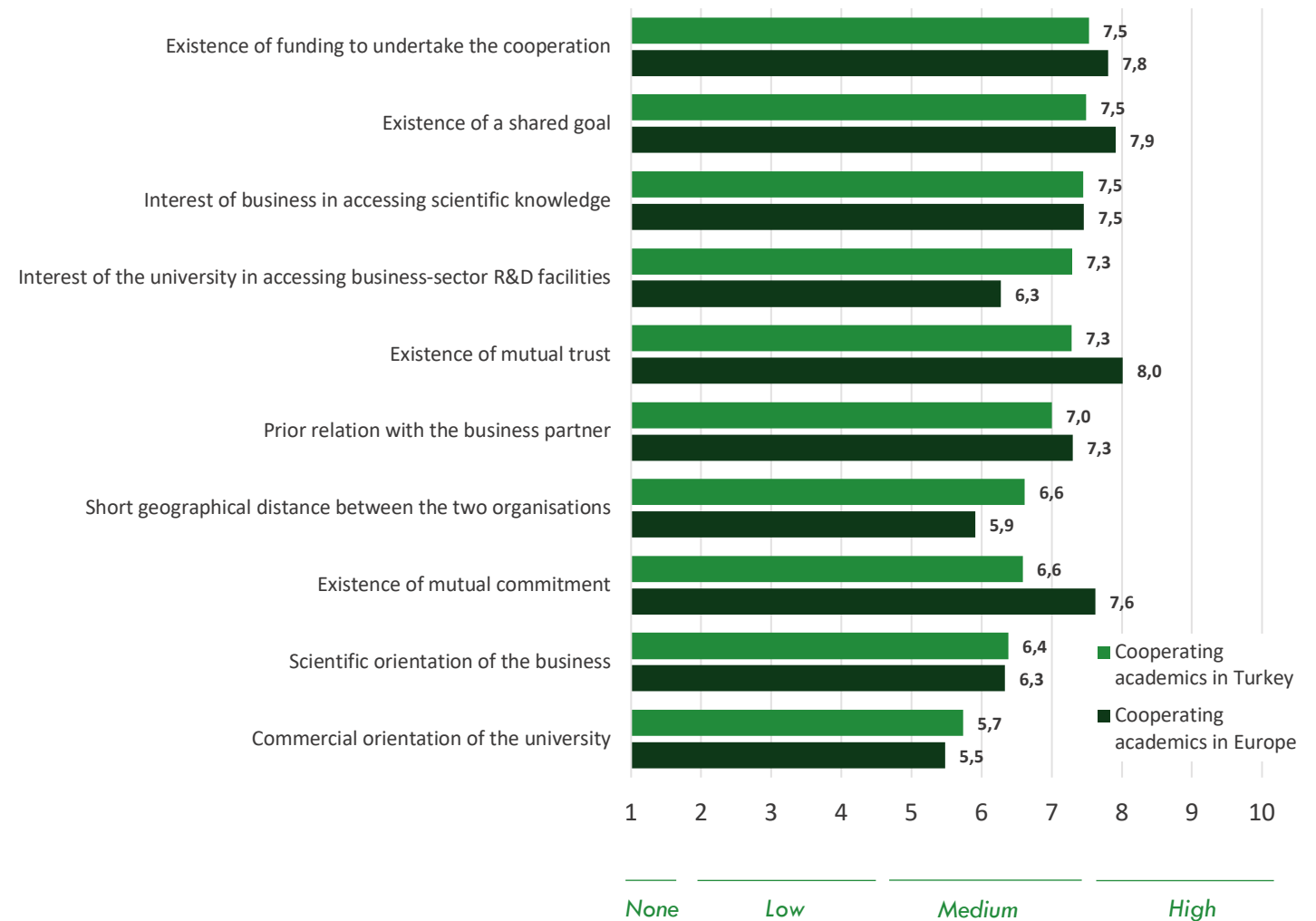
Drivers stimulating UBC

European and Turkish perceptions of UBC facilitators are similar. Yet, relationship related factors bear less importance for academics in Turkey.

Interestingly, the interest of university in accessing business-sector R&D facilities is notably higher for Turkish academics. Due to budget restriction infrastructures at Turkish universities may not be very up to date, therefore UBC is seen as a way which allows them to access business facilities.

Facilitators

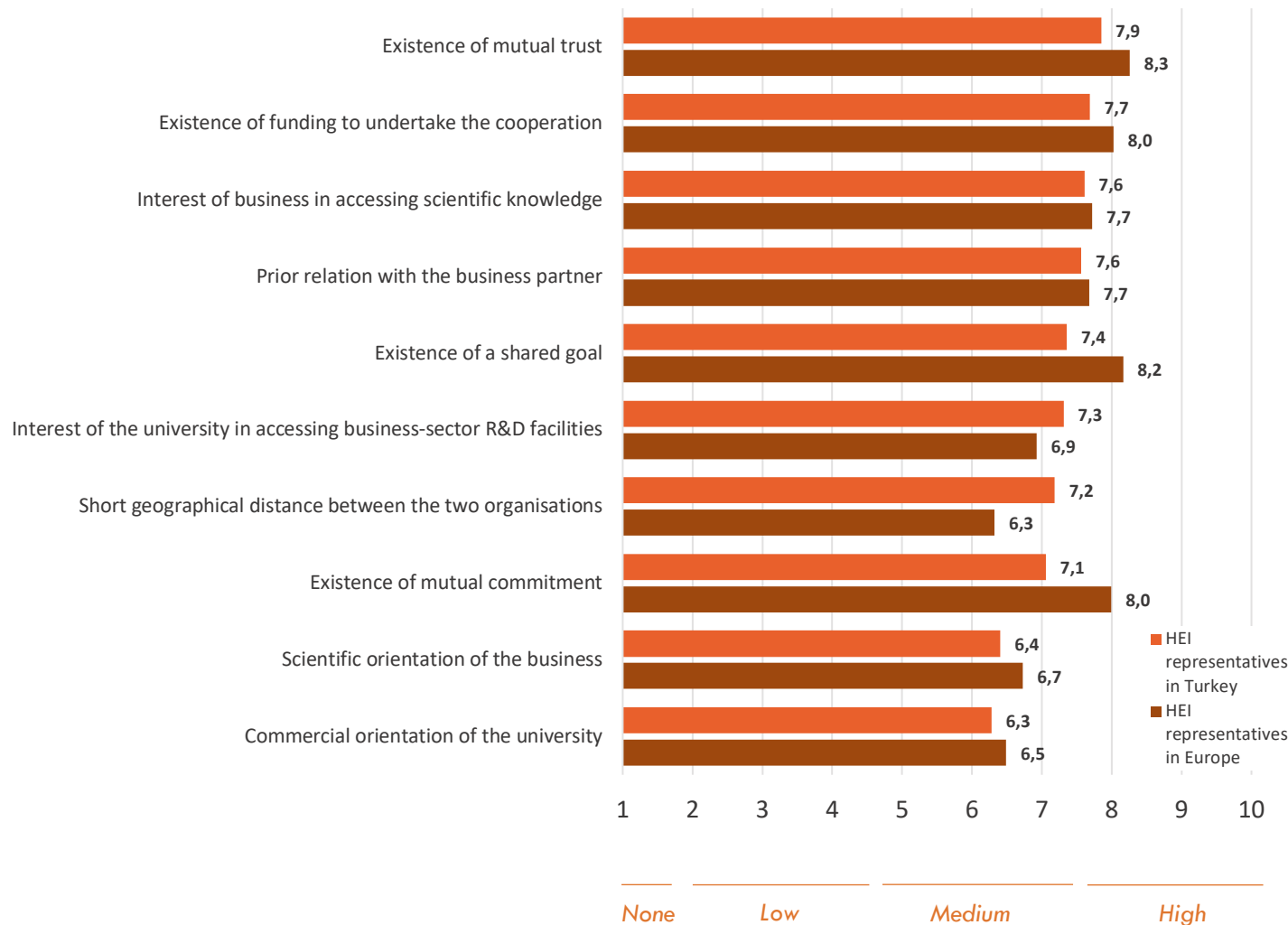
'What is facilitating your cooperation with business?' – as answered by academics



Drivers stimulating UBC

Facilitators

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



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

For both groups, the most important facilitators also relate to the existence of mutual trust and funding. However, further relationship related factors such as the existence of commitment and a shared goal are significantly higher for HEI representatives in Europe than they are for those in Turkey.

The interest of business in accessing scientific knowledge plays an important role for both groups. Knowledge and its interpretation are the most important assets that academia can offer.

Drivers stimulating UBC

Motivators of Turkish academics who already cooperate with businesses and motivators of non-cooperating academics have certain discrepancies.


While cooperating academics highlight research motivations, academics not engaging in UBC are more driven by the willingness to contribute to the mission of the university and to address societal challenges.

Obtaining funding is perceived as a motivation only for the cooperating academics. Although there is a number of altruistic motives behind UBC, financial benefits cannot be overlooked.

The motivation to improve teaching is exclusive to the non-cooperating academics.

Motivators

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

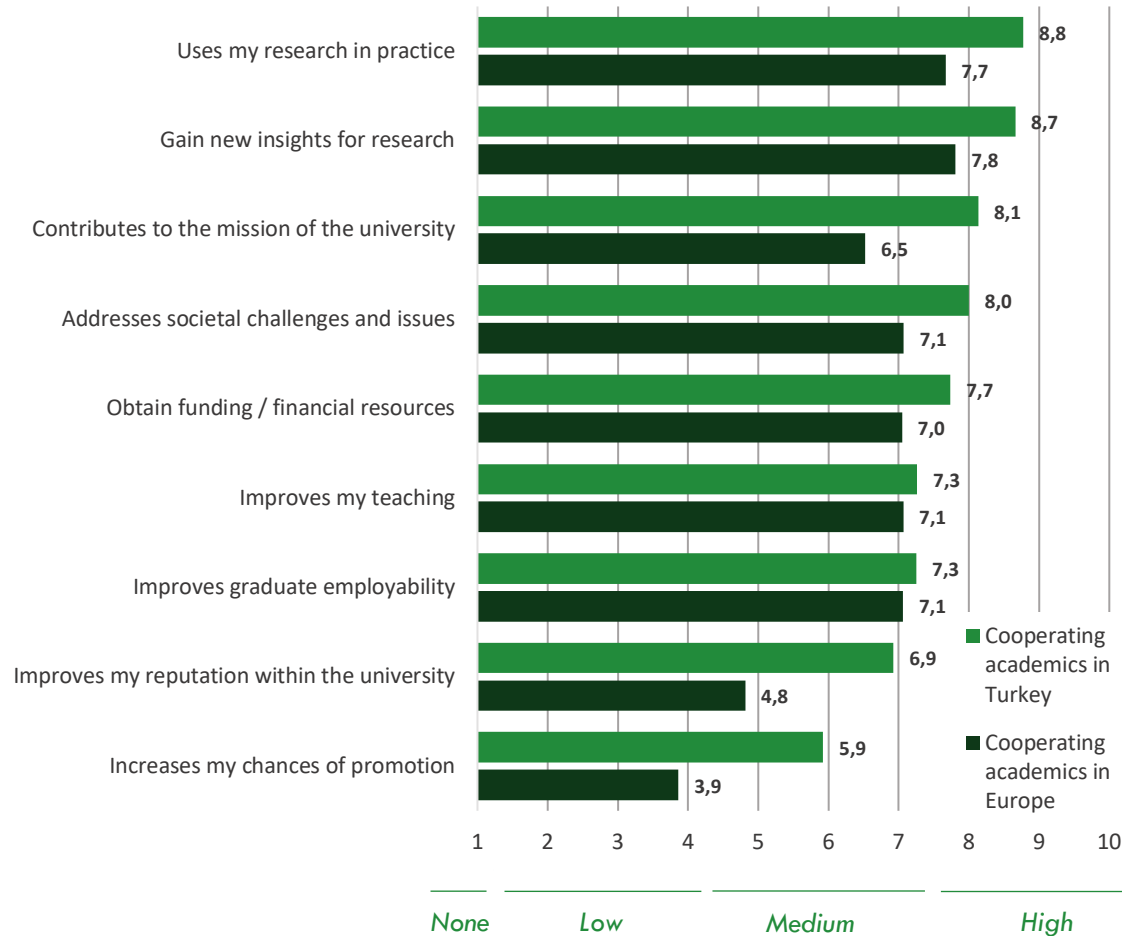


	Academics who cooperate	Academics who <u>do not</u> cooperate
1.	Uses my research in practice	Contributes to the mission of the university
2.	Gain new insights for research	Addresses societal challenges and issues
3.	Contributes to the mission of the university	Uses my research in practice
4.	Addresses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

Drivers stimulating UBC

Motivators

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



Turkish academics have a stronger perception of UBC motivators than their European counterparts.

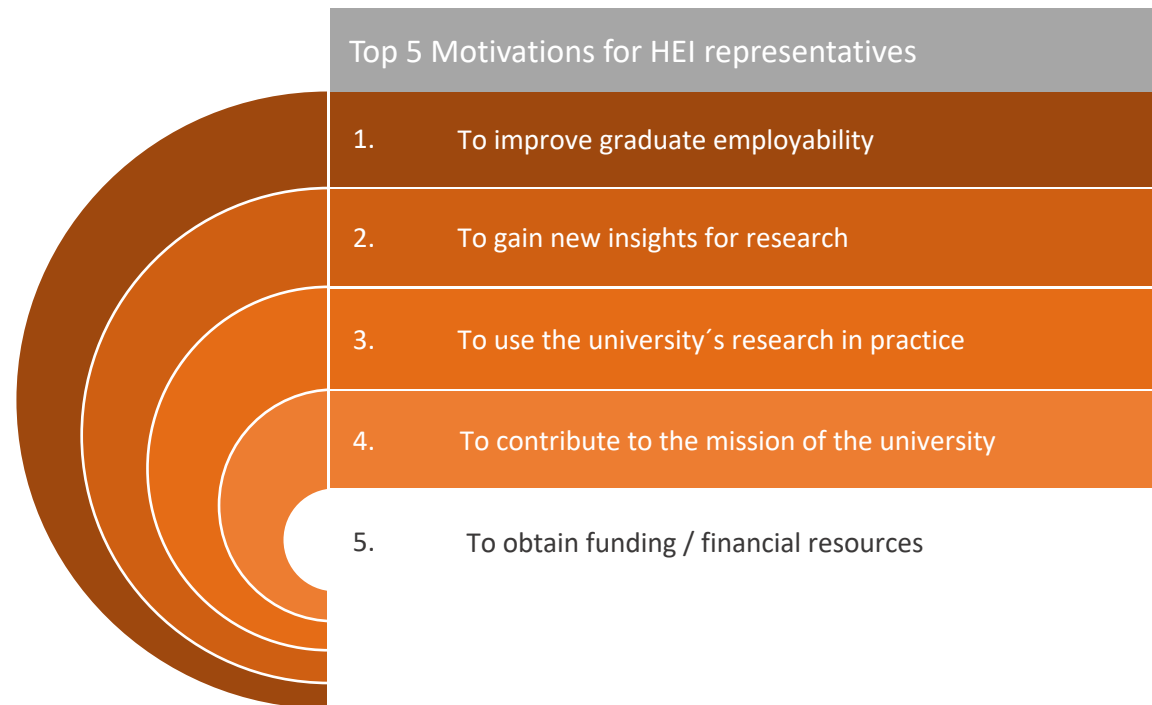
The motivators focused on other stakeholders have a higher importance for academics in Turkey. The most significant difference in perception can be seen in the motivation to contribute to the mission of the university.

Notably promotion and reputation related motivators are the weakest drivers stimulating UBC for both groups. However, they are perceived significantly stronger by Turkish academics.

Drivers stimulating UBC

Motivators

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



Turkish HEI representatives are highly motivated to improve graduate employability, because graduate unemployment rates are very high and HEI representatives see this issue as one of their social responsibilities, in addition to exploiting this as a parameter for competing with other HEIs.

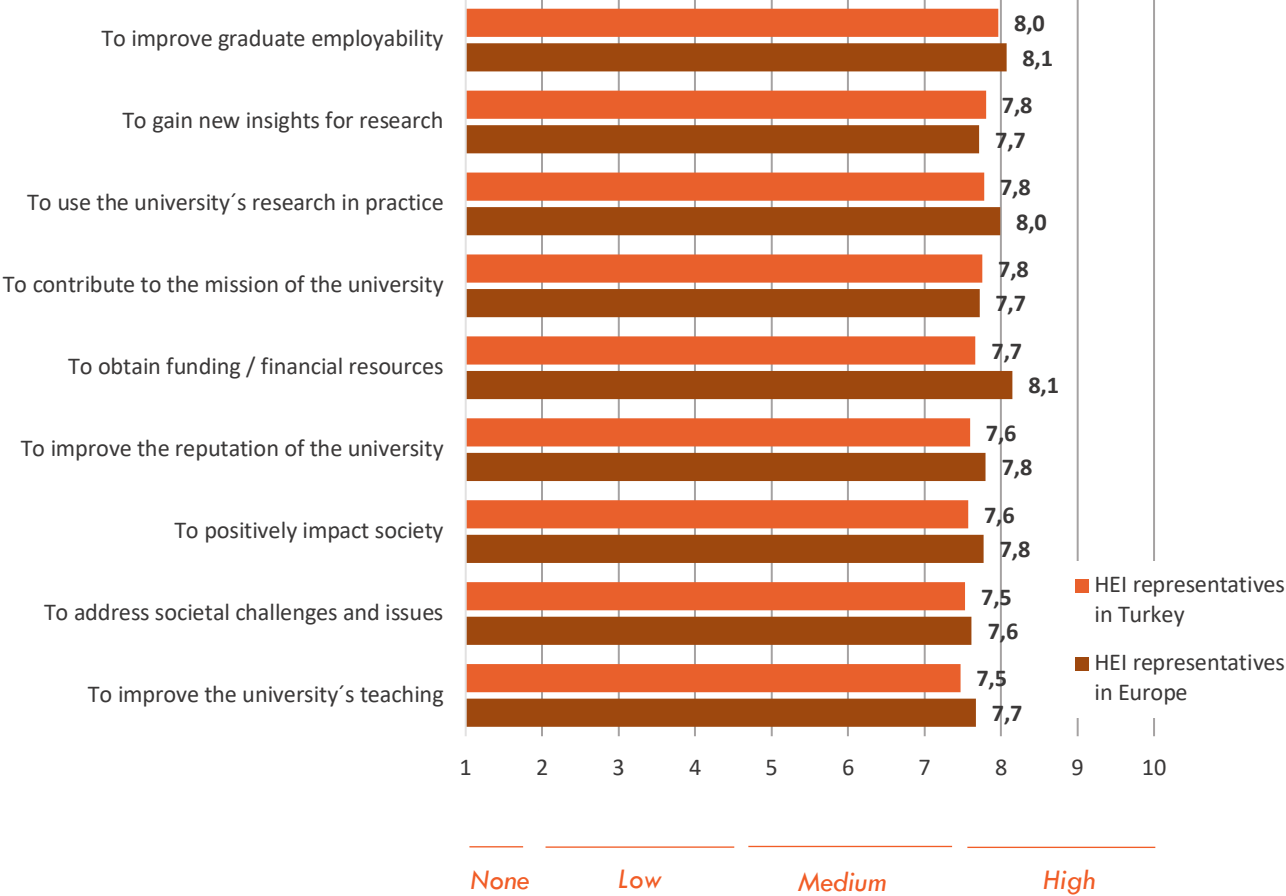
Research related motivations such as gaining new insights and research application bear also high importance for Turkish HEI representatives.

Further motivations relate to contribution to the mission of the university and obtaining funding. Turkish academics need to set personal goals to survive under uncertain socio-economic conditions. They are also under pressure of the top management and feel obliged to contribute to the mission of their universities.

Drivers stimulating UBC

Motivators

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



Turkish HEI representatives perceive motivators very similar to European HEI representatives.

More crucially, for both European and Turkish HEI representatives all motivators were ranked of nearly equal importance (from 7.5 to 8.0), which ultimately means that all these motives have a potential of stimulating UBC for universities.

Benefits of UBC

Turkish academics and HEI managers have similar perceptions about the stakeholders that benefit from UBC.

Businesses and universities are perceived by both groups as the stakeholder groups who benefit the most from UBC.

Academics see their own benefit higher than the one for government, while HEI representatives see that the benefits for academics are lower.

Students and society are believed by both groups to gain little benefit from UBC. Students and society can be seen in the Turkish context as indirect beneficiaries with long-term and therefore less tangible impacts.


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

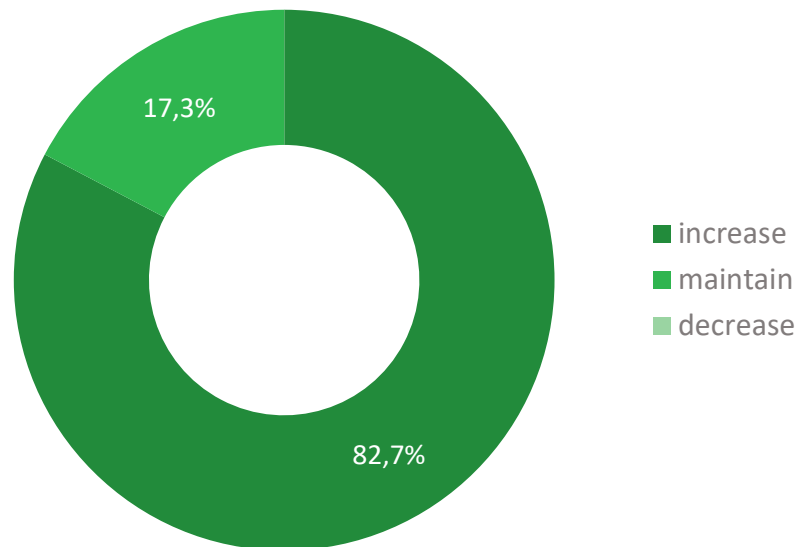


	Academics	HEI representatives
1.	Businesses	Businesses
2.	Universities	Universities
3.	Academics	Government / public authorities
4.	Government / public authorities	Academics
5.	Society	Students
6.	Students	Society

Future intentions

Future UBC intentions – Turkey

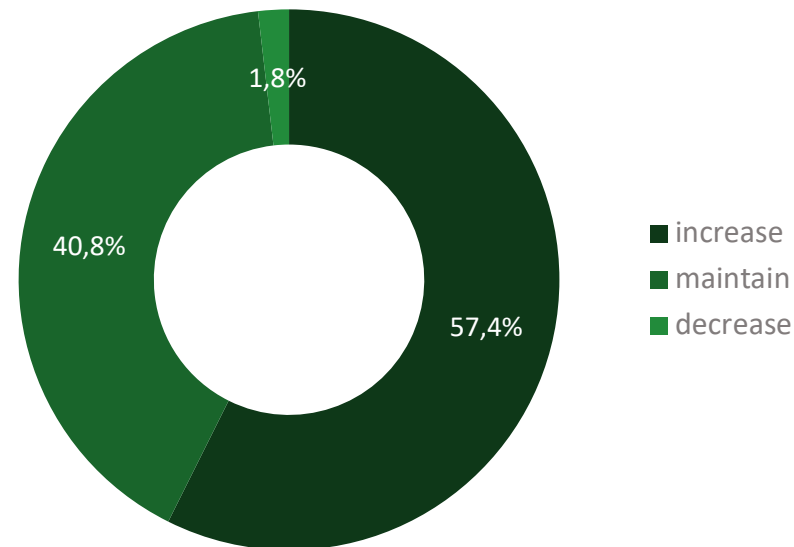
As answered by Turkish academics



Turkish academics show a very strong commitment to UBC. 100% of them are expecting to maintain or increase their UBC activities. In this sense, Turkey proves to be an attractive country for UBC, with positive momentum for the future.

Future UBC intentions – EUROPE

As answered by European academics



Academics in Europe also show a strong commitment to increasing UBC activities. 57.4% of cooperating academics expect to increase their cooperation and only 1.8% plan to decrease their collaborative activities with businesses. This shows a positive projection for UBC in Europe.

Willingness to recommend UBC

The willingness of Turkish cooperating academics to recommend to a colleague to engage in UBC highly varies depending on whether this cooperation is in research or in education.

Turkish academics are significantly more satisfied with UBC in research than their European counterparts (NPS=55). While 62% of them will promote it positively, only 8% would do it negatively.

Similarly, Turkish academics are also more satisfied than their academics counterparts in education-related UBC (NPS = 8 for Turkish and -14 for European academics).

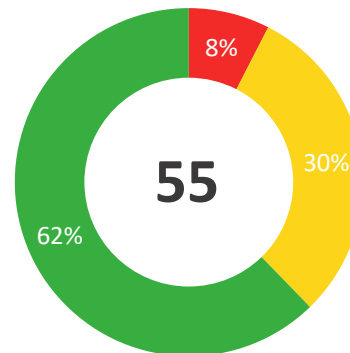
Willingness to recommend to an academic colleague cooperation with business in R&D and education

As answered by academics

	Detractors	Passives	Promoters	Net promoter score
Academics cooperating in E&T	31%	31%	38%	8
Academics cooperating in R&D	8%	30%	62%	55

Satisfaction in cooperation with businesses (net promoter score)

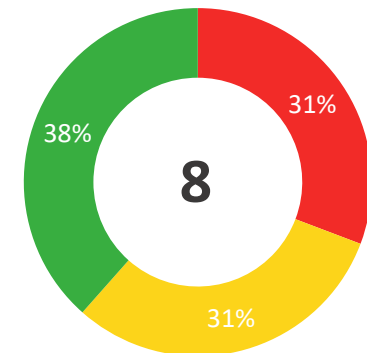
Academics cooperating in research



■ Detractors ■ Passives ■ Promoters

European academics' NPS result: 17

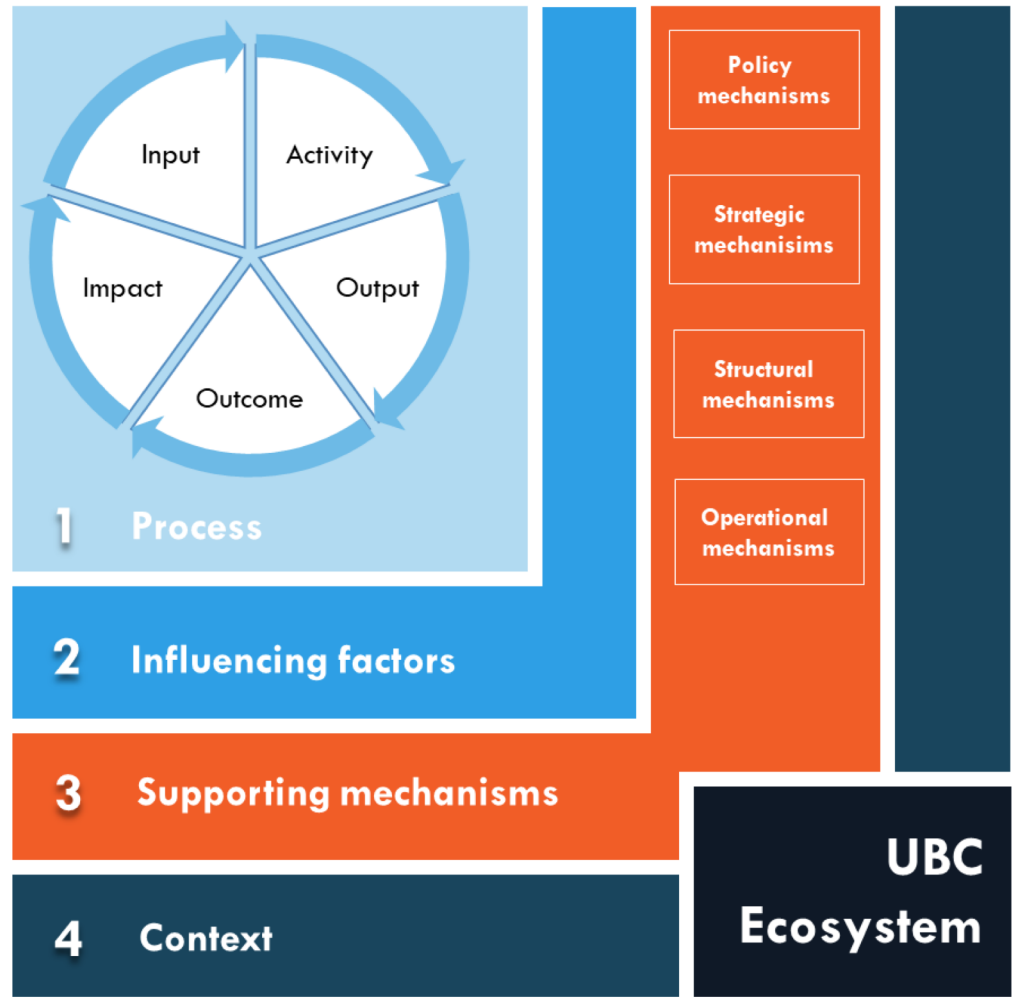
Academics cooperating in education



■ 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

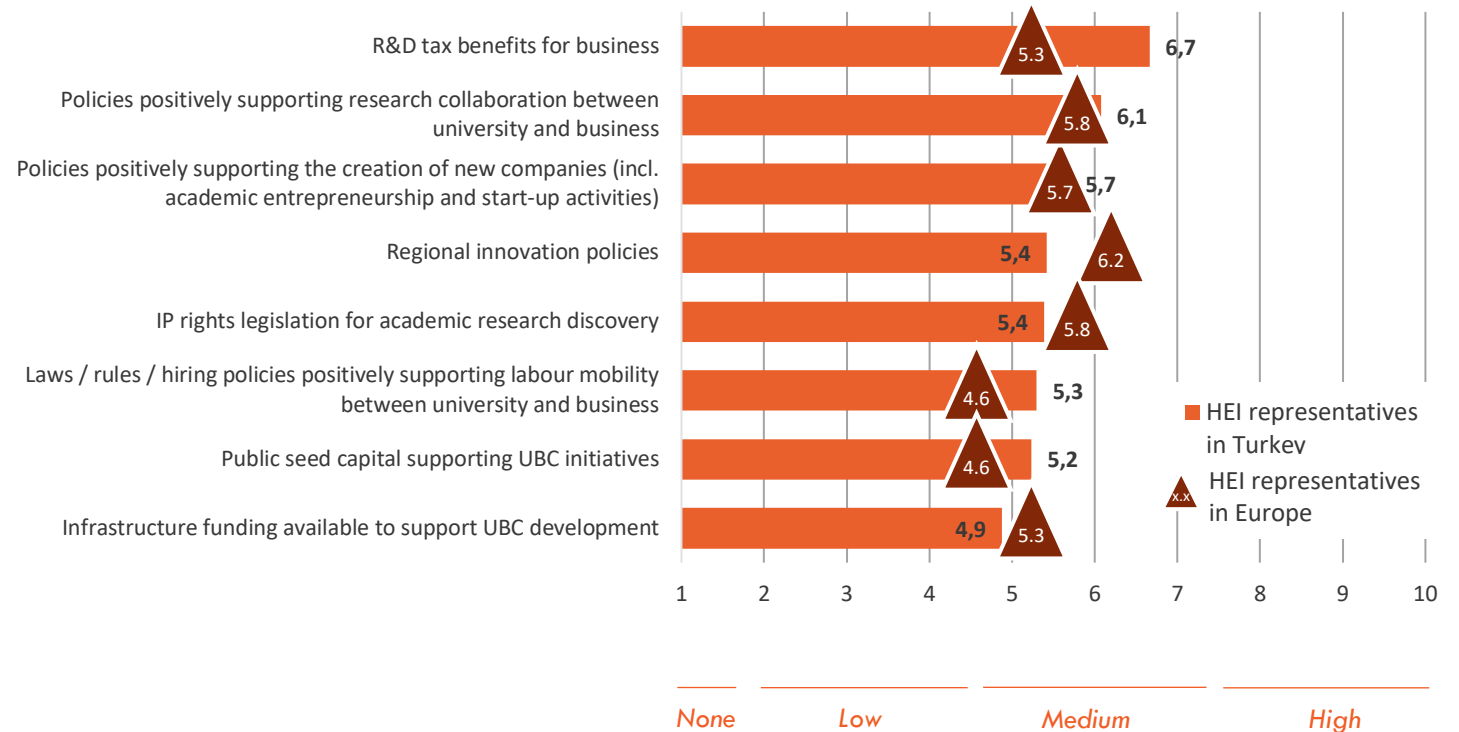
Turkish HEI representatives perceive policy mechanisms to be developed to a medium-low level. These perceptions are similar to those of their European counterparts.

R&D tax benefits for business is the most developed supporting mechanism (6.7) and it is significantly more advanced in Turkish HEIs than in Europe. It is followed by policies positively supporting research collaboration and new companies creation (6.1 and 5.7 respectively). Turkey has very diversified public R&D support programmes. Academics are encouraged through these mechanisms to undertake steps towards academic entrepreneurship.

Regional innovation policies and IP rights legislation for academic research discovery are perceived higher by European HEI representatives. In Turkey the regional innovation policies are very new concepts with limited examples. IP awareness amongst academia is similarly an issue that has started to be discussed only in the last 5 years.

Policy mechanisms

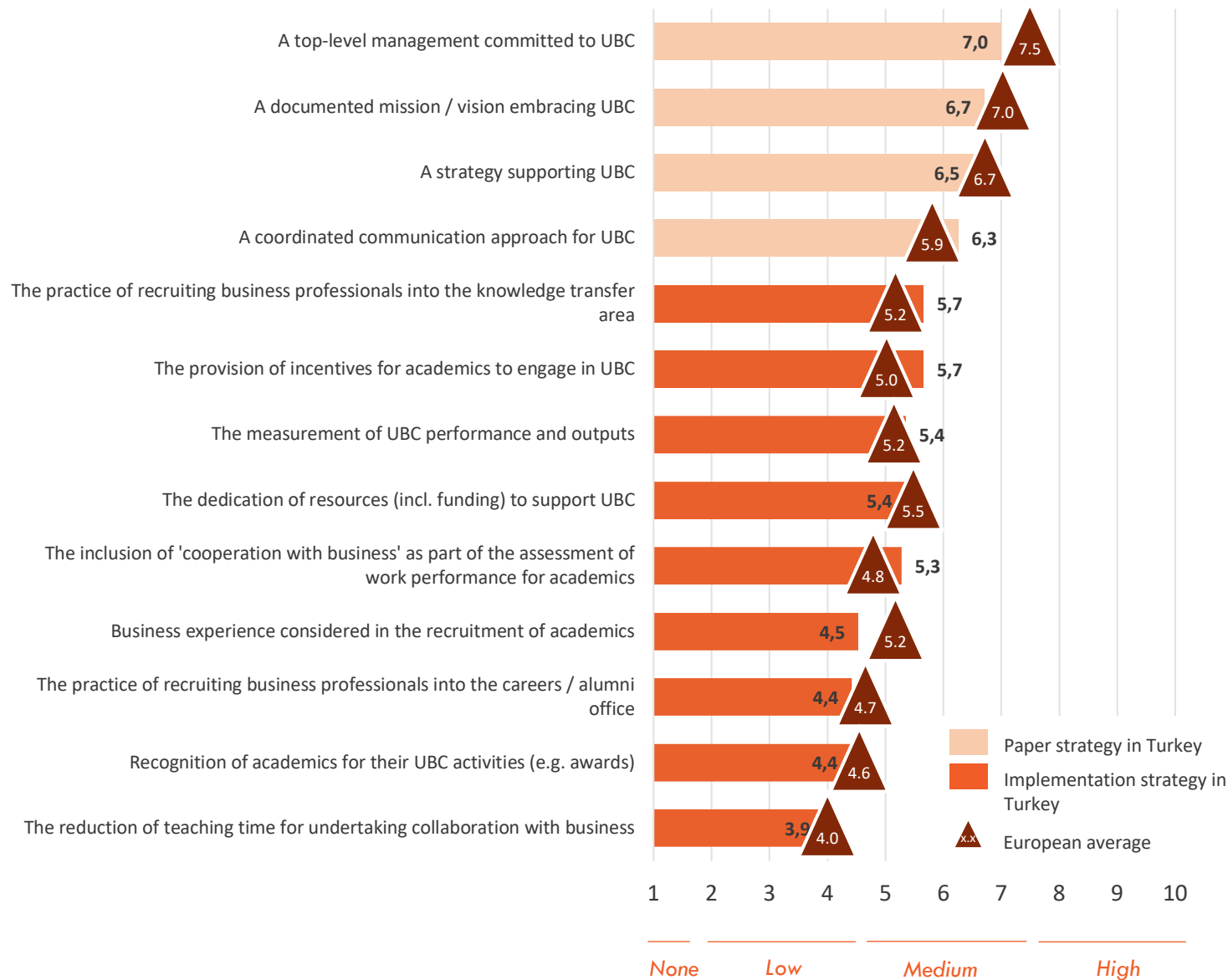
'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



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 in Turkish and European HEIs is very similar.

The most developed mechanisms are a committed top-level management, a documented mission embracing UBC and a strategy supporting UBC.

The least developed ones are related to the recognition of academics for their UBC activities and the reduction of teaching time.

Notably, the paper strategies are substantially more developed than implementation strategies, showing the official commitment of Turkish HEIs to UBC above the actual dedication of resources. The concept of UBC is however still very young and the policies that are so far established have few implementation examples.

Supporting mechanisms for UBC

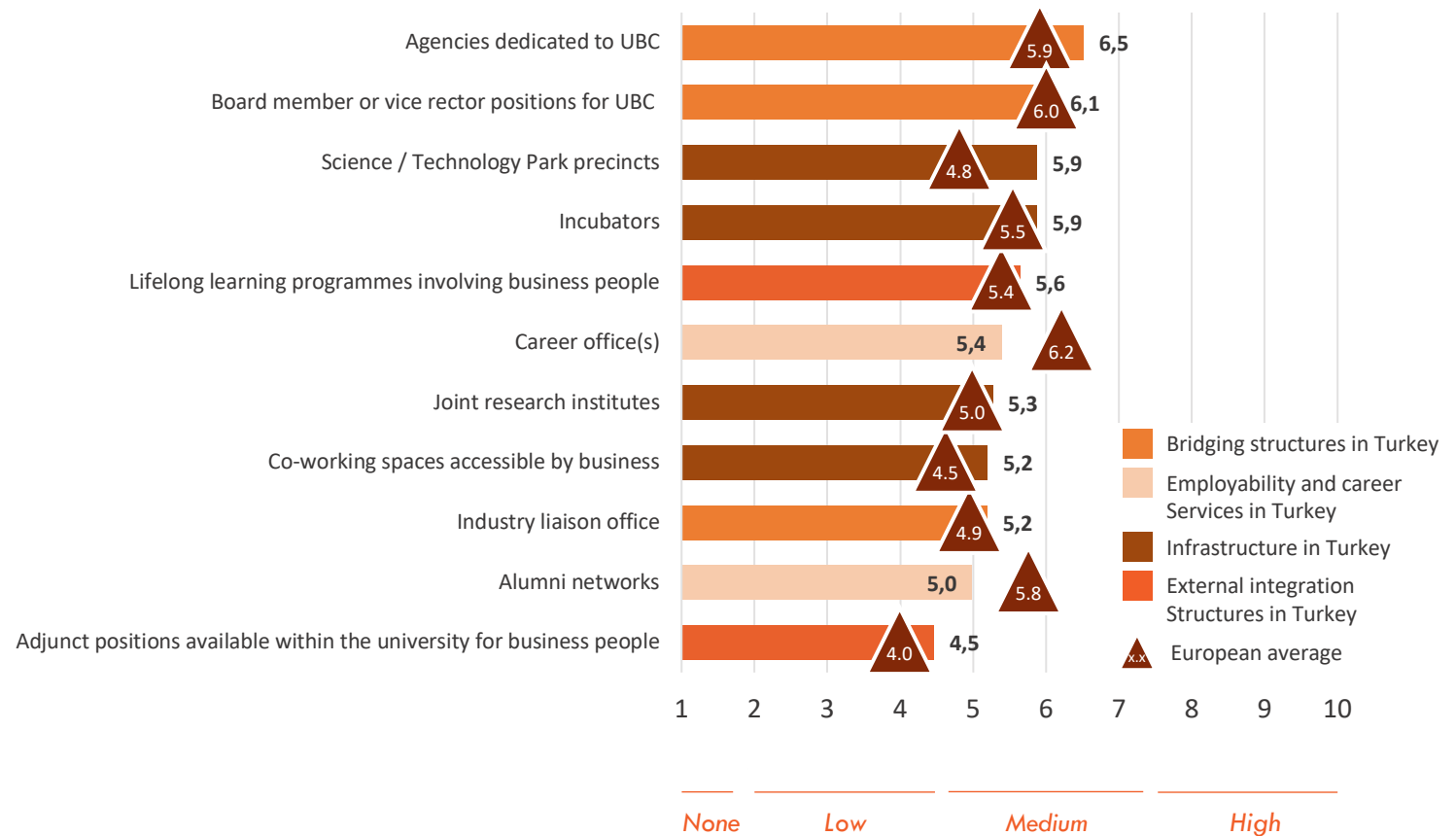
The development of most structural mechanisms is slightly higher in Turkish HEIs than in European HEIs.

Agencies dedicated to UBC and a board member or vice rector positions for UBC are the most developed structural mechanisms in Turkish HEIs (6.5 and 6.1 respectively). Since Turkish HEIs are at a stage where policies are still being established, there is a need for strong administrative commitment to set first specific structures.

Employability and career services are less developed in Turkish HEIs compared to the European average. Conversely, infrastructure mechanisms are more developed in Turkey than in Europe.

Structural mechanisms

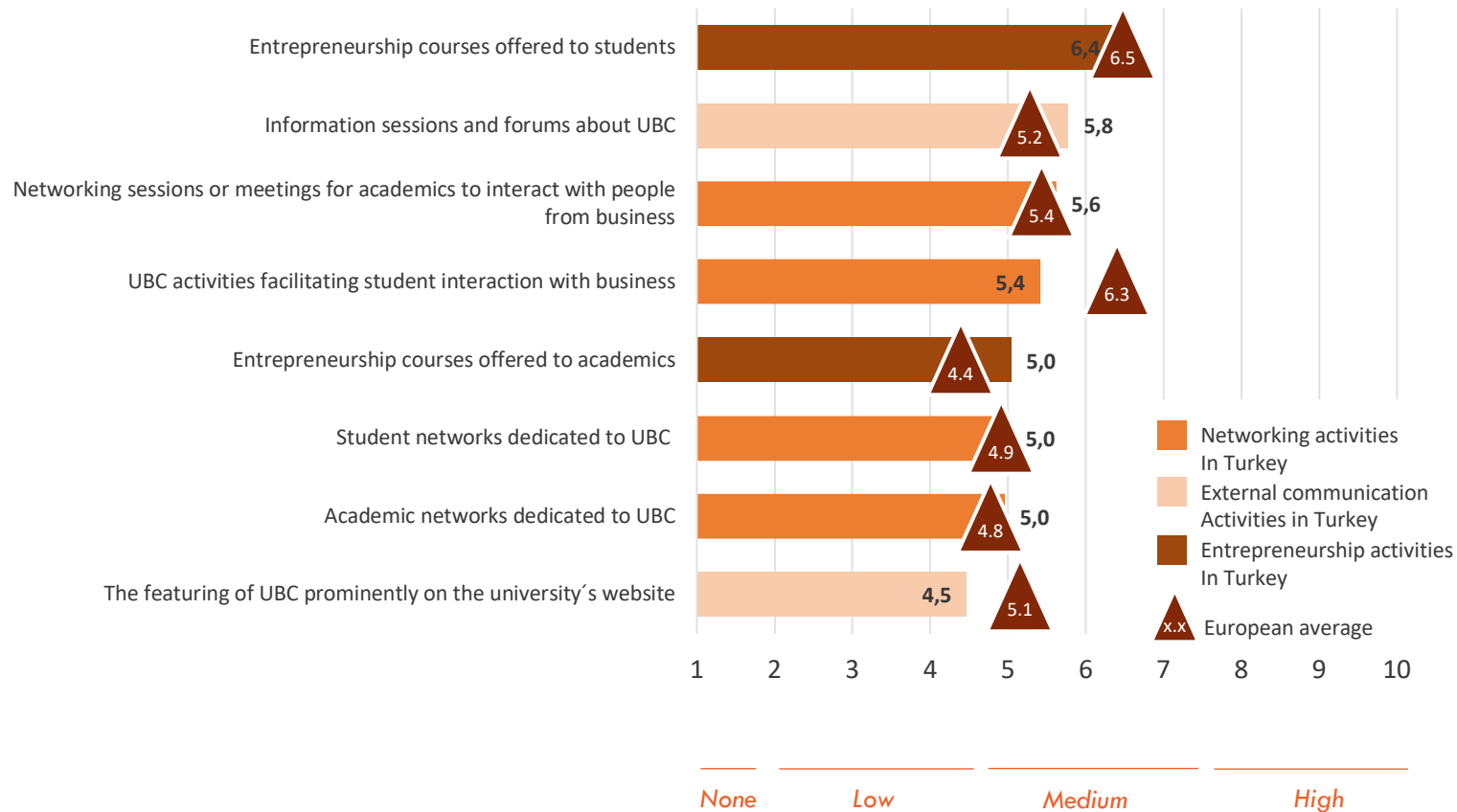
'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



Supporting mechanisms for UBC

Operational mechanisms

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



Overall, the perspectives of Turkish and European HEI representatives align with respect to the development of operational mechanisms.

Entrepreneurship courses offered to students are seen as the most developed mechanism in Turkish as well as in European HEIs. Entrepreneurship is conceived as a solution to unemployment and is being encouraged at all levels.

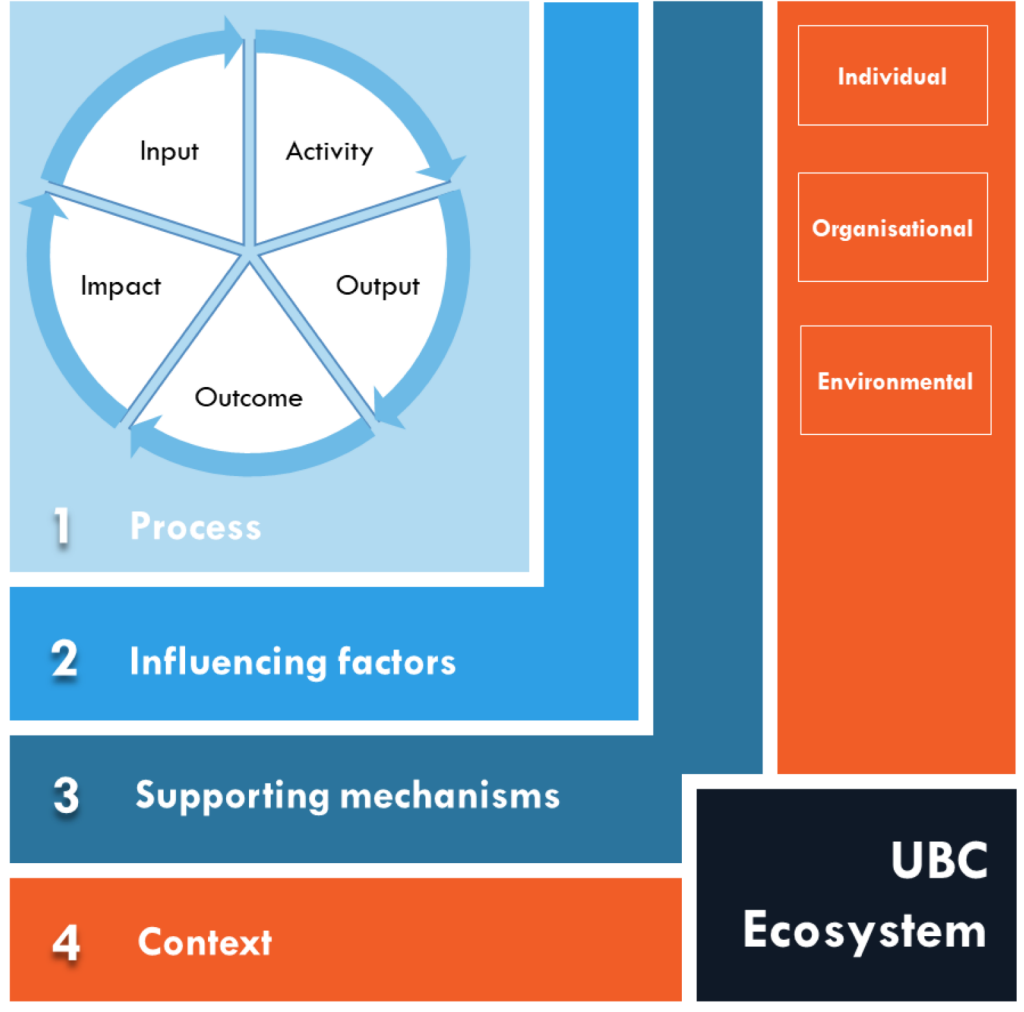
Compared to the EU average, UBC activities facilitating student interaction with business is significantly less developed in Turkish HEIs. Turkish businesses are absorbed by day-to-day survival issues and the interaction with students interaction is seen as a time intensive occupation. This interaction is often being overlooked by companies in their concerns about short-term outcomes, and at the same not being supported by HEI operational mechanisms.

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 or medium 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.).

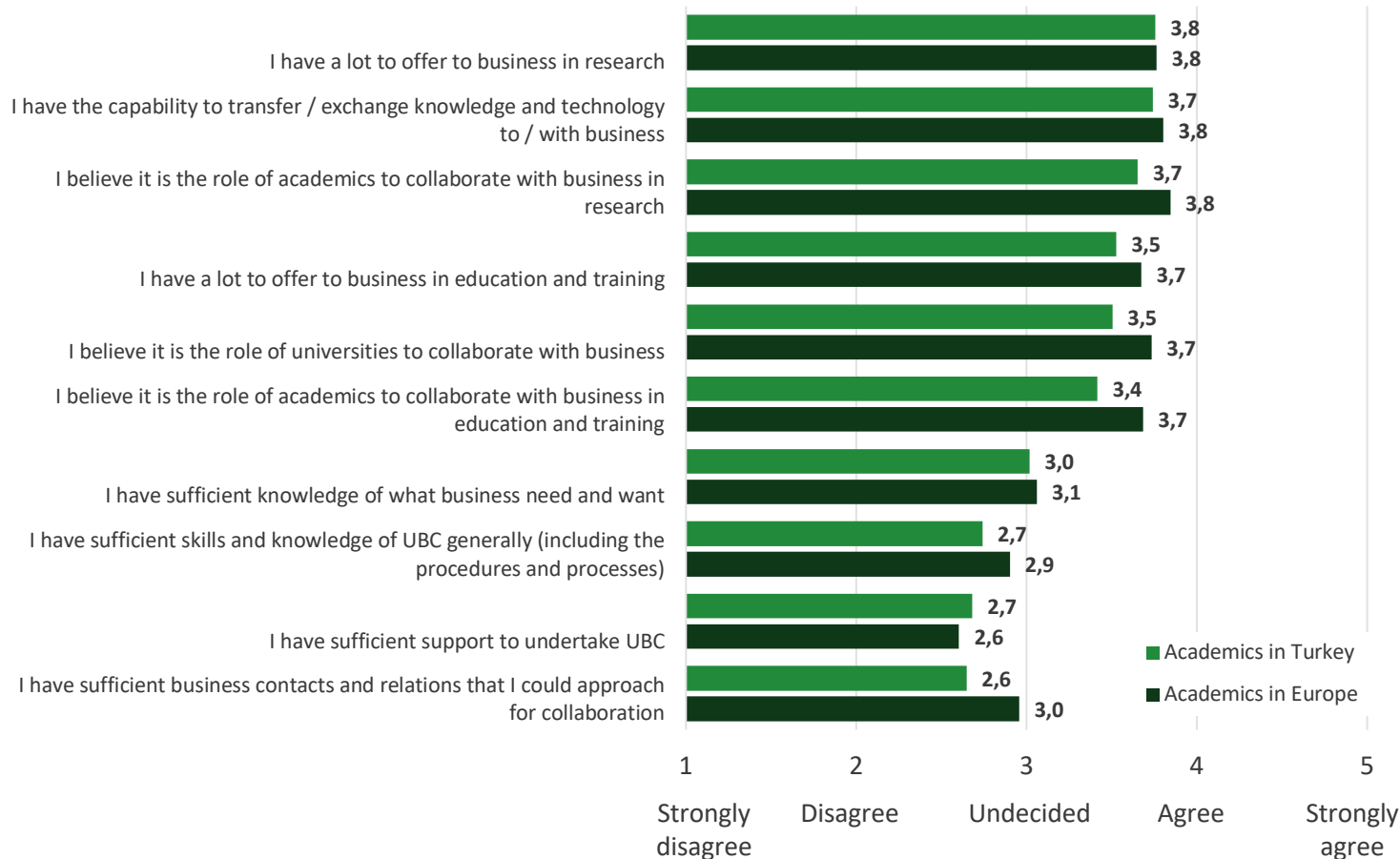
This section outlines how some contextual factors influence UBC in the country.



UBC capabilities

Capabilities for UBC

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



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

Turkish academics believe that they have a lot to offer to businesses in research (3.8) and that they have the capability to transfer knowledge and technology to business (3.7). Similarly, they believe that it is the role of universities to collaborate with business in research (3.7).

Academics in Turkey perceive they have insufficient skills, knowledge (2.7), general support (2.7) and business contacts (2.6) to undertake UBC, as there is still a big gap between businesses and universities.

Context

Although Turkish and European academics perceive their contextual factors similarly, the perception of some contextual factors is slightly more positive in Turkey.

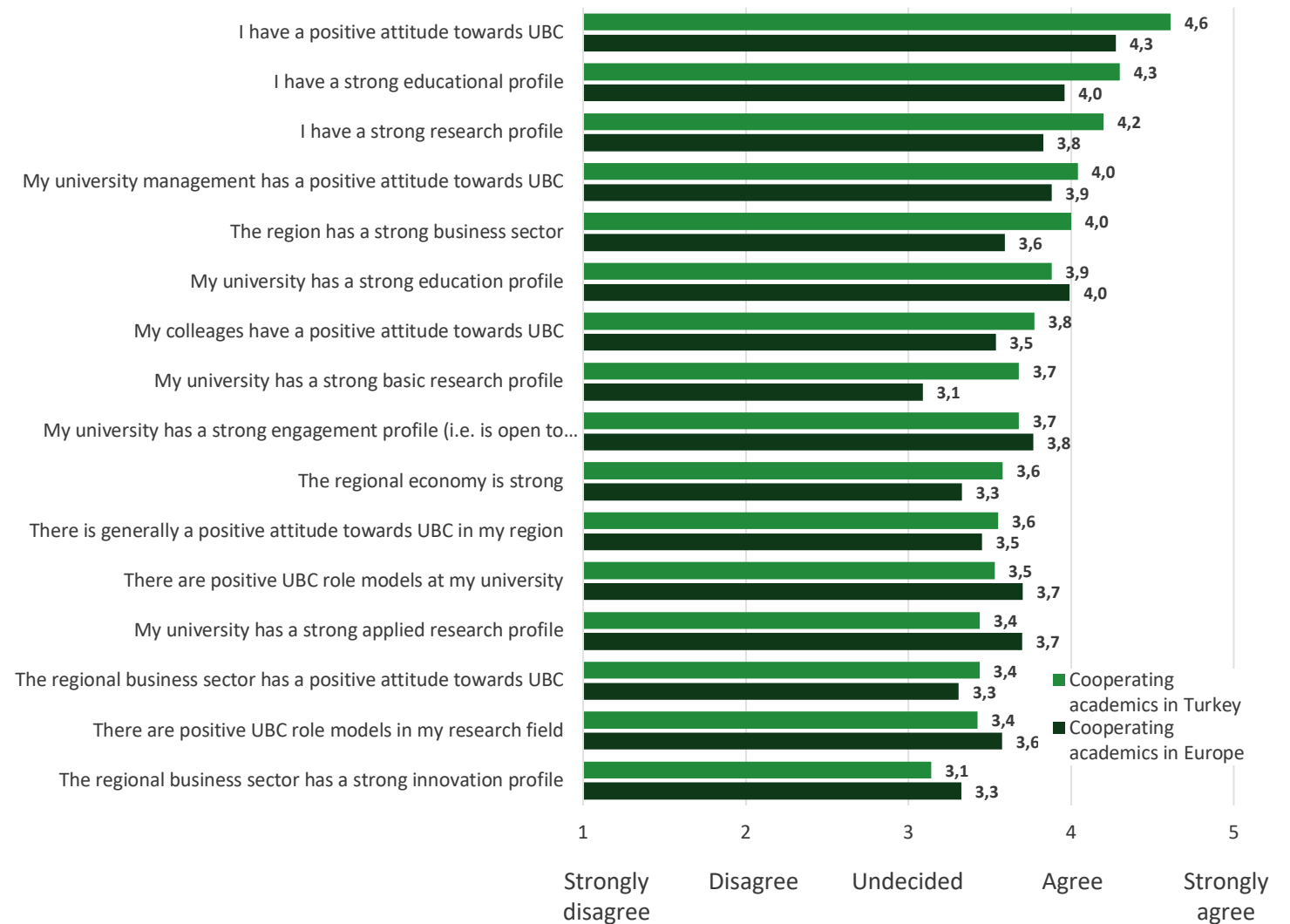
Turkish academics perceive that they have a strong education and research profile. However, they perceive less positive UBC role models at their HEIs and their fields.

Both Turkish and European academics have a positive attitude towards UBC (4.6 and 4.3 respectively). But Turkish academics perceive a more positive attitude of their colleagues, HEIs and regions towards UBC than their European counterparts.

The intention and public policies for UBC are already established, however Turkey has not yet progressed towards implementing these policies in a widespread manner throughout the country. There is already a number of success cases, most of which are however based only on experiences of certain individuals committed to UBC.

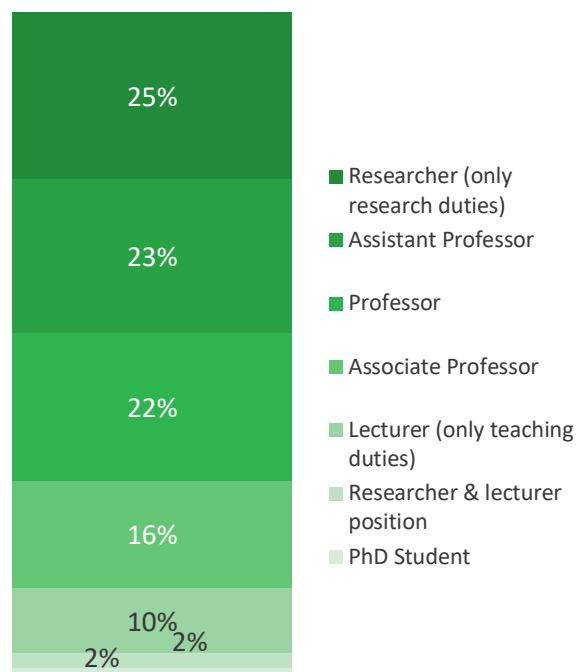
Contextual factors affecting UBC

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



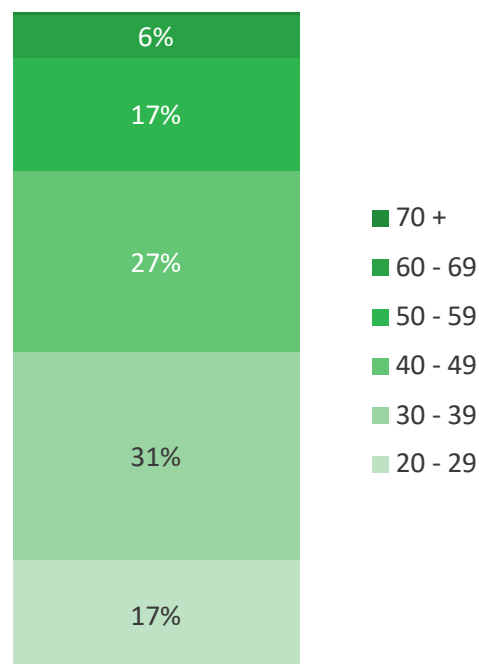
Respondent profile – academics

Position of respondent



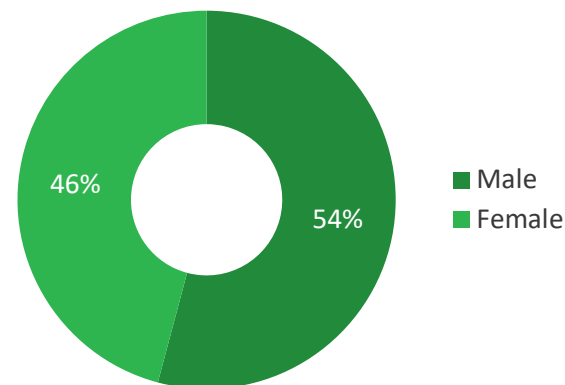
Researchers, assistant professors and professors comprise the largest groups, with 25%, 23% and 22% respectively. The remaining academics identified themselves as associate professors (16%), lecturers (10%), researcher and lecturers (2%) and PhD students (2%).

Age of respondents



58% of Turkish academics in the sample are aged 30-49. An even proportion (17%) are aged 20-29 and 50-59. Academics older than 60 are 6%.

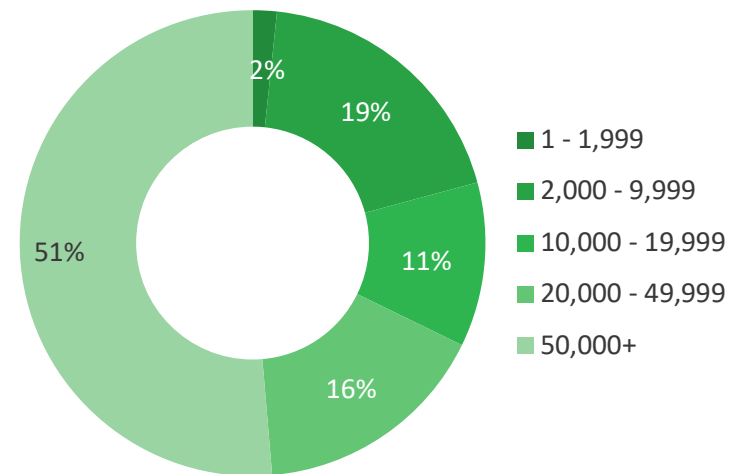
Gender of respondents



The gender distribution in the academic sample in Turkey is skewed towards male respondents, with 54% of respondents.

Respondent profile – academics

Number of students of the HEI

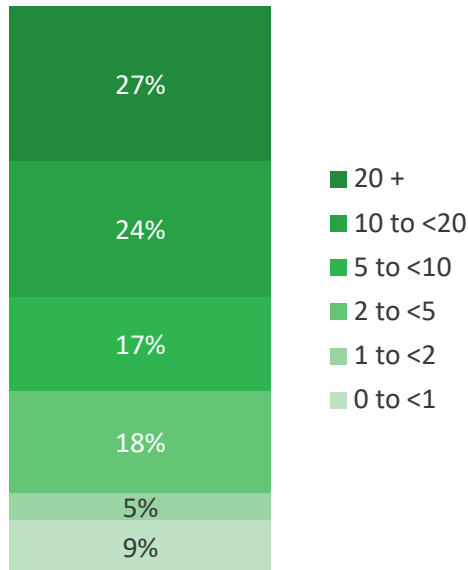


Sample Size	
Turkish Academics	n=452
European Academics	n=10.836
Turkish HEI representatives	n=110
European HEI representatives	n=3.482

More than half of the Turkish academics (51%) in the sample work at very large HEIs with over 50,000 students. 21% of them work for small HEIs (under 9,999 students), 16% for medium-large HEIs (20,000-49,999 students) and medium-sized HEIs (10,000-19,999 students) are represented by 11%.

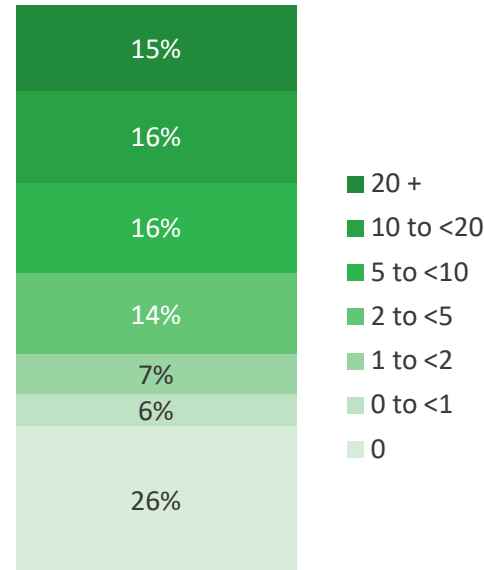
Respondent profile – academics

Years working in university



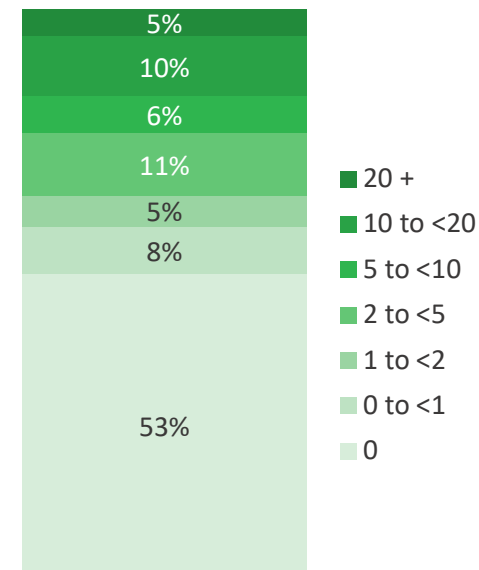
Most academic respondents have worked in academia for several years. 51% have worked in academia for over 10 years. 17% have 5-10 years of experience and 18% have worked in academic for 2-5 years. 14% of the academics have less than 2 year of experience.

Years working in business



Academic respondents are experienced in businesses. More than 70% of the Turkish academic respondents have worked in industry before. 32% of them have worked in industry for 5 to 20 years, 14% for 2 to 5 years and 13% have less than 2 years of experience. 15% have worked in business for over 20 years.

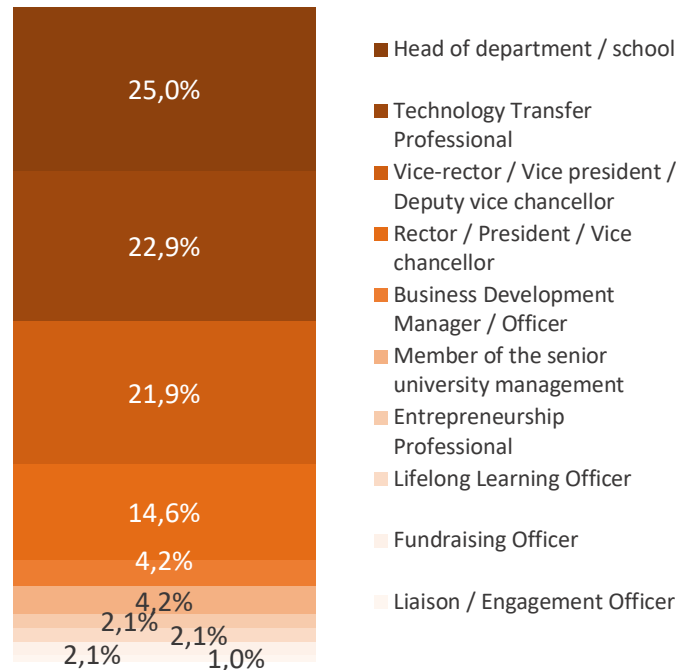
Years involved in UBC whilst working at a university or business



53% of academic respondents in Turkey do not have UBC experience. 24% of them have less than 5 years of experience and 16% engaged in UBC for 5-20. Only 5% have been involved in UBC for over 20 years.

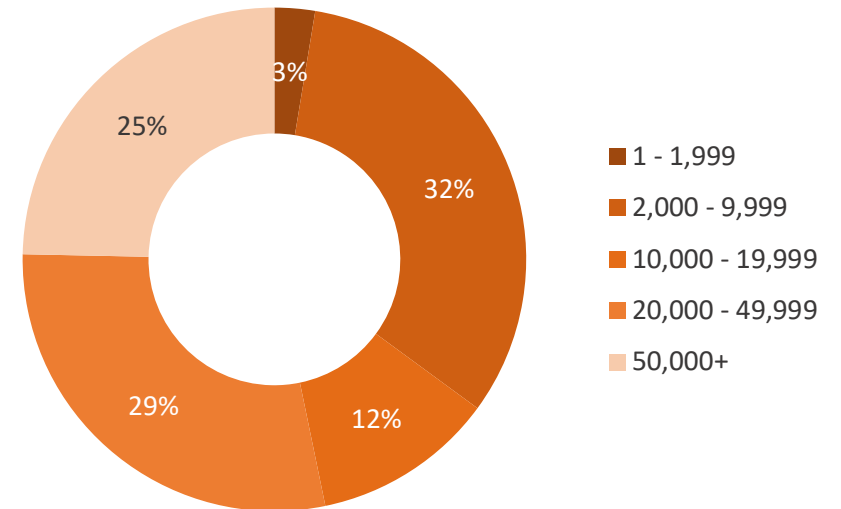
Respondent profile – HEI representatives

Position of respondent



Turkish HEI representatives hold a variety of roles. A quarter of them are heads of department/school rectors. Technology transfer professionals are the second largest group (22.9%), along with vice-rectors or vice-presidents (21.9%). Less represented groups are presidents or vice chancellors, business development managers, members of the senior university management, and entrepreneurship professionals, among others.

Number of students of the HEI



Overall, 35% of HEI representatives in the Turkish sample work for small HEIs (under 9,999 students), 29% for large HEIs (20,000-49,999 students) and 12% for medium-sized HEIs (10,000-19,999 students). 25% work in large HEIs (over 50,000 students).

Contact us

Todd Davey - davey@uiin.org

Arno Meerman - meerman@uiin.org

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