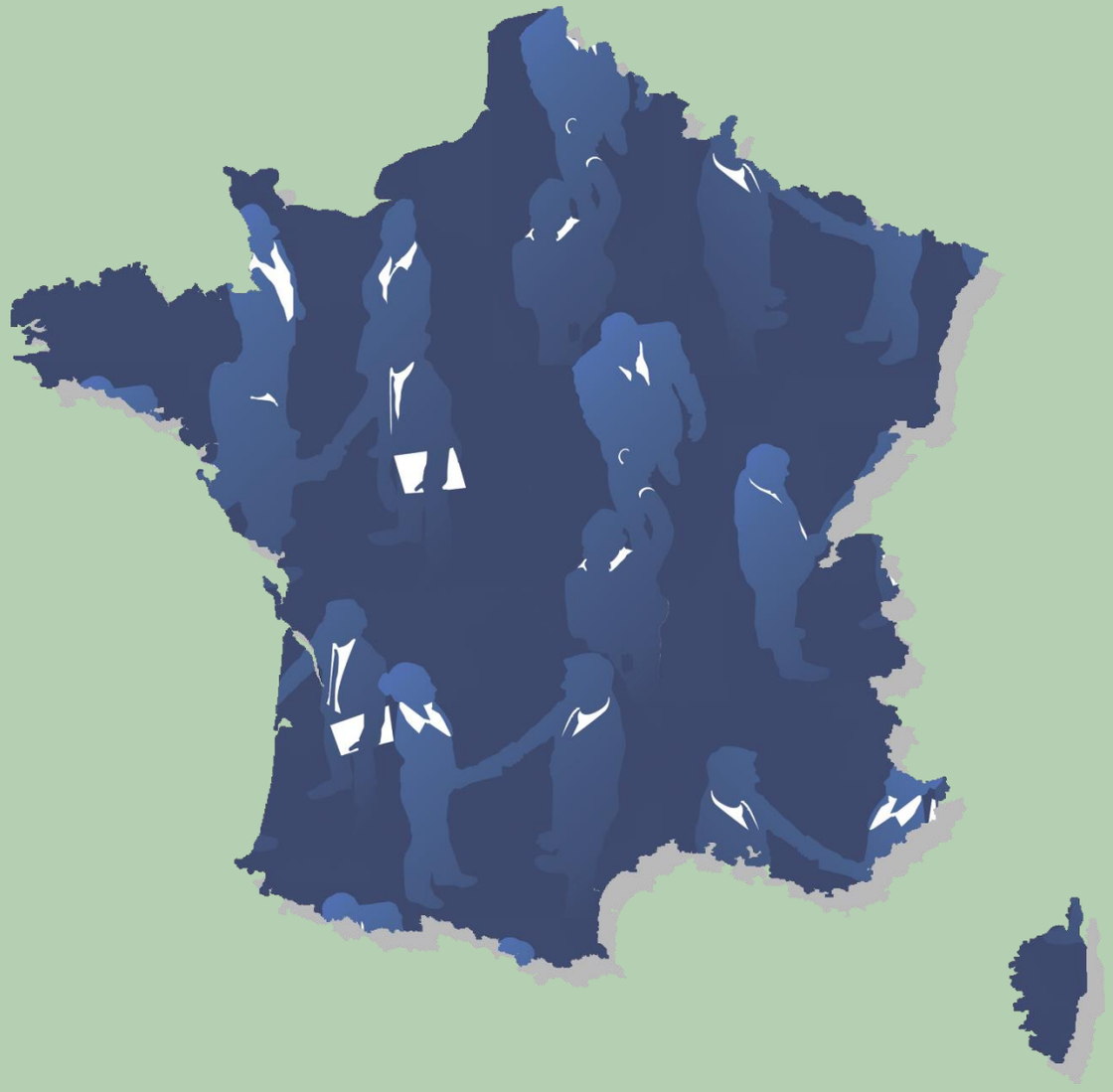
UNIVERSITY-BUSINESS
COOPERATION IN EUROPE

State of University-Business Cooperation

FRANCE

University Perspective

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



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The State of France 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 France 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 98% of respondents currently cooperating with businesses planning to maintain or increase their cooperation in the future. In this sense, France proves to be an attractive country for UBC.

Yet, with still limited numbers of academics and business cooperating, there is still room for further development and improvement. This is specifically true in supporting academics in their cooperation efforts, including the development of incentive and performance measurement systems in UBC and the promotion of cooperation beyond research activities. Further priority should focus on the creation of the trustworthy environment for traditional universities and businesses to consolidate partnerships.

About the study

The results presented in this report reflect the perceptions of academics, HEI managers and KTP in France 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 696 French HEI responses. The study measured the perceptions of respondents with respect to their cooperation efforts, barriers, drivers, support mechanisms an perceived capabilities.

University-Business Cooperation

French academics are involved in a variety of different cooperation types, with mobility of students and joint R&D emerging as the most developed activities. However, more than half of French academics do not engage in these activities at all. Valorisation related activities are the least developed in French, ranking below the European average.

Academics see themselves as proactive initiators of UBC, with almost two thirds of them stating that they usually or always initiate such cooperation. On the contrary, French academic respondents perceive businesses as those stakeholders that less often initiate cooperation.

A compatibility issue

Independent of whether academics are currently cooperating with business or not, differing time horizons, along with business' lack of awareness of university research offerings are identified by all academic respondents as the major barriers to UBC. While cooperating academics identify limited resources of SMEs as another significant hindering factor, non-cooperating academics are concerned with the business focus on producing practical results. There is a general perception that business objectives are not compatible with HEI objectives.

Aligned with the perception of cooperating academics, the most strongly perceived barrier by HEI representatives to the limited resources of SMEs. They also rate lack of government and business funding as important barriers.

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 areas that require future development.

Relationships matter

While funding to undertake cooperation emerges as one of the top five facilitators, relational factors appear to be of even higher importance. It is the existence of mutual trust, shared goal, mutual commitment and a prior relation with the business partner that facilitate and thus drive cooperation, from the perspectives of all HEI respondents. These results confirm that any effort dedicated to enable and increase cooperation between businesses and universities, in the first place, should focus on the relationship development.

Employability as a priority

With high youth unemployment rates and a recently established legal framework fostering HEI support to the integration of graduates into the job market, all academic respondents are driven by the willingness to improve graduate employability. A further common motivation for all respondents is to address societal challenges.

Furthermore, independent of whether academics are currently cooperating with business or not, they are motivated by the willingness to apply their research in practice and to contribute to the mission of the university. Obtaining funding and financial recourses emerges as a motivating factor for cooperating academics and HEI representatives.

Lack of incentives

Universities in France are seen to place a strong emphasis on developing supporting mechanisms for UBC. Thus, high-level strategic developments such as top-level management commitment for UBC, a documented mission/vision embracing UBC and a strategy supporting UBC are perceived by HEI representatives as well advanced. Nevertheless, the development of mechanisms related to the provision of academic incentives to undertake UBC, including the recognition of their UBC activities is quite low. This seems to be a paradox, as HEIs are expected to undertake UBC and the devoted paper strategies are already in place, but there is no comprehensive incentive or performance measurement system to support their engagement.

Growing focus on student entrepreneurship

Student-centred activities emerge as the most advanced operational mechanisms in French HEIs, with entrepreneurship courses offered to students and UBC activities facilitating student interaction with businesses being the most developed activities. There is an increasing number of initiatives dedicated to the stimulation of student entrepreneurship (e.g. PEPITE). Academic entrepreneurship networks and courses, on the other hand, are significantly less developed.

Positive attitude towards UBC

Cooperating academics recognise that it is their role to collaborate with business in both, education and research. However, they perceive they have insufficient knowledge about companies' needs and lack support and general knowledge about UBC. Nevertheless, they have a positive attitude towards UBC.

Specifics of French UBC Landscape

In a context of rationalisation of overall government spending, education has remained a priority

The initial 2017 budget included an additional EUR 3 billion for education[1]. In 2015, general government expenditure on education as a proportion of GDP was 5.5 %, above the EU average (4.9 %)[2]. However, private expenditure as a percentage of GDP was below the average and average expenditure per student rose by only 40% due to a doubling of student numbers[3].

Rising complexity

Many structures to support innovation and research policy have been created in recent years. Each has its own structures and specificities, generating high complexity, blurring the readability of the system for firms and making overall coordination very challenging[4]. Public support schemes and structures are regularly evaluated but it is not clear how those evaluations are used for improvement.

Validation of learning from experience (VAE) is an access route to qualifications

In 2015, 3,943 people obtained all or part of a higher education degree through recognition of the skills acquired by experience[5]. Four out of ten VAE beneficiaries achieved a Vocational Bachelor in Law, Economics and Management, which is the most common field of education6. Master's and PhDs degrees are awarded mainly in Science, Technology and Healthcare. VAE beneficiaries are generally working people (87%) from which 44% are senior managers and 27% are in an intermediate profession[6].

Low innovation performance compared to Europe's innovation leaders

Overall public support for innovation doubled over 15 years to 0.5 % of GDP in 2014, and the number of public schemes supporting innovation has followed a similar trend, increasing from 30 in 2000 to 62 in 2015[8]. Nevertheless, according to the 2016 European Innovation Scoreboard (EIS), France ranks just 11th in the EU.

The quality and openness of research systems and the availability of skilled human resources characterise and strengthen the French innovation system. However, weaknesses exits regarding factors linked to company activities and outputs. France ranks below the EU average for intellectual assets and the performance is just above EU average for cooperation between actors in the innovation system. Overall, universities and other public research organisations are weakly involved in the innovation ecosystem.

NOTE:

To understand the results of the study in proper context, it is important to explain some key traits of the French academic sector and its relationships to external stakeholders.

For this purpose two informative slides provide a brief overview about French specifics.

[1] European Commission (2017), Education and Training Monitor 2017 — France

[2] IBID

[3] Ministry of Higher Education, Research and Innovation (2017), Higher Education & Research in France, facts and figures

[4] Ekeland M., Landier A. and Tirole J. (2016), Renforcer le capital-risque français, Note du Conseil d'Analyse Economique No. 33

[5] Ministry of Higher Education, Research and Innovation (2017), Higher Education & Research in France, facts and figures

[6] IBID

[7] IBID

[8] Pisani-Ferry, J. et al. (2016), Quinze ans de politiques d'innovation en France, Rapport de la Commission nationale d'évaluation des politiques d'innovation

Capacity of French Universities

The French higher education system is characterised by high centralization and the existence of diverse types of institutions and courses, which have different organisational arrangements and admission requirements. Over 3500 different institutions offer higher education studies and the tertiary educational attainment rate is high. Student numbers have increased 8-fold in 50 years. In 2015, 2,551,000 students enrolled in higher education and according to the expected demographical changes, this number is likely to continue growing over the next decade[1].

The growth in French higher education numbers can be primarily explained by the demographic growth between the 1950s and 1960s, a diversification in the high education offer, with the creation of the technological and vocational baccalauréat, along with the increase in the number of foreign students (coming mainly from Africa and Asia) which represent 12.1% of students[2].

French universities are of a high quality. A total of 39 French universities are included in the *QS World University Rankings 2018*, of which 11 are within the global top 300. While in the *Times Higher Education* World University Rankings, France had two educational institutions in the top 100 and a further five universities are within the top 200.

Improving student employability is a priority

Unlike the the EU patterns, the employment rate of recent French tertiary education graduates has continued its fall since 2011, down to 77.3% in 2016 when the EU average was 82.8%[3]. Interestingly, STEM programmes are relatively well regarded on the labour market. In France, the employment rate of 25-34 year-olds with a degree in a STEM field is high, at 89%[4]. However, the highest employment rates are to be found in the fields of education (93%) and health (91%). On the other hand, the employment rate of 25-34 year-olds who studied humanities and arts, and social sciences, journalism and information is only 77%[5].

More then 90% of the graduates of programmes involving apprenticeships or traineeships were in employment 30 months after graduating. In 2014-15, 138,800 of the 405,900 apprentices were following a higher education course[6]. An increasing proportion of higher education students in all types of institutions and programmes go through apprenticeships or traineeships. This number has increased by 97% since 2005[7].

R&D expenditure below the EU target

In 2014, research and development (R&D) carried out in the national territory represented €47.9 billion in expenditure, which constitutes 2.24% of the GDP[8]. With this percentage dedicated to domestic research in 2014, France did not meet the 3% target set by the EU. Public research is carried out mainly by research institutions and HEIs, which together, account for 96% of the government-funded R&D[9]. The remaining is carried out by the private non-profit sector and government departments.

Budget allocations spent on public research were circa €13 billion and funded 68% of all public R&D, were HEIs are the main beneficiaries[10]. Public research was also funded through contracts with businesses, which accounted for a total of €0.9 billion.

France also lags behind innovation leaders in terms of public-private scientific co-publications – around 40 per million inhabitants against over 50 in Germany and above 60 in the Nordic countries.

[1] Ministry of Higher Education, Research and Innovation (2017), Higher Education & Research in France, facts and figures

[2] IBID

[3] European Commission (2017), Education and Training Monitor 2017 — France

[4] OECD (2017), France Education at a Glance 2017: OECD Indicators , OECD Publishing, Paris

[5] European Commission (2017), Education and Training Monitor 2017 — France

[6] Ministry of Higher Education, Research and Innovation (2017), Higher Education & Research in France, facts and figures

[7] IBID

[8] OECD (2017), France Education at a Glance 2017: OECD Indicators , OECD Publishing, Paris

[9] Ministry of Higher Education, Research and Innovation (2017), Higher Education & Research in France, facts and figures

[10] IBID

Introduction

About the study

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

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

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

Main activities

The main components of the project were a series of expert interviews with 23 recognised UBC experts, 52 good practice case studies, a UBC policy and indicators review as well as a major quantitative survey of stakeholders within both HEIs and business. The survey was translated into 25 languages and sent to all registered European HEIs (numbering over 3,000) in the 33 countries during October-November 2016. Through this, a final sample of 17,410 representatives from within HEIs and business was achieved. This makes the study the largest international study into cooperation between HEIs and business yet completed.

Why care about university-business cooperation?

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

  which can in the longer term:
  - create jobs,
  - stimulate economic growth,
  - increase living standards,
  - reduce hindrances to good living.

Study Objectives

The specific objectives for the study are:

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

UNIVERSITY-BUSINESS COOPERATION IN EUROPE

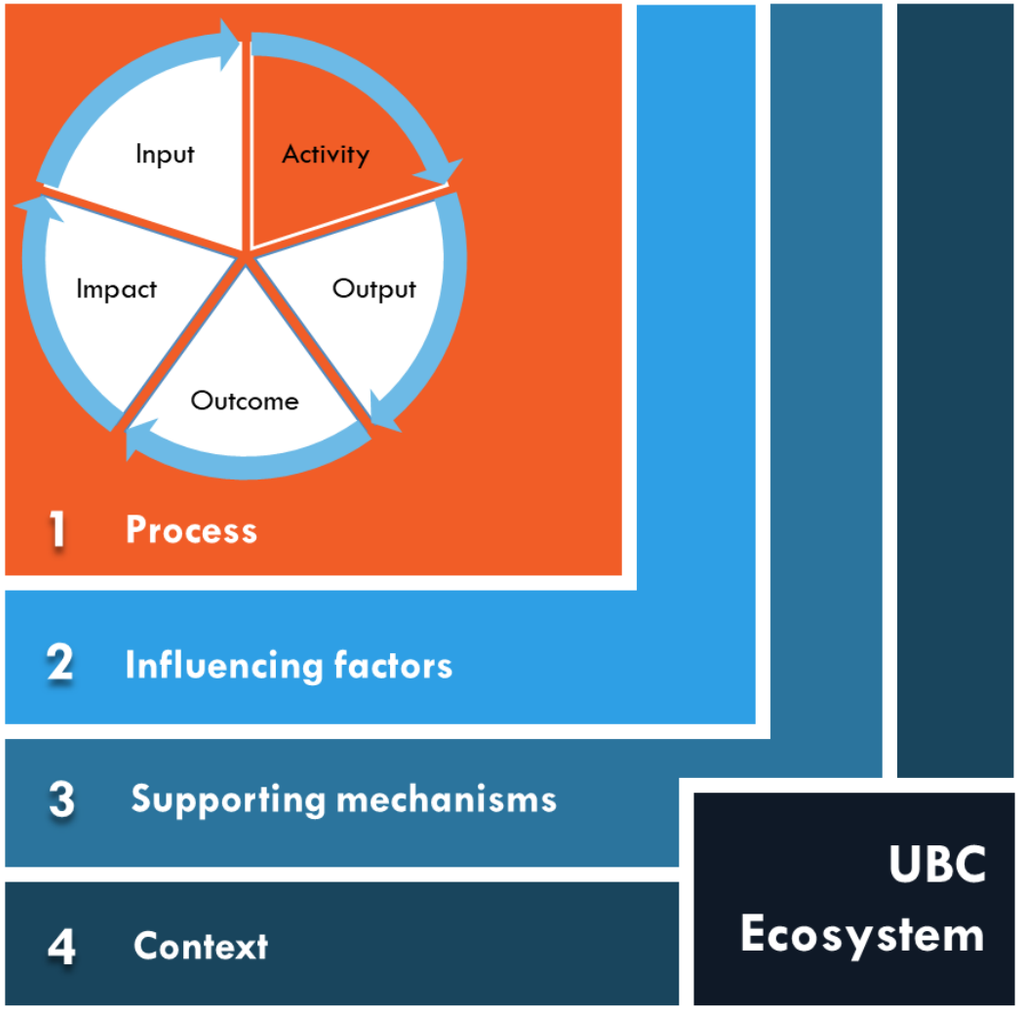
UBC activities

UBC Ecosystem Framework ™

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

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

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



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

UBC Activities

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

Area	Activity
Education	1. curriculum co-design 2. curriculum co-delivery *(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	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	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	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

Overall, most UBC activities are less developed for French academics than for for their European counterparts. Generally, within the French dual system for higher education (Universités and Grandes Ecoles), the schools have traditionally much closer cooperation with businesses than universities.

French academics most commonly engage with business in mobility of students (4.3) and joint R&D (3.7). However, over a half of them do not engage in these activities at all.

The third most developed UBC activity for French academics is curriculum co-delivery. But while 31% report a medium to a high level of development, almost 60% are not engaged at all. Universities account for 62% of student population and the delivery of curriculum remains largely in the remit of individual professors[1].

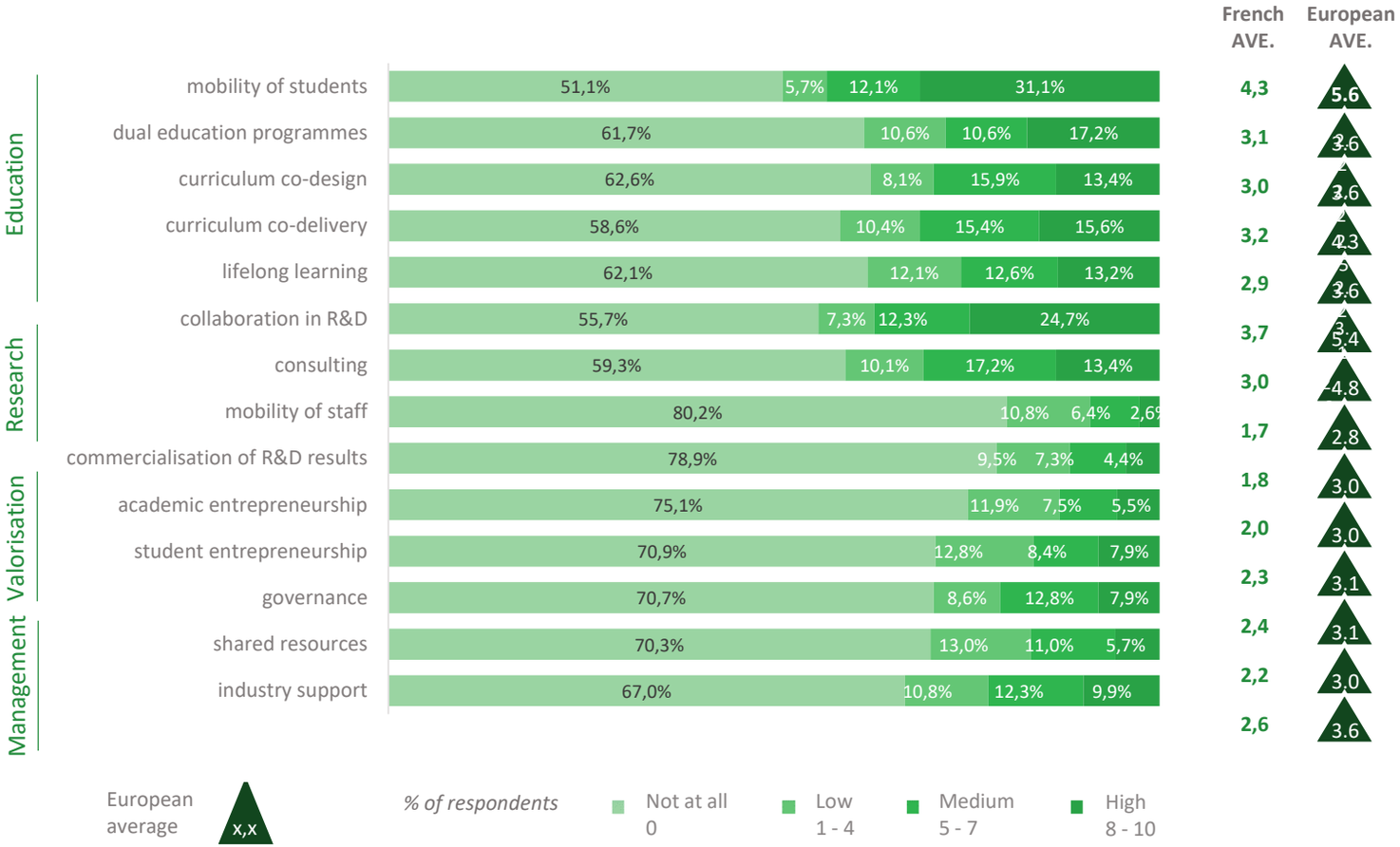
All the management and valorisation UBC activities are not developed for more than 70% of the French academics. In France, the commercialisation of the R&D results is mostly undertaken by the joint research units that are comprised by the partnerships between HEI labs and public research organisations (UMR[2]), and not businesses.

[1] Ministry of Higher Education, Research and Innovation (2017), Higher Education & Research in France, facts and figures.

[2] Unité mixte de recherche

The extent of development of UBC activities

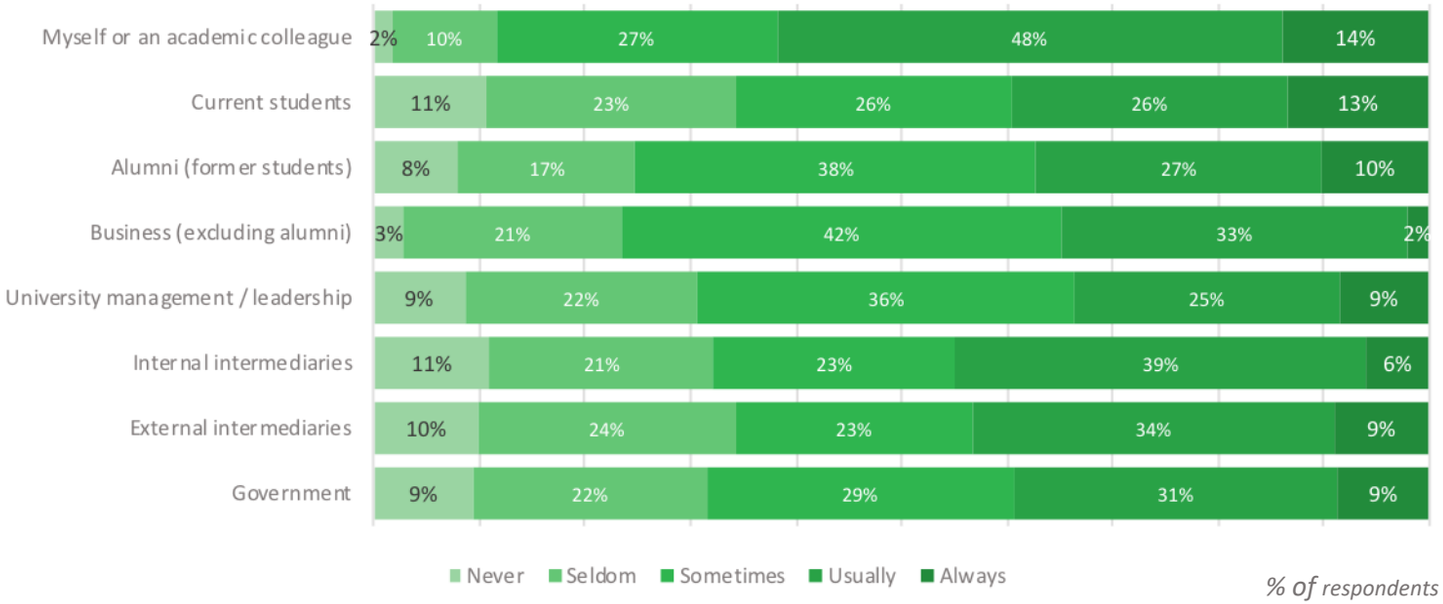
'Which UBC activities do you collaborate with businesses in?' – as answered by academics



Initiation of UBC

How UBC is initiated

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



% of respondents

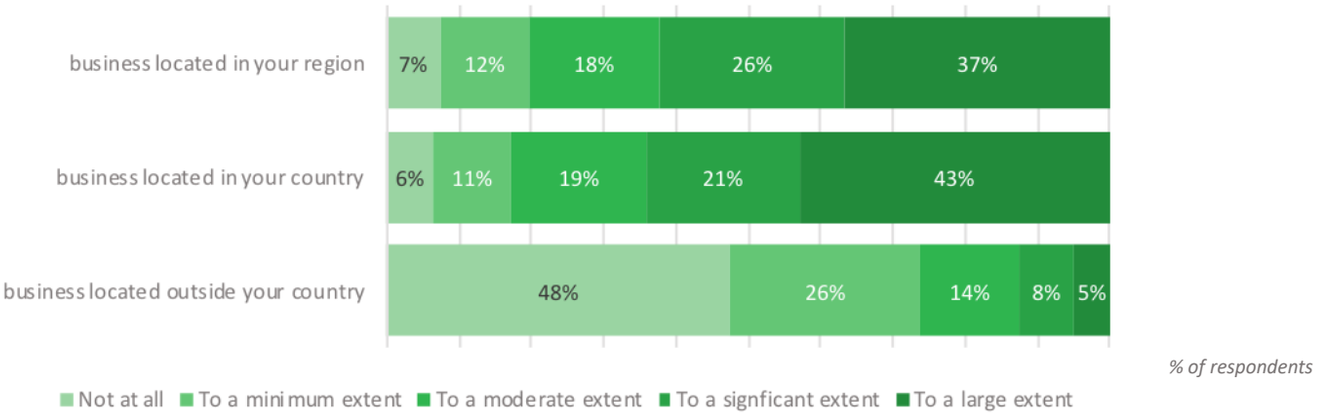
Almost two thirds of French academics (62%) consider that themselves or their colleagues always or usually initiate UBC. Due to a complex HEI landscape and insufficiently performing UBC supporting mechanisms, individual academics stand in a more suitable position to initiate collaborative activities.

Both internal (45%) and external intermediaries (43%) as well as government (40%) are also considered initiators.

Contrary, academic perceive that businesses are those stakeholders that less often initiate UBC, followed by the university alumni. Given the complexity of the French higher education system, it is difficult for firms, especially for SMEs, to reach HEIs to start collaboration.

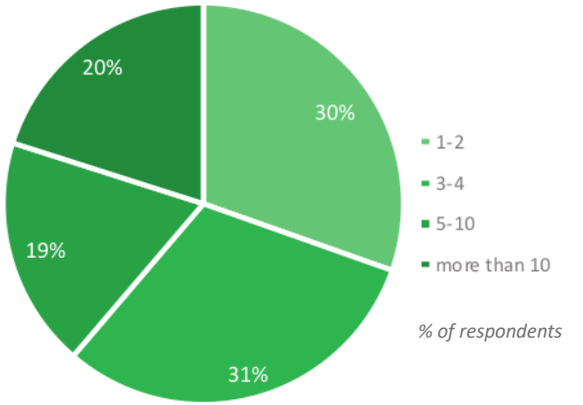
Location of cooperating partners

Location of business partners



French academics have cooperation of a significant and large extent with French businesses and businesses from the region (64% and 63% respectively). The cooperation with international business partners lags considerably behind. Only top schools in France have the capability and resources to reach out for international business partners.

Number of business partners

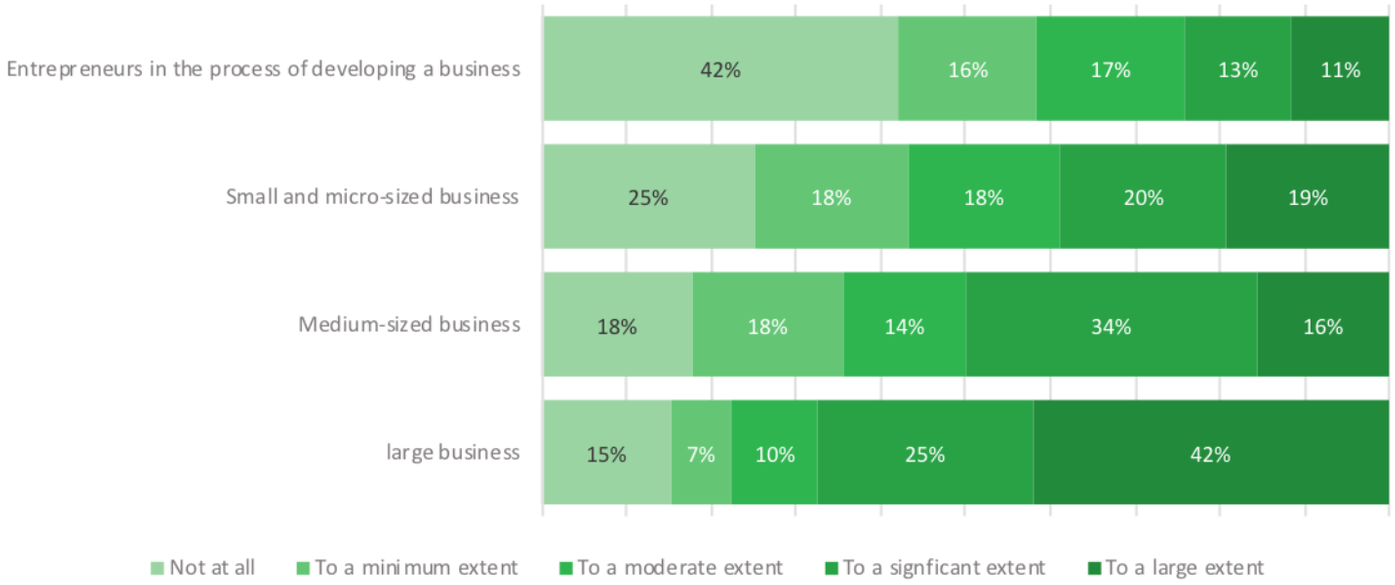


Over a half of French academics cooperate with only 1 to 4 businesses (61%). The remaining 39% have partner relations with 5 or more partners.

Size of cooperating partners

Size of cooperating partner

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



The larger the business the more likely it is to cooperate with a French academic. 67% of cooperating academics in France engage with large businesses to a significant or large extent. This cooperation is reduced to 50% for medium businesses, 39% for small and micro-sized firms and 24% for entrepreneurs.

Dedicated UBC offices in universities lack financial resources, whereas large businesses possess more capabilities to engage with businesses. It is also much easier for them to start a cooperation with schools rather than with universities that are traditionally less geared towards businesses.

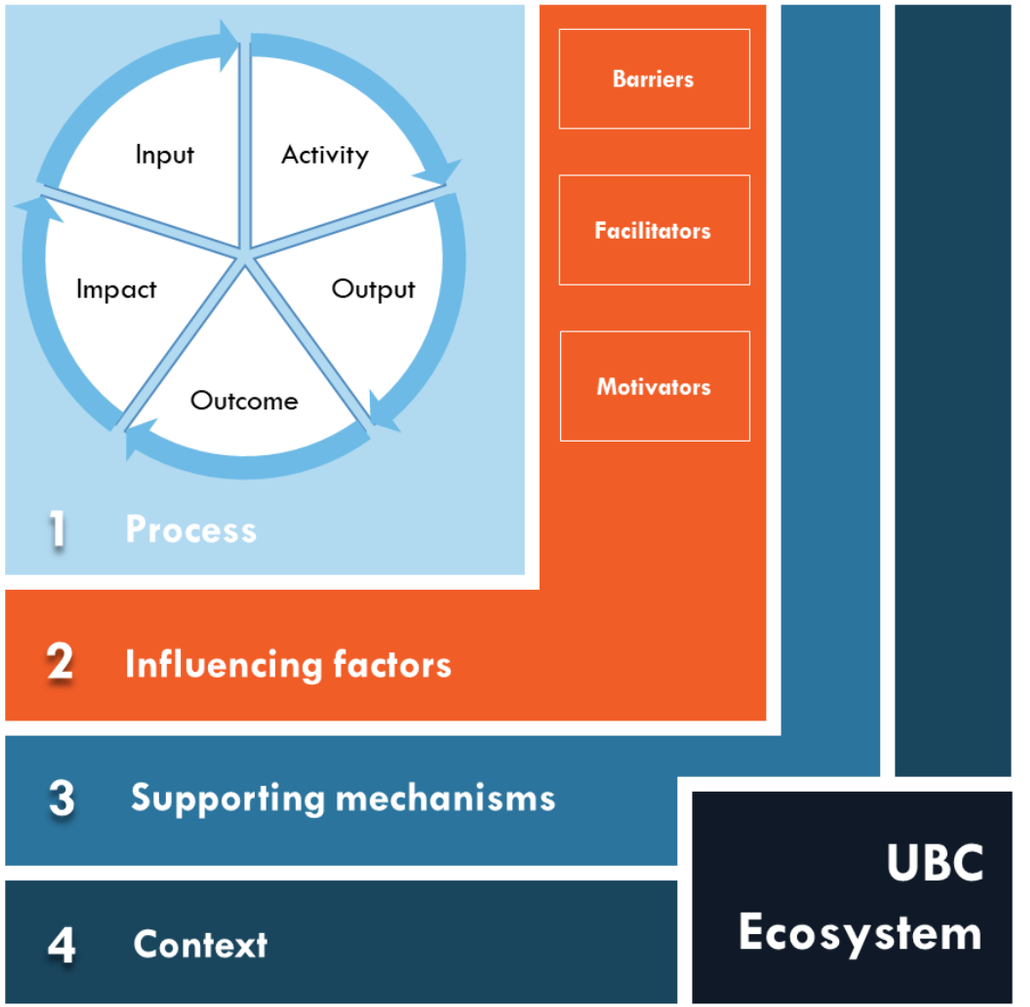
Factors influencing UBC

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.	Limited resources of SMEs	Differing motivation / values between university and business
2.	Differing time horizons between university and business	Differing time horizons between university and business
3.	Business lack awareness of university research activities / offerings	Business lack awareness of university research activities / offerings
4.	Insufficient work time allocated by the university for academics´ UBC activities	The focus on producing practical results by business
5.	Bureaucracy related to UBC	Difficulty in finding the appropriate collaboration partner
Lowest	Frequent staff turnovers within my university or the business	Frequent staff turnovers within my university or the business

The top five barriers to UBC for French academics relate to resources, administrative and cultural issues. They differ for collaborating and non-collaborating academics.

While the limited resources of SMEs are seen as the most relevant barrier to to UBC for cooperating academics, their non-cooperating counterparts are mostly hindered by differing motivations between two organisations. Both groups are hindered by differing time horizons and business' lack of awareness of university research activities.

Although, currently, a more open mindset is evolving, a number of academics still expect that the firms' objectives are not compatible with university objectives. This is however not the case for schools.

While collaborating academics in France also recognise importance of barriers related to administrative issues, the non-collaborating ones are hindered by business' focus on producing practical results and difficulties in finding the appropriate partner.

Barriers hindering UBC

French and European academics perceive barriers in a different way.

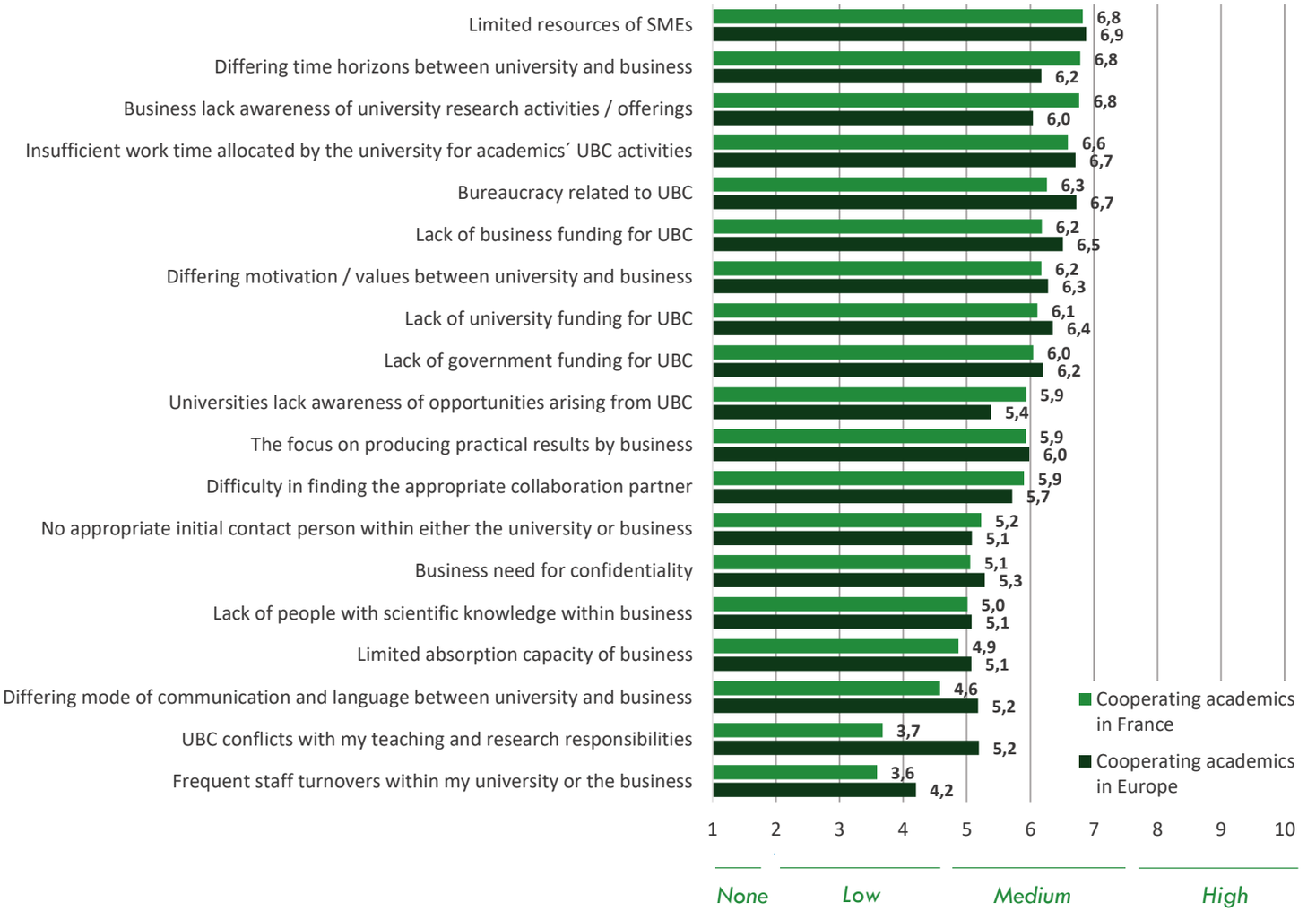
In France academics are more hindered than their European counterparts by the differing time horizons and business' lack of awareness of university research activities.

However, they are less hindered than their European counterparts frequent staff turnovers, which is also the weakest barrier. As there is no long lasting relationship between HEIs and businesses in the French context, staff turnovers are not an issue.

Furthermore, French academics see no conflict between UBC activities their teaching and research responsibilities.

Barriers

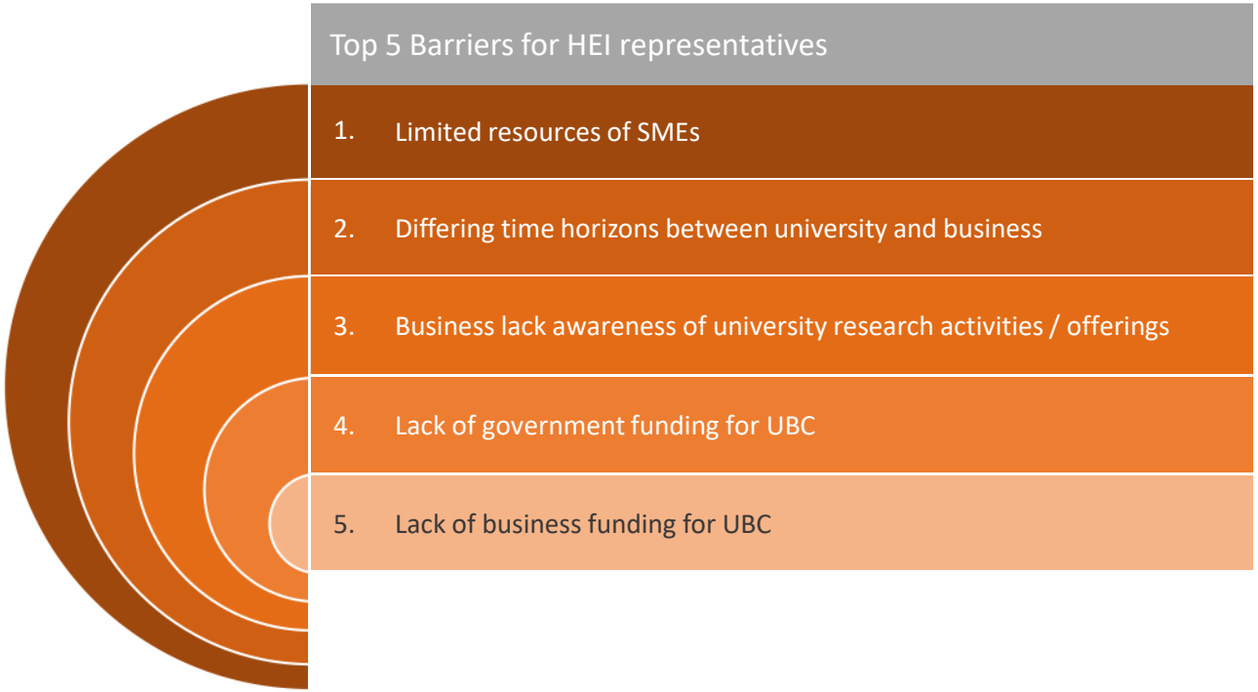
'What is inhibiting your cooperation with business?' – as answered by academics



Barriers hindering UBC

Barriers

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



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

The lack of resources of SMEs and differing time horizons between the two organisations are the largest barriers. This is consistent with the perceptions of French academics.

HEI representatives recognise that the business' lack of awareness of HEIs' research offerings is also a major barrier.

At the same time, funding related barriers can also significantly inhibit UBC in France. Businesses generally do not invest in the HEI sector because it is supposed to be a responsibility of governmental structures. Thus, during the last decade, the French government has already funded a number UBC initiatives including the joint laboratories between research organisations and SMEs (e.g. LabCom [1]) and Technology Transfer Accelerator companies – new French model for TTO (SATT [2]).

[1] In March 2013, the French National Research Agency (ANR) issued a call for projects, known as "LabCom", to promote the creation of joint laboratories bringing together public research laboratories and SMEs and mid-caps.

[2] Conectus Collaborative Research & Technology Transfer. SATT ALSACE. URL: http://www.conectus.fr/en

Barriers hindering UBC

Overall, French HEI representatives perceive barriers lower than their European counterparts.

Yet, both groups recognise the limited resources of SMEs as the strongest barriers.

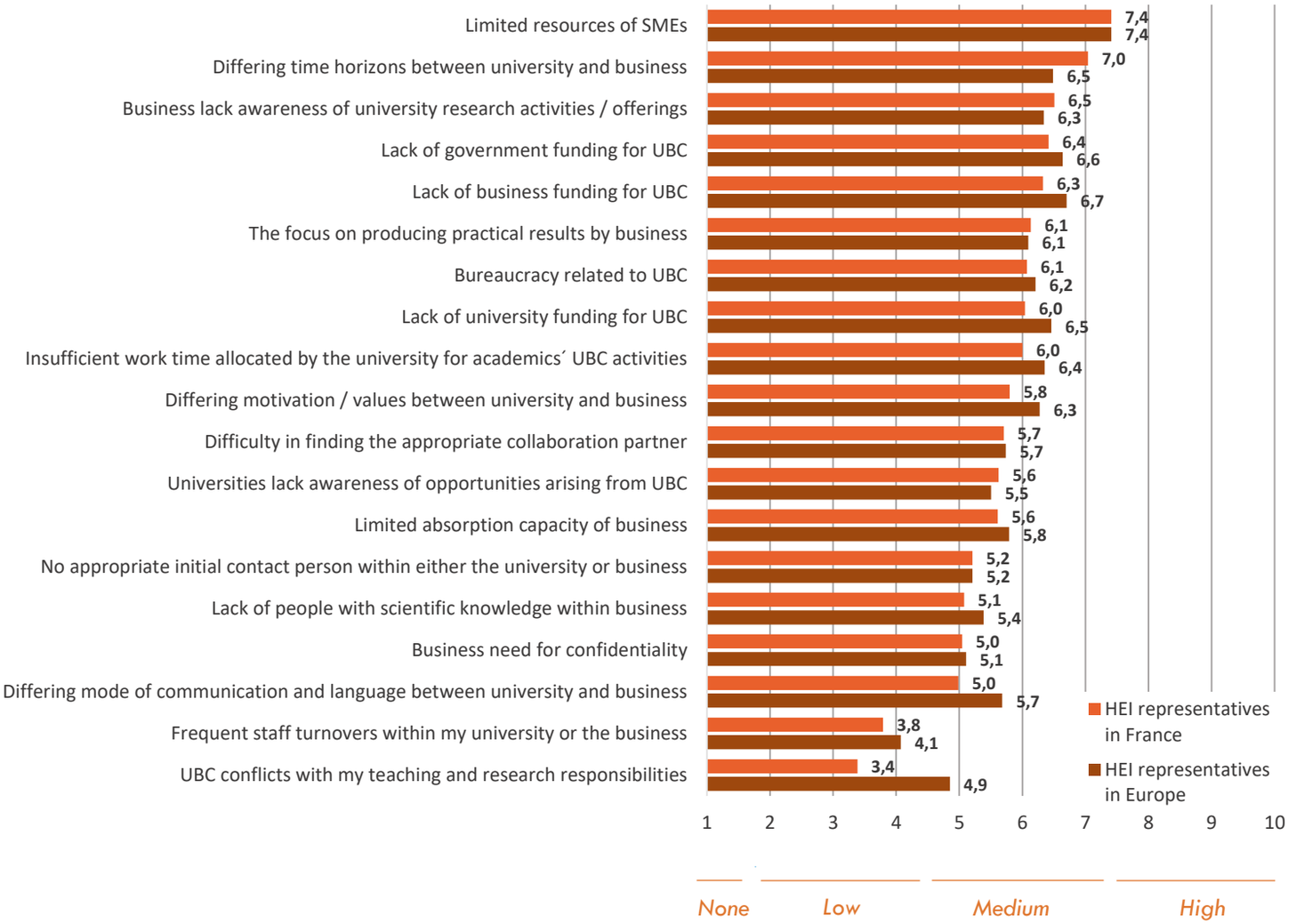
While culture and awareness related factors are the most inhibiting for French HEI representatives, their European counterparts are mostly hindered by the funding related factors.

The lack of funding from different sources (government, university, business), differing motivations and insufficient work time for academics are significantly less inhibiting for French HEI representatives.

The frequent staff turnovers within the university or businesses are seen as one of the weakest UBC barriers for both groups.

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.

Facilitators

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

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

The main factors that facilitate UBC for both French academics and HEI representatives are identical.

The main three facilitators focus on the relationship aspect of UBC, highlighting the importance of mutual trust, mutual commitment and a shared goal for successful UBC. As UBC in France is still in a development stage, these relationship factors are crucial for the establishment of enduring and reliable partnerships.

The existence of funding to undertake UBC and prior relations are also recognised by both groups.

Drivers stimulating UBC

European and French perceptions of UBC facilitators align. Yet, French academics perceive the drivers slightly stronger than their European counterparts.

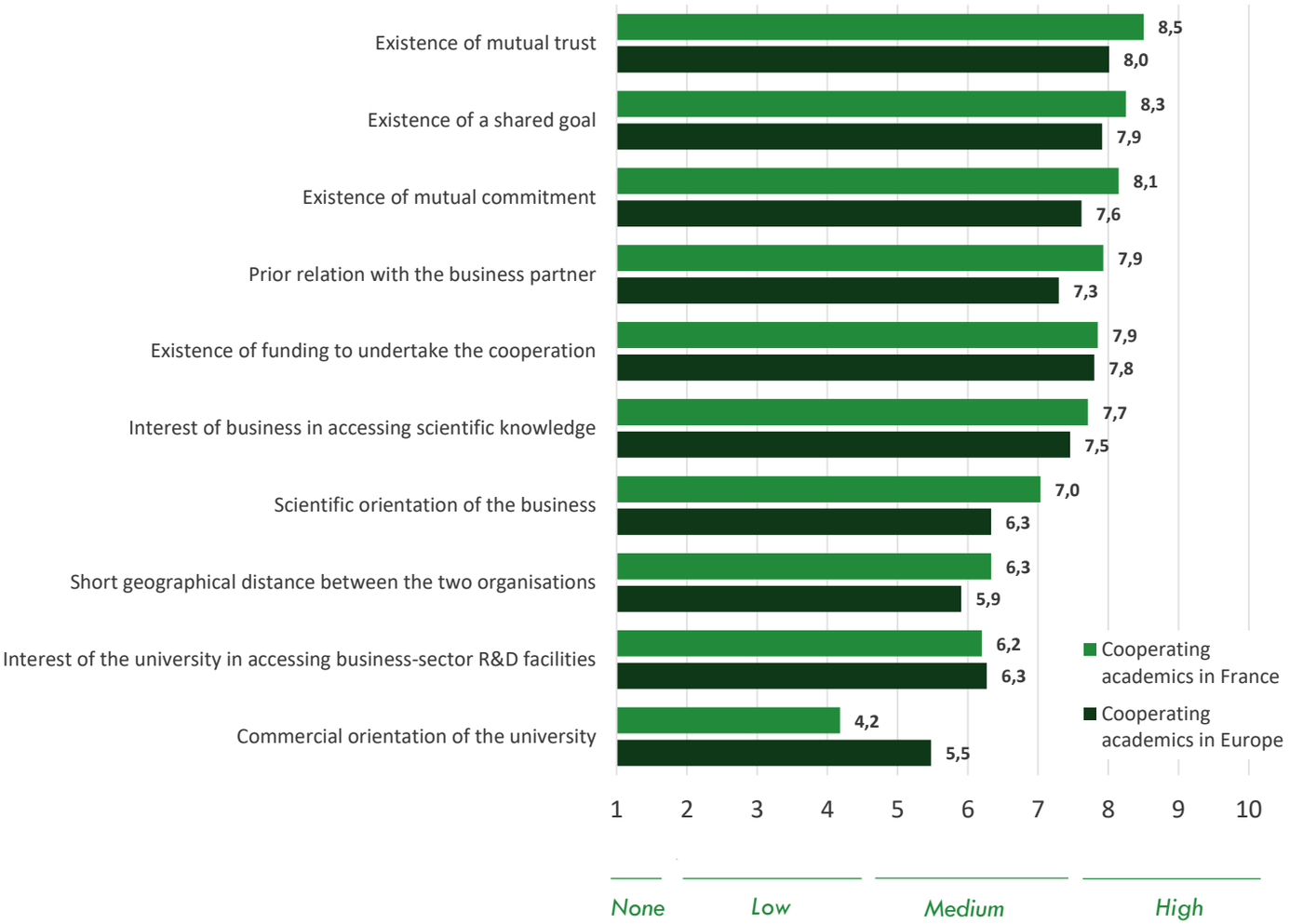
For both groups, the most important facilitators are those related to the relationship component of UBC. The academics highlighted the existence of mutual trust, a shared goal, mutual commitment and prior relations among the most important facilitators influencing their cooperation with businesses. Given that there is a lack of a collaborative culture (mainly in non-technological universities), the relationship facilitators seem to be of even higher importance in the French context.

In addition to the relationship facilitators, the existence of funding and the interest of business in accessing scientific knowledge also play important role for both. These factors are likely to trigger partnerships and help to overcome cultural issues.

Commercial orientation of the university emerges as the least strong facilitator for French academics.

Facilitators

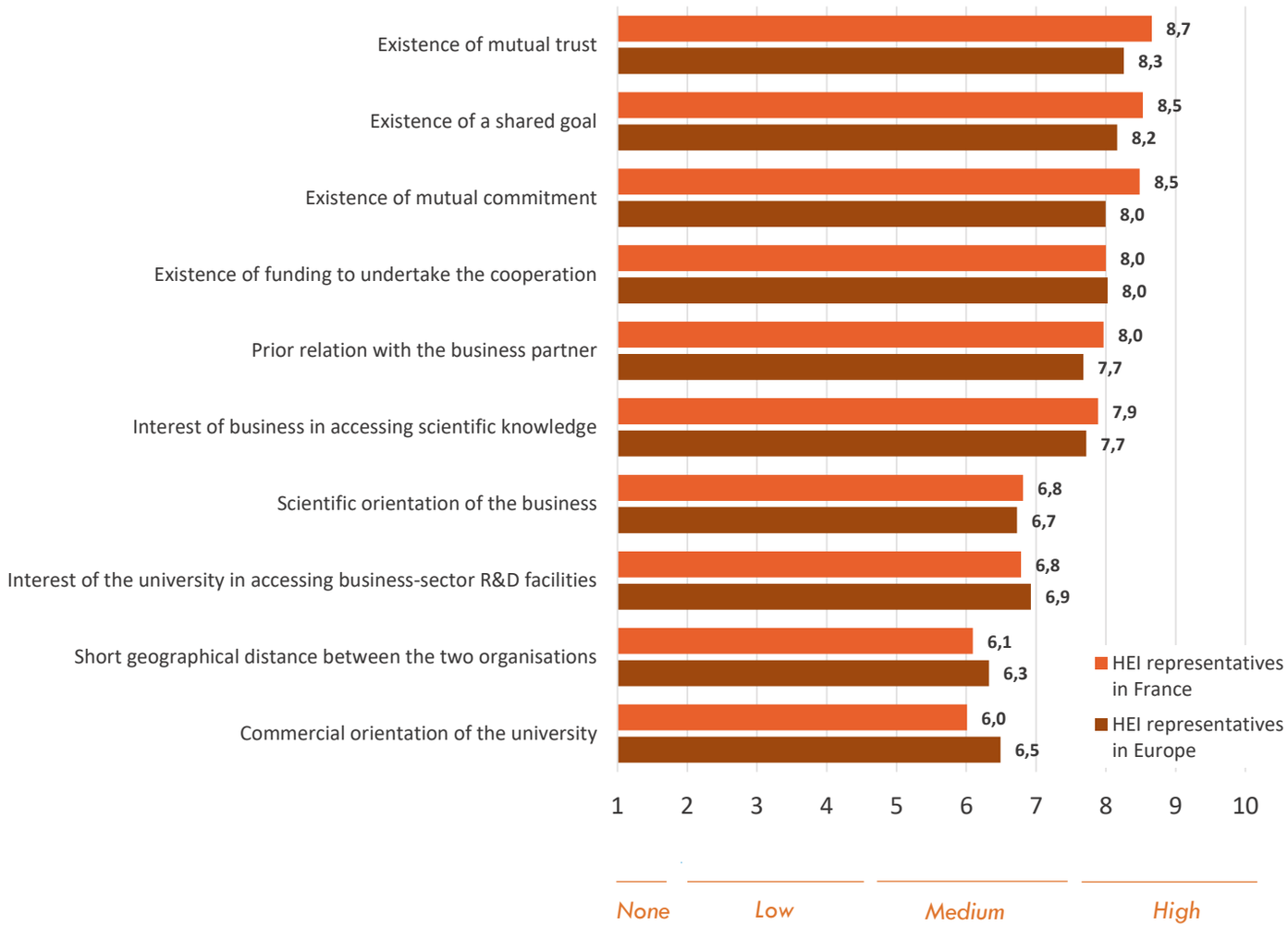
'What is facilitating your cooperation with business?' – as answered by academics



Drivers stimulating UBC

Facilitators

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



French 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 aspect of UBC. This is consistent with the French academics' perceptions.

The existence of funding and prior relations also play an important role, mainly because new partnerships are difficult to initiate.

Similarly to academics, the commercial orientation of the university is the weakest facilitator.

Drivers stimulating UBC

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

While cooperating academics highlight the willingness to address societal challenges as the main motivator, for non-cooperating cooperating academics it is the improvement of graduate employability. The latter is however also highly recognised by academics who already cooperate. Since 2007, French law set a third mission to HEIs. Besides training and research, they have to support graduates in entering the job market[1].

Interestingly, non-cooperating academics rate motivators related to other stakeholders (e.g. employability of graduates, societal needs, mission of the university) more strongly.

Furthermore, cooperating academics are more motivated by financial benefits than their non-cooperating counterparts. Since 2005, the national government as well as regional authorities have funded several collaborative R&D programmes for example via competitiveness clusters[2] and the French National Research Agency that are seen today as additional source of funding for researchers in a context of growing scarcity of public funding for traditional research.

[1] Loi n° 2007-1199 du 10 août 2007 relative aux libertés et responsabilités des universités

[2] Pole de compétitivité. URL: https://www.eurofound.europa.eu/observatories/emcc/erm/support-instrument/poles-of-competitiveness

Motivators

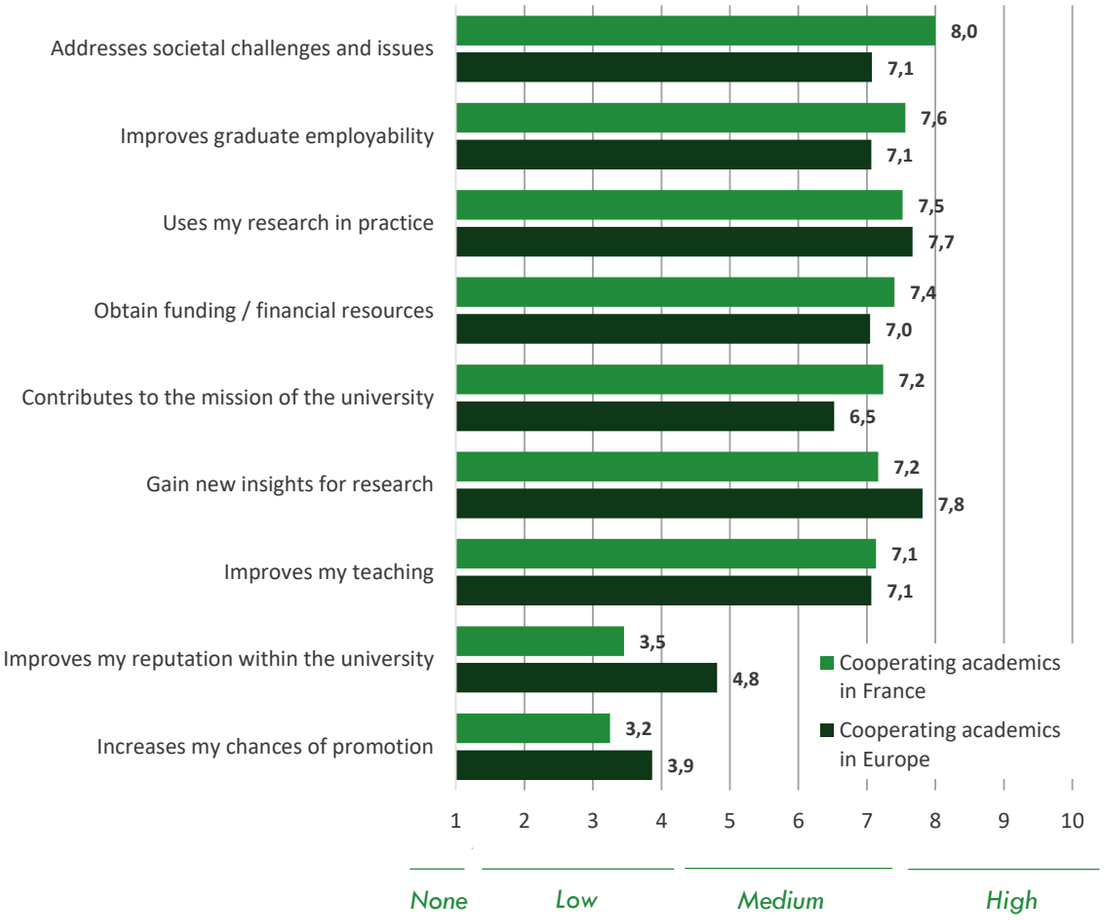
'What motivates you to cooperate with business?'- as answered by academics

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

Drivers stimulating UBC

Motivators

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



French academics perceive UBC motivations differently to their European counterparts.

In comparison to the European average, the top two motivators, which which are related to society and student employability, are perceived stronger in France, where youth (under (under 25 years old) unemployment rate is higher than the EU average (23.7% vs. 17.2%[1]).

Overall, the motivations focused on other stakeholders such as students, society or university have a higher importance for academics in France.

Notably, promotion and reputation related motivators are the weakest drivers stimulating UBC for both groups. UBC is not included in the performance measurement in the French HEI system. Additionally, reputation, particularly in public universities, is built, first and foremost, based on number and quality of publications.

[1] Eurostat (March 2017).

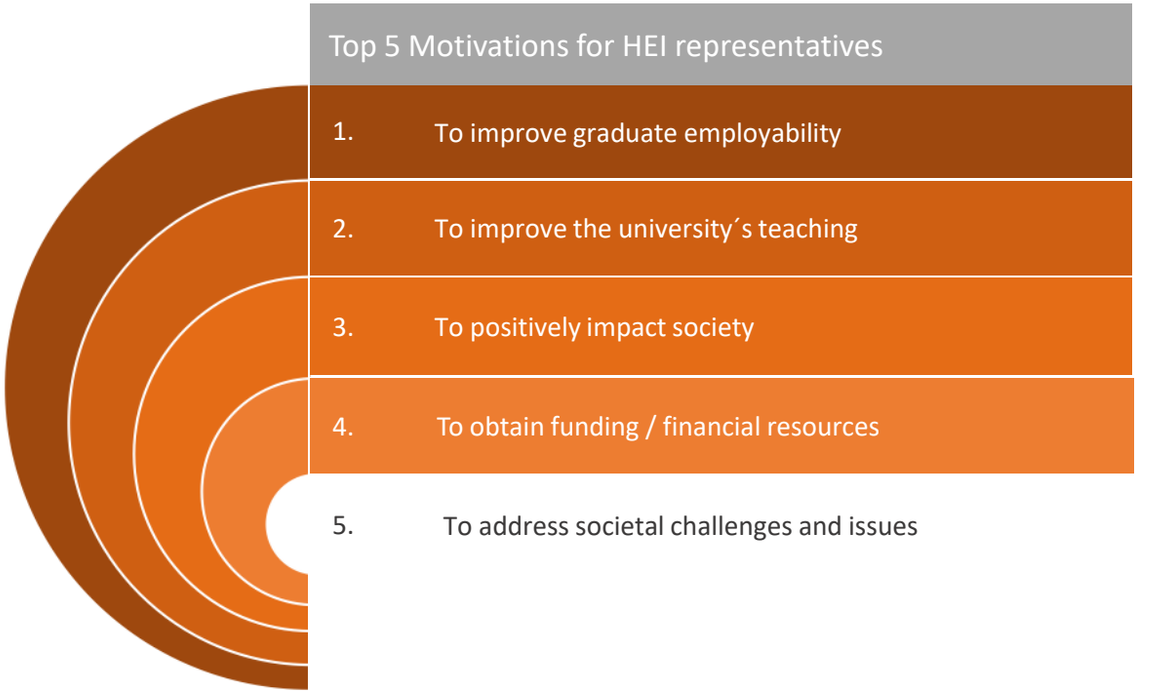
Drivers stimulating UBC

HEI representatives are more motivated by the benefits that their HEIs can get from UBC, such as improvement of graduate employability and universities' teaching.

This is followed by motivators related to society. Financial incentives also motivate French HEI representatives to cooperate with businesses.

Motivators

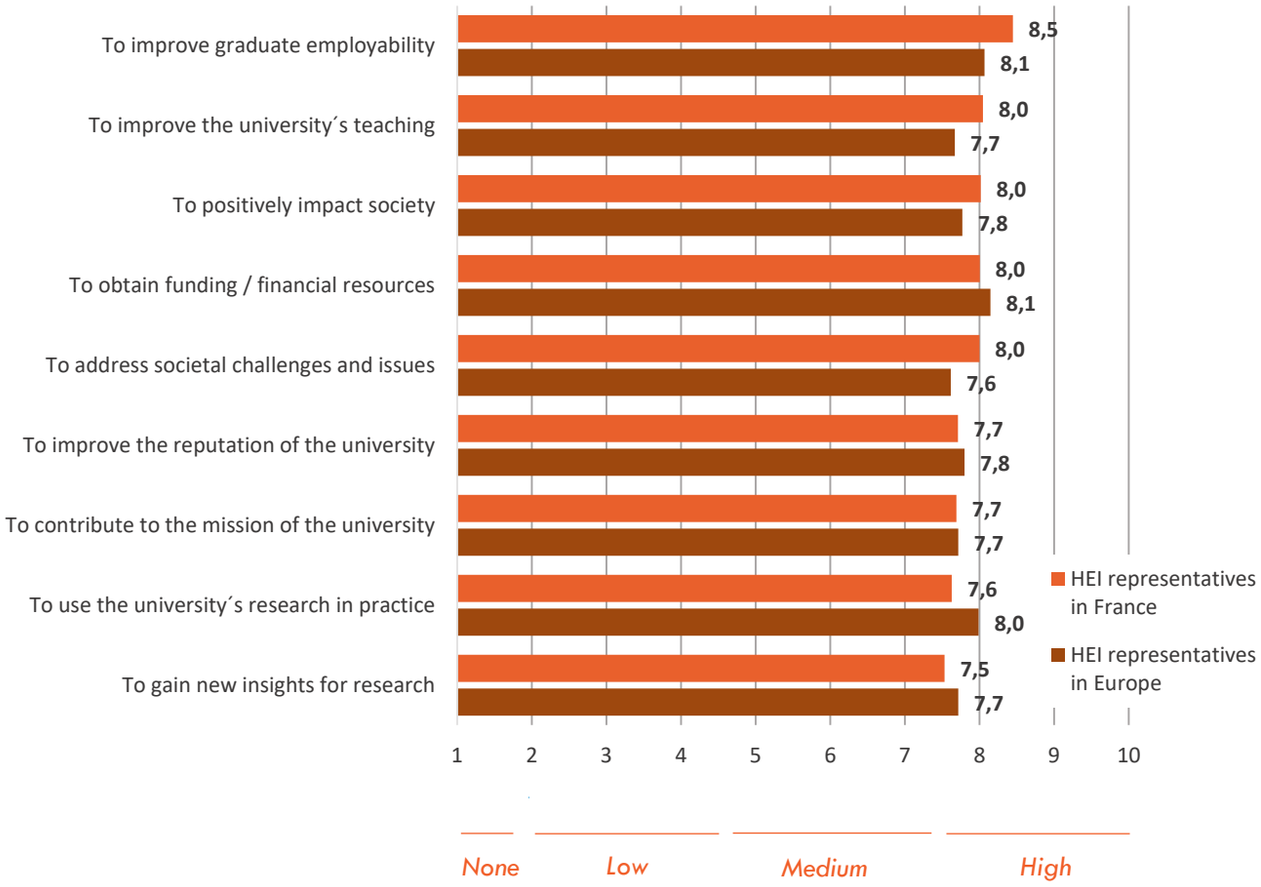
'What motivates your HEI to cooperate with business?'- As answered by HEI representatives



Drivers stimulating UBC

Motivators

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



French HEI representatives and their European counterparts perceive motivators very similarly.

Improving graduate employability is perceived as the strongest motivator for both.

More crucially, for both European and French HEI representatives all motivators were are ranked of nearly equal importance (from 7.2 to 8.1), which ultimately means that all these motives have a potential of stimulating UBC for universities.

Benefits of UBC

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

Students and businesses are perceived by both groups as the stakeholder groups who benefit the most from UBC. Youth unemployment rate is high and there is a growing mismatch between industry needs and the number and quality of graduates as future workforce.

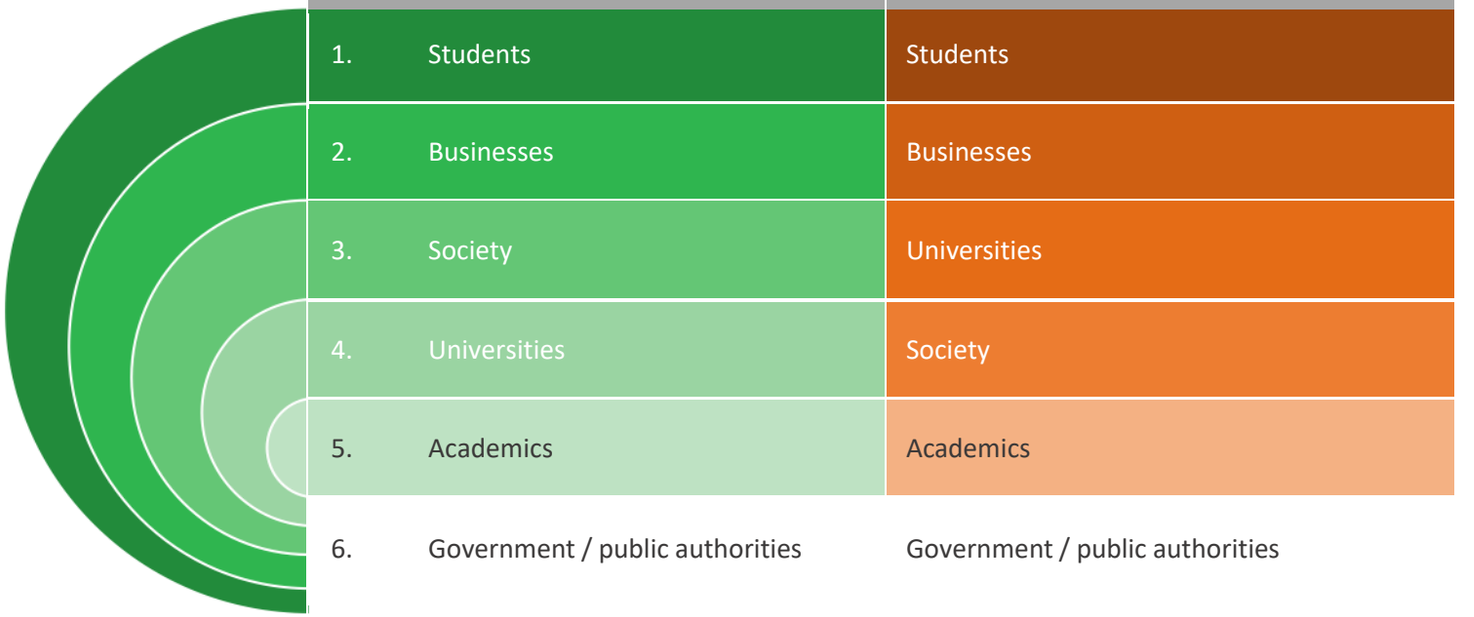
The French government is believed by both groups to gain little benefit from UBC. It is considered as an indirect beneficiary.

Academics and HEI representatives see benefits for academics lower than the ones for universities and society. Indeed academics in the French context may not see partnering with businesses as a benefit for them. Additionally, traditional universities are generally reluctant to cooperate with companies, in particular with the large ones. This is however different for engineering and business schools that work with businesses on a daily basis.

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

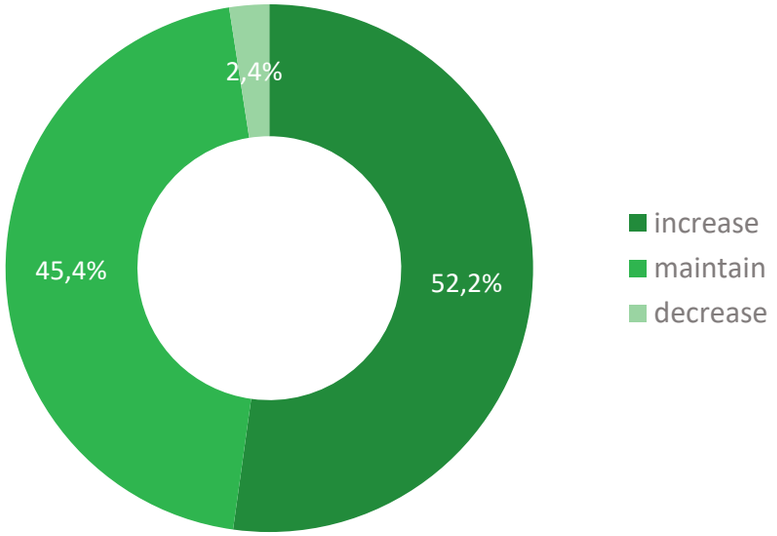
'Who receives the benefits of UBC?'- as answered by academics and HEI representatives



Future intentions

Future UBC intentions – France

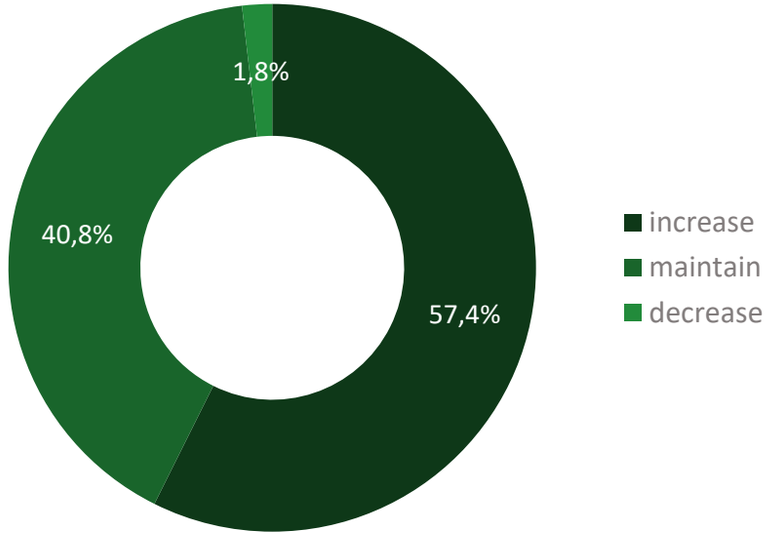
As answered by French academics



French academics show a strong commitment to UBC. 97.6% of academics expecting to maintain or increase their UBC activities. In this sense, France proves to be an attractive country for UBC.

Future UBC intentions – EUROPE

As answered by European academics



Academics in Europe show an even stronger 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 French cooperating academics to recommend to a colleague to engage in UBC varies depending on whether this cooperation is in research or in education.

French academics are less satisfied with UBC in research than their European counterparts (NPS=0). While 35% of them will promote it positively, 35% would do it negatively.

Contrary, French academics are equally unsatisfied in education-related UBC as the European academics (NPS=-13).

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

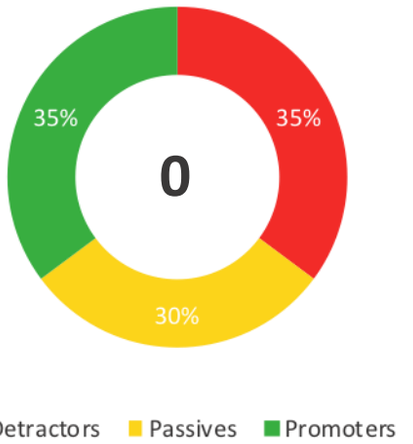
As answered by academics

	Detractors	Passives	Promoters
Academics cooperating in E&T	*45%*	*23%*	*32%*
Academics cooperating in R&D	*35%*	*30%*	*35%*

Net promotor score
-13
0

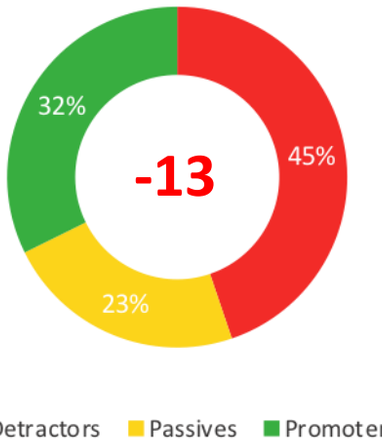
Satisfaction in cooperation with businesses (net promoter score)

Academics cooperating in research



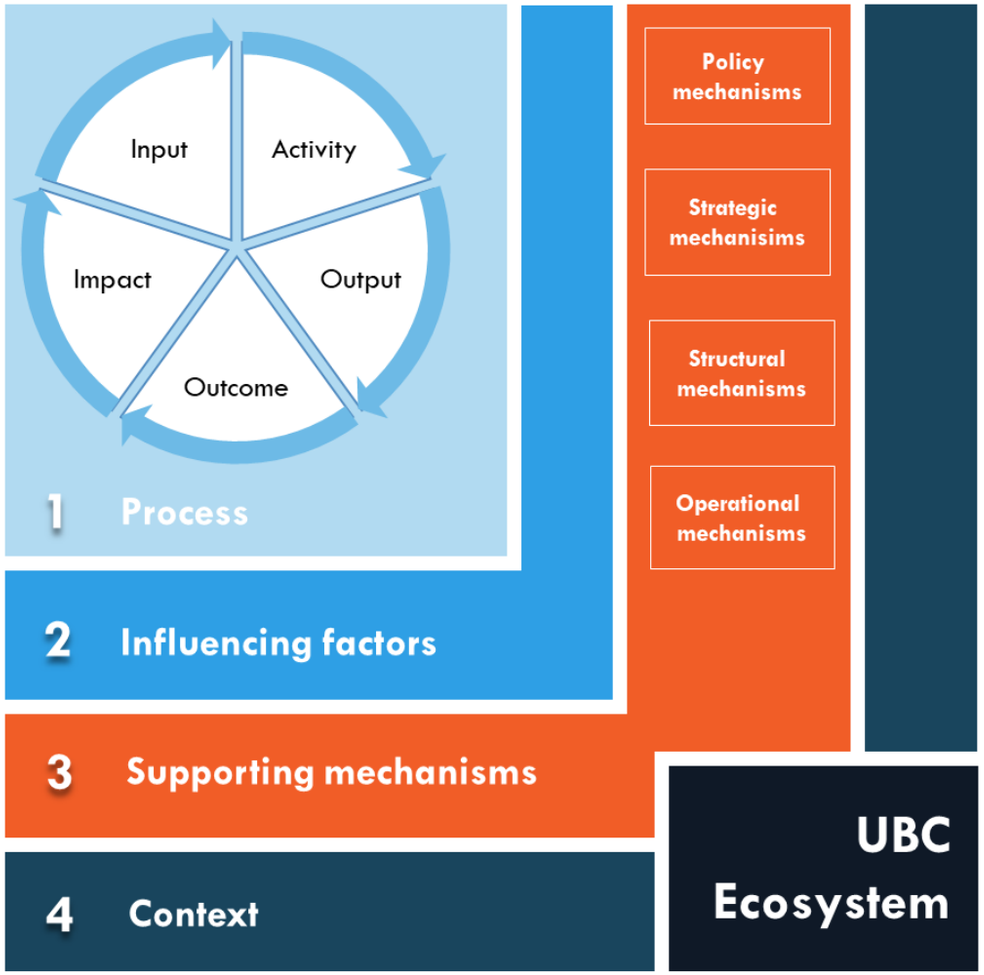
European academics‘ NPS result: 17

Academics cooperating in education



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

French HEI representatives perceive policy mechanisms to be developed to a medium-low level. The majority of these perceptions is stronger than the perceptions of their European counterparts.

R&D tax benefits for business are seen as the most developed supporting mechanism in the French HEIs (7.0). There is a R&D Tax Credit[1] system in place, which supports business R&D and relies on combination of direct funding and tax relief measures.

It is followed by regional innovation policies (6.8). In France, collaborative research (public/private R&D) is strongly supported by regional policies and European Regional Development Fund (ERDF).

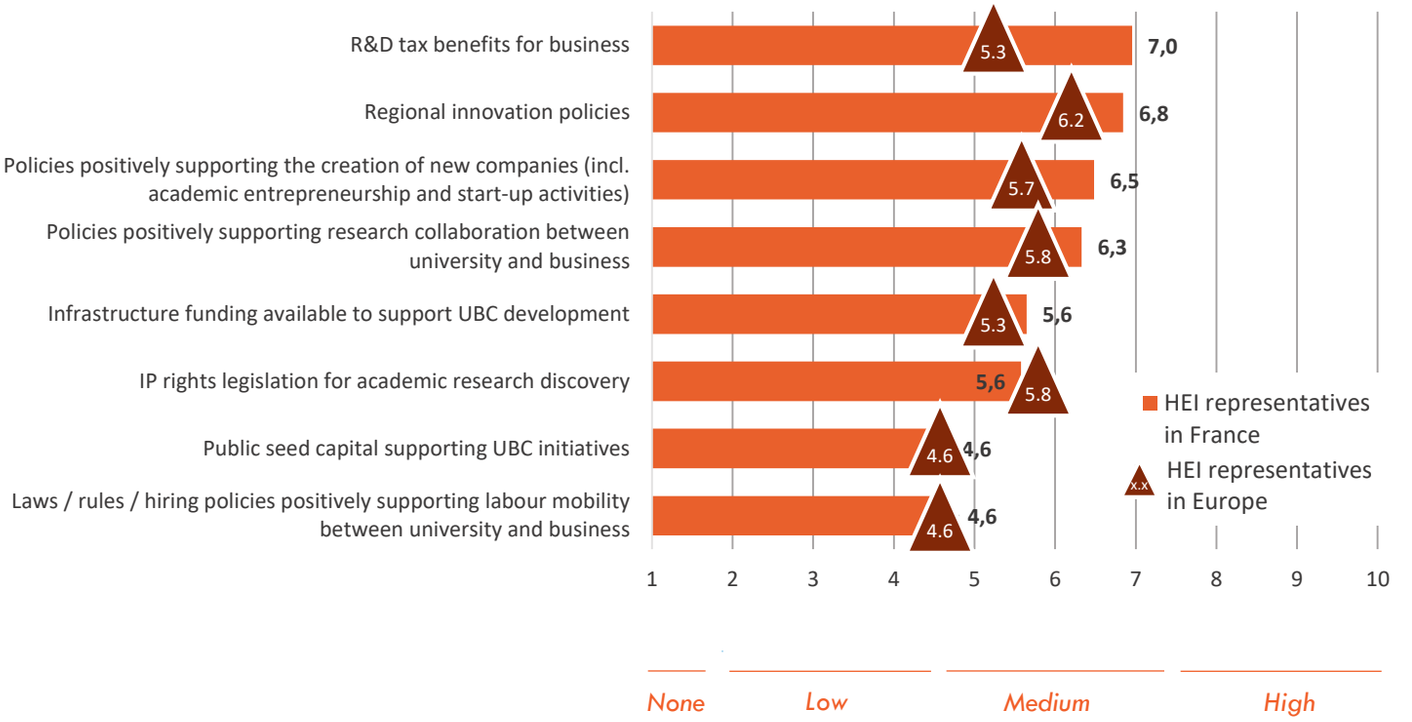
The policies positively supporting the creation of new companies and research collaboration between university and business (5.3 and 5.2 respectively) are also better developed than in Europe. Since the the beginning of the 2000's, France has been widely supporting the creation of technology-based public incubators.

The least developed mechanisms relate to the public seed capital supporting UBC and laws/rules/hiring policies supporting labour mobility (4.6 each).

[1] OECD (2016). R&D tax incentive country profiles 2015: France. Measuring R&D tax incentives. Directorate for Science, Technology and Innovation, February 2016. URL: http://www.oecd.org/sti/RDTax%20Country%20Profiles%20-%20FRA.pdf

Policy mechanisms

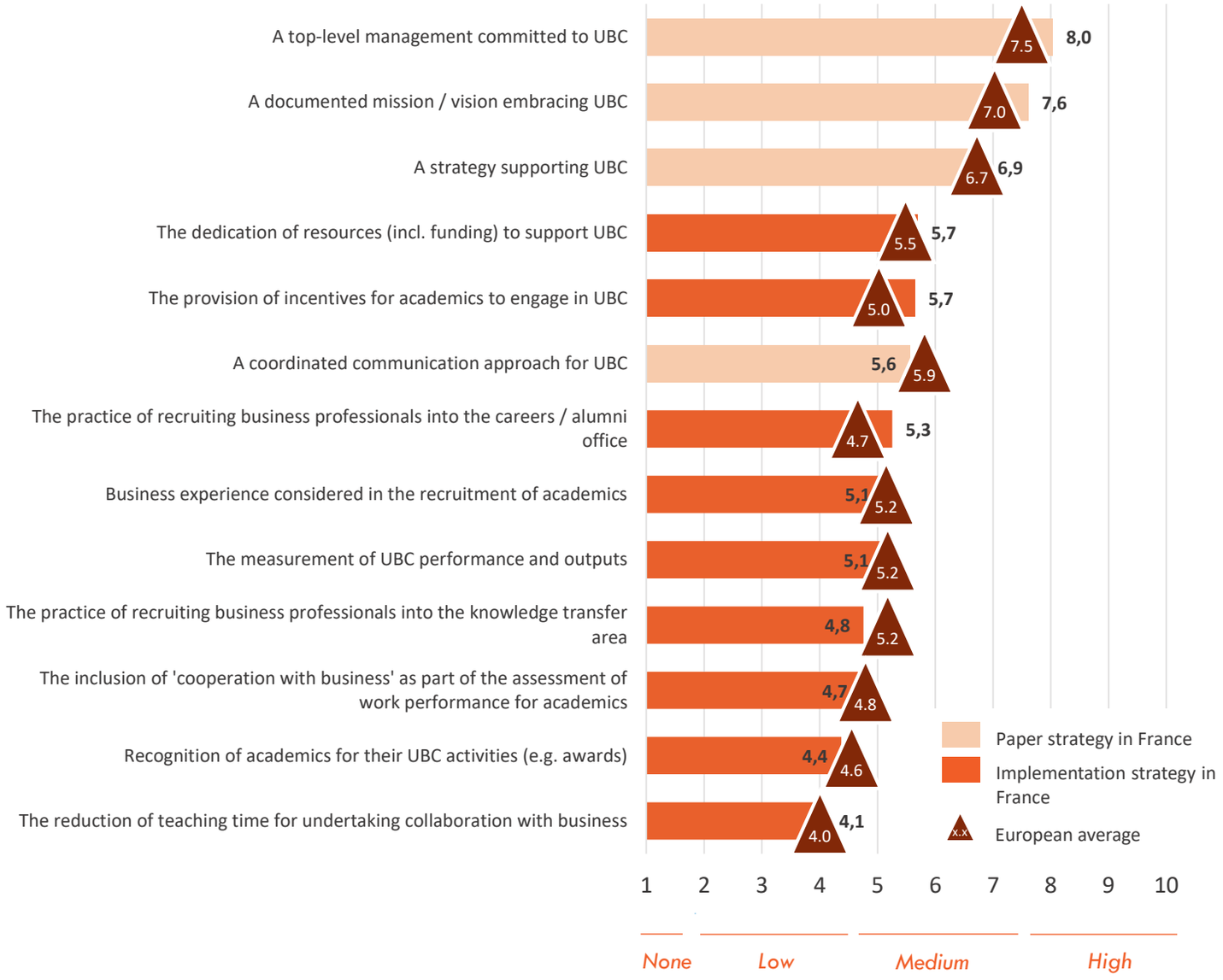
'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



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 French and European HEIs is similar.

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

The least developed mechanisms are related to the recognition of academics for their UBC activities (4.4) and the reduction of teaching time (4.1). There are already some incentive mechanisms for inventor-researchers in place, but the overall situation for academics undertaking UBC in the French context still remains challenging[1].

[1] J. Beylat and P. Tambourin (2017). P ropos itions de modernis ation de la loi Allègre et de simplification de l'intéressemen. URL: http://www.enseignementsup-recherche.gouv.fr/cid113106/remise-du-rapport-beylat-tambourin-sur-la-loi-allegre.html

Supporting mechanisms for UBC

The development of the structural mechanisms in French HEIs is similar to the European average.

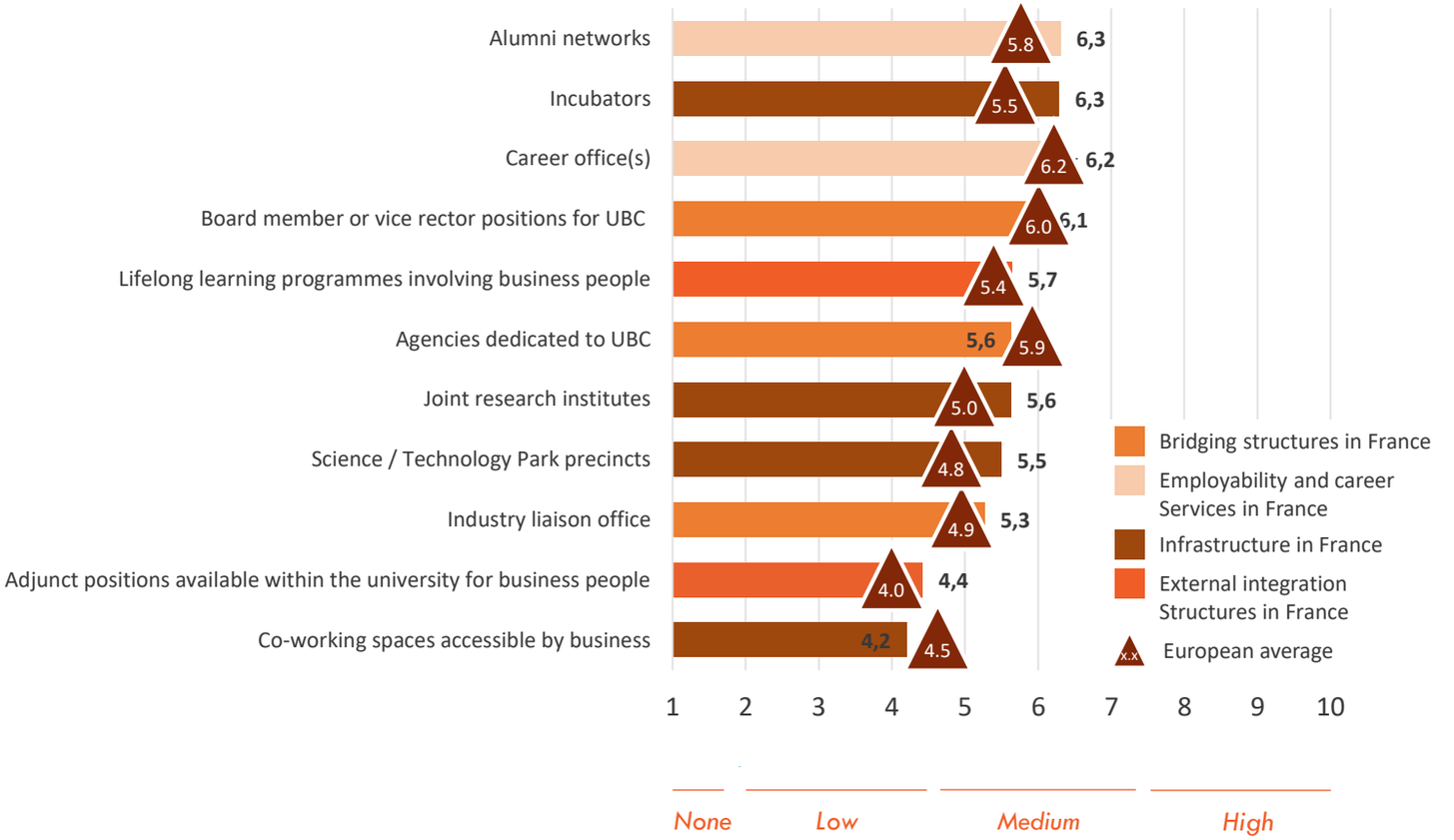
The most developed structural mechanisms include alumni networks (6.3) and incubators (6.3), which are perceived to be better developed in France compared to the European average. While alumni networks are well developed and institutionalised in engineering and business schools, their development in public universities lags behind.

They are followed by career offices and and board member/vice rector positions for UBC. These two mechanisms have the same development level in the European HEIs.

Adjunct positions within the HEI for business people and co-working spaces spaces accessible by business are the least developed mechanisms (4.4 and 4.2 respectively) since they hardly exist in the French HE infrastructure.

Structural mechanisms

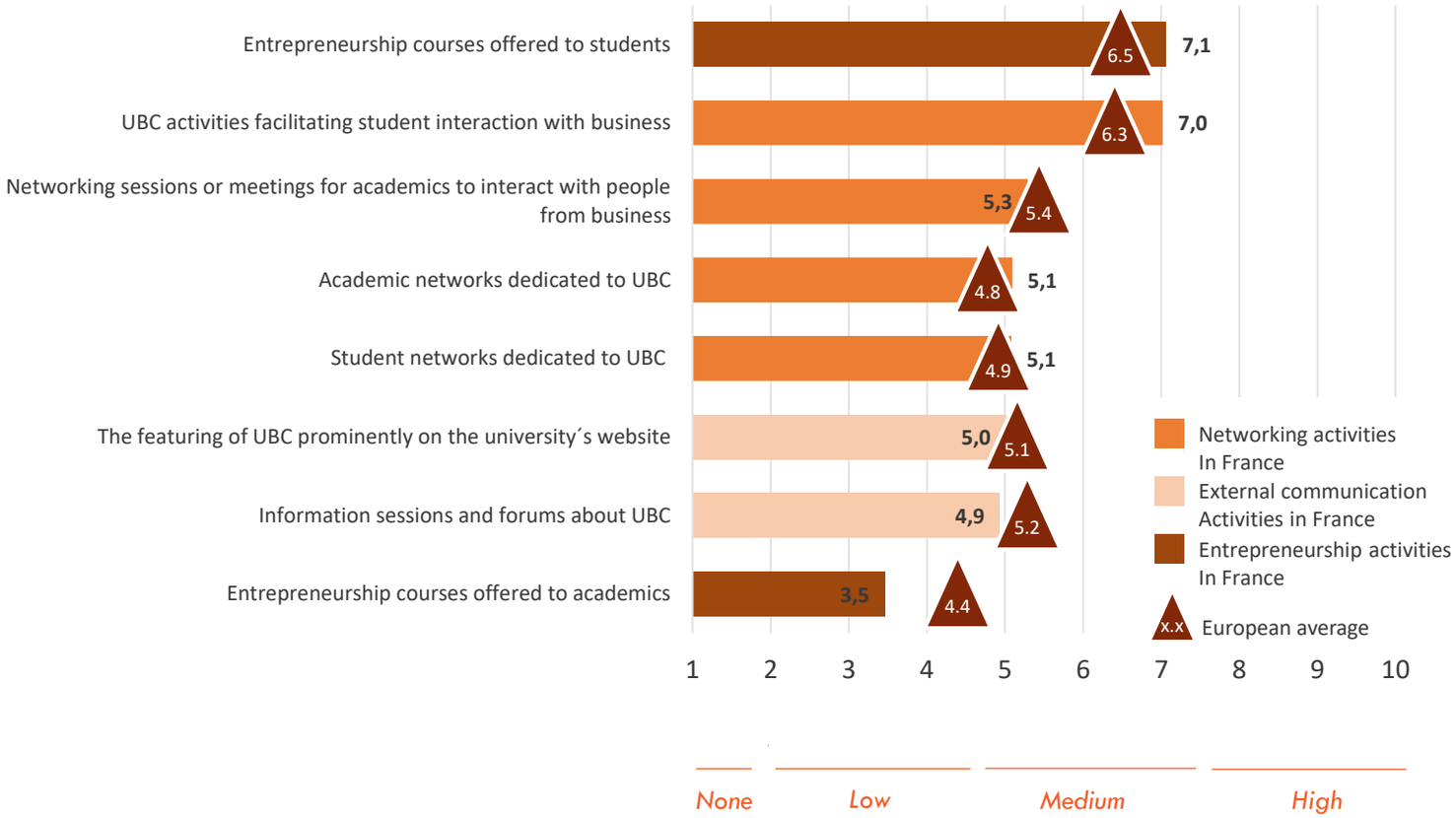
'To what extent do these mechanisms support UBC in your HEI?' - as answered by HEI representatives



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 French and European HEI representatives align with respect to the development of operational mechanisms.

Student-centred activities are the most developed operational mechanisms, with entrepreneurship courses offered to students (7.1) and UBC activities facilitating student interaction with businesses (7.0) ranked higher than European average. There is a growing number of schemes dedicated to student entrepreneurship. The Conference for the Presidents of Engineering Schools indicated that 96% of French schools have embedded entrepreneurship as part of the curriculum[1]. As for public universities, the Ministry of Higher Education, research and Innovation initiated the creation of the PEPITE – 29 supporting structures to enhance student entrepreneurship[2].

External communication activities are less developed in France due to a lack of financial resources. Entrepreneurship courses offered to academics is the least developed operational mechanism (3.5).

[1] The Conference of Deans of French Schools of Engineering (CDEFI) is a non-profit association of deans of French public and private schools of engineering and universities of technology. URL: http://www.cdefi.fr/fr/la-cdefi/chiffres-cles

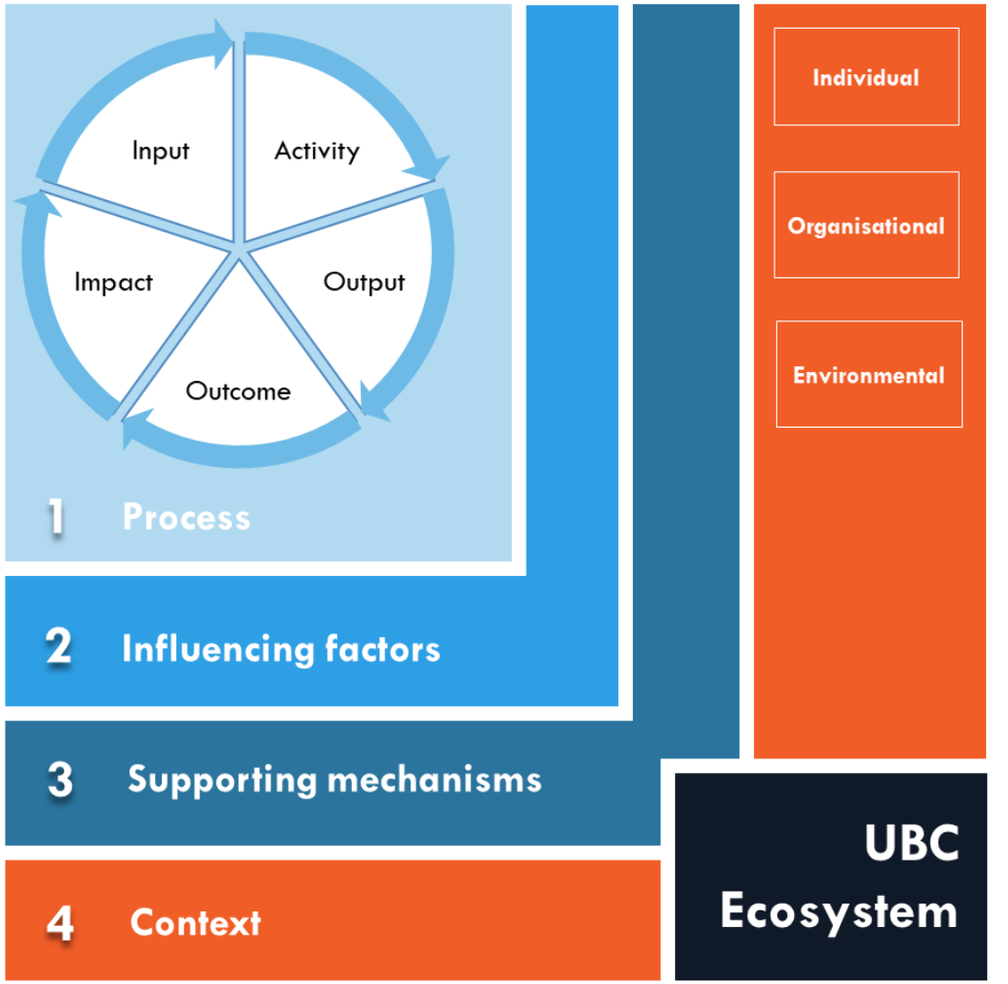
[2] PEPITE : pôles étudiants pour l'innovation, le transfert et l'entrepreneuriat. URL: http://www.enseignementsup-recherche.gouv.fr/cid79223/www.enseignementsup-recherche.gouv.fr/cid79223/pepite-poles-etudiants-pour-l-innovation-le-transfert-et-l-entrepreneuriat.html

Context

The degree to which UBC takes place is influenced by a set of element 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.).

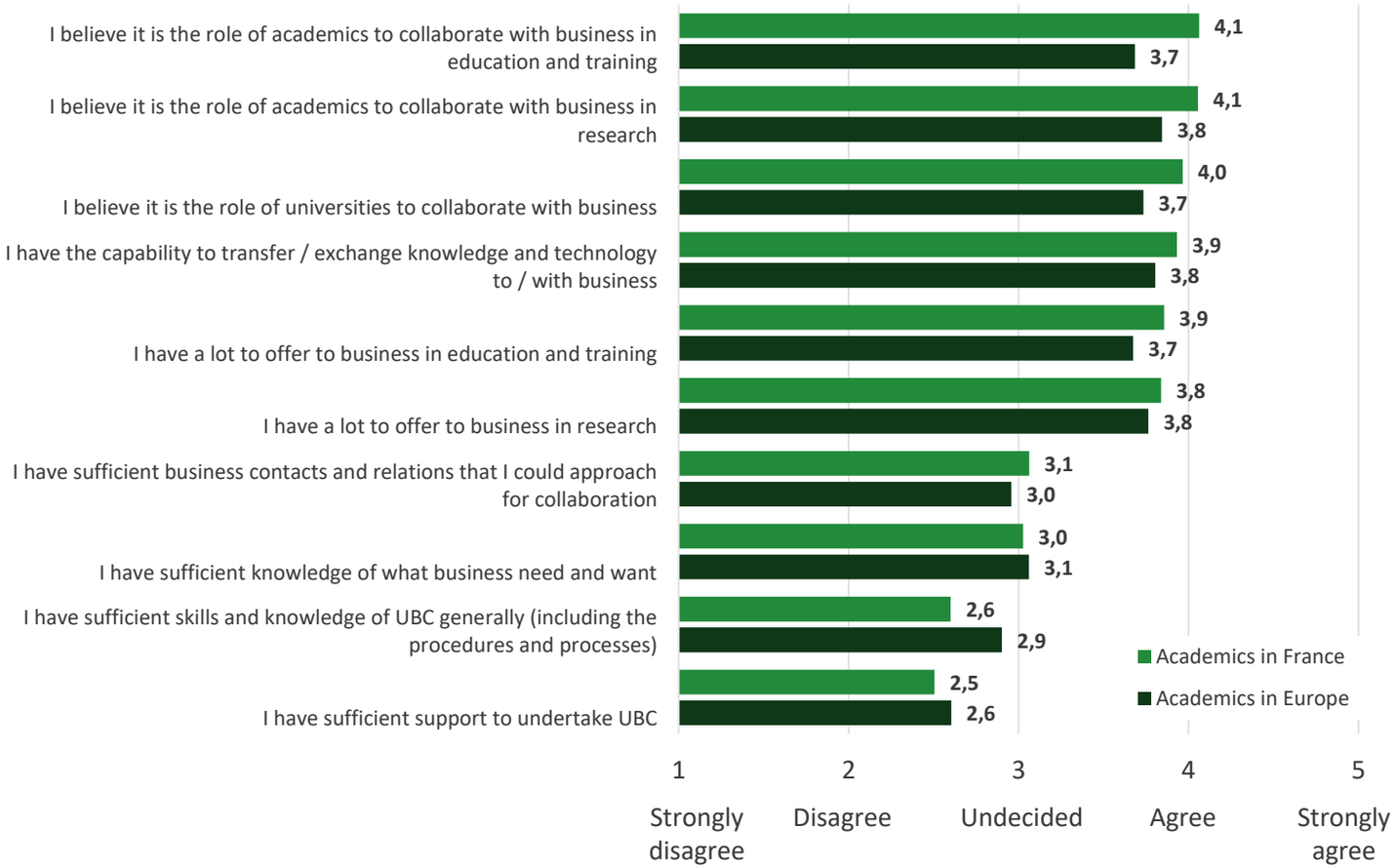
This section outlines how some contextual factors influence UBC in the country.



UBC capabilities

Capabilities for UBC

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



French academics identified moderate capabilities for UBC and beliefs about the role of UBC and for most of them have a more positive attitude than their European counterparts.

French academics perceive that it is their role to collaborate with businesses in education (4.1) and research (4.1).

They identified their strengths in the ability to exchange knowledge (3.9) as well as in providing education (3.9) and doing research for companies (3.8).

They perceive they have insufficient knowledge about companies' needs (3.0) and lack general support and knowledge in the field of UBC (2.6 and 2.5).

Context

French and European academics perceive their contextual factors similarly.

Both French and European academics have a positive attitude towards UBC (4.3 and 4.2).

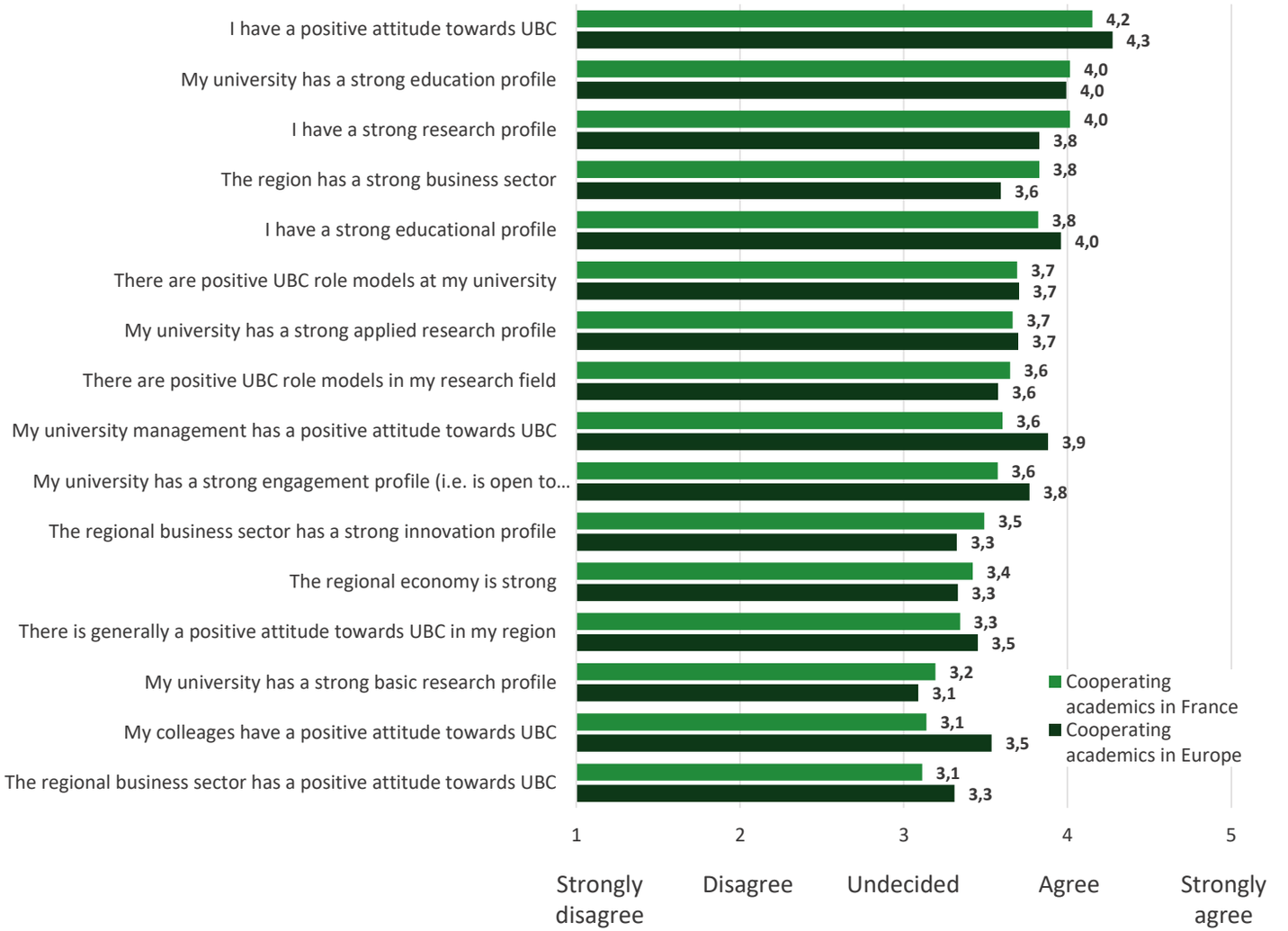
French academics perceive however a less positive attitude of their colleagues, HEIs and regions towards UBC.

Furthermore they perceive that French universities have a less strong engagement profile.

Contrary, French academics have more positive perceptions of their regions with regards to business sector, innovation profile and regional economy.

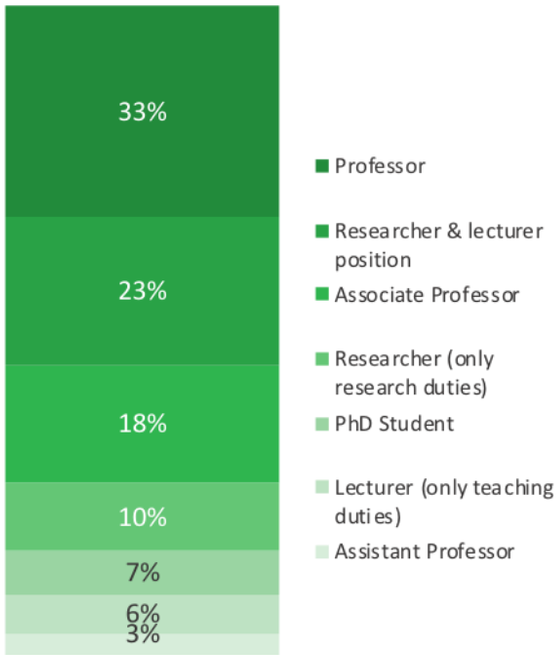
Contextual factors affecting UBC

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



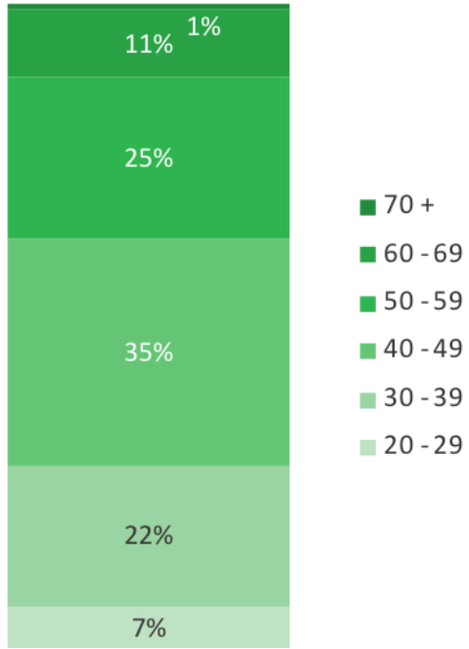
Respondent profile – academics

Position of respondent



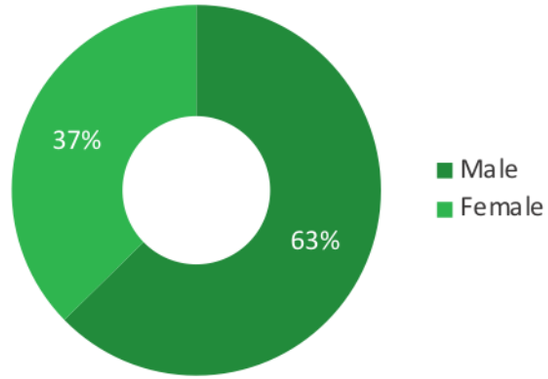
'Professors' (33%) comprise the largest group, followed by 'researchers and lecturers' (23%). The remaining academics identified themselves as 'associate professors' (18%), 'researchers' (10%), 'PhD students' (7%), 'lecturers' (6%) and 'assistant professor' (3%).

Age of respondents



Most French academics in the sample are in the middle of their working life. A third of the academics (35%) in the sample are between 40 and 49. Other significant groups are those aged 50-59 (25%) and 30-39 (22%). Academics older than 60 are 12%.

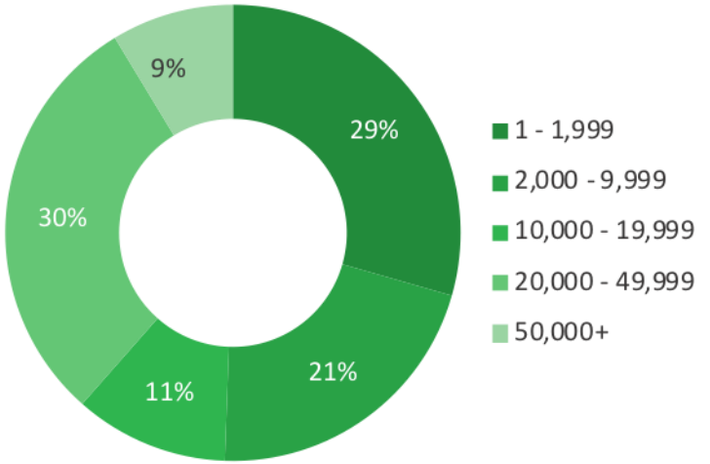
Gender of respondents



The gender distribution in the French academic sample is skewed towards male respondents, with 63% of the total sample.

Respondent profile – academics

Number of students of the HEI

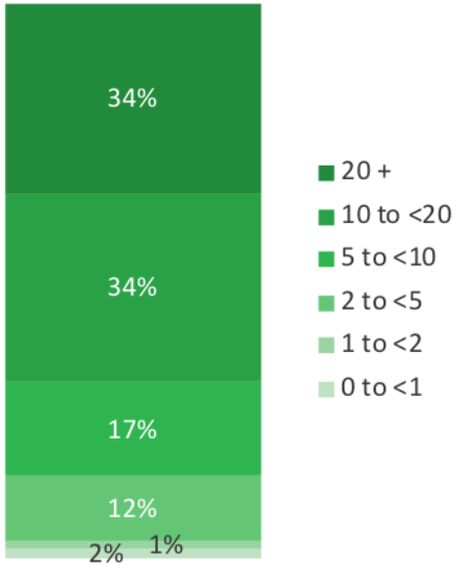


Sample Size	
French Academics	n=454
European Academics	n=10.836
French HEI representatives	n=242
European HEI representatives	n=3.482

Half of the French academics (50%) in the sample work for smaller HEIs (under 9,999 students) and 29% of them work for very small HEIs (under 1,999 students). Medium-large HEIs (20,000 - 49,999 students) are represented by 30% of respondents. 11% of academics are based in medium-sized HEIs (10,000 – 19,999). Only 9% of the academics work at very large HEIs with over 50,000 students.

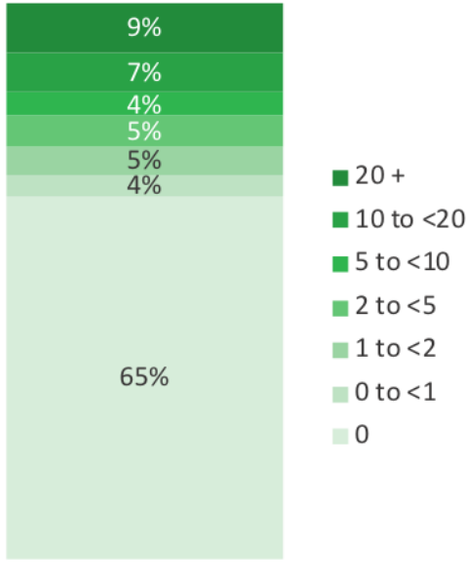
Respondent profile – academics

Years working in university



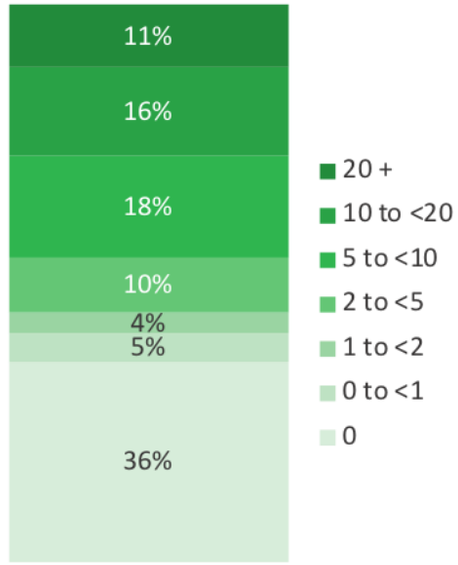
Almost all French academic respondents have worked in academia for several years. Over two thirds of them (68%) have worked in academia for over 10 years. 17% have 5-10 years of experience and 12% have worked in academia for 2-5 years. Only 3% of the academics have less than 2 year of experience.

Years working in business



Two thirds (65%) of the French academic respondents haven't worked for business before. Only 16% of them have worked for over 10 years. An even proportion (9%) have 2 to 10 years and less than 2 years industry experience.

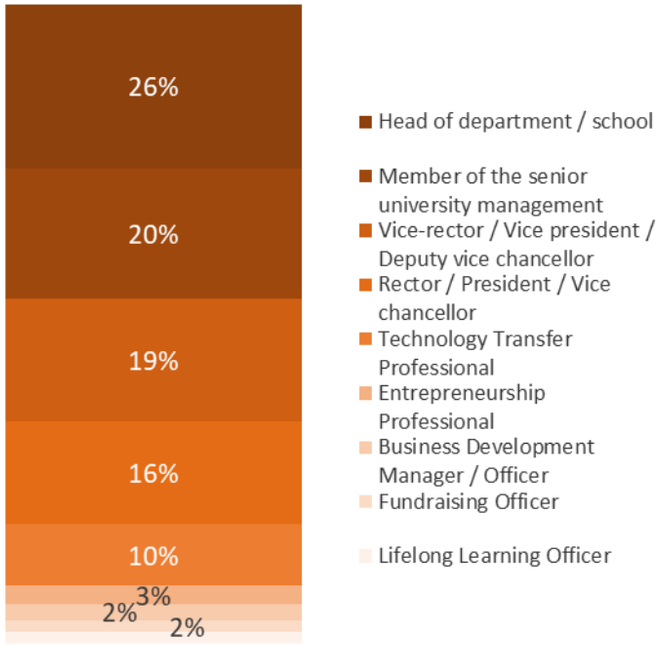
Years involved in UBC whilst working at a university or business



Most academic respondents in France have some UBC experience. Although only 11% have been involved in UBC for over 20 years, 34% have 5 to 20 years of experience and 19% engage with industry for less than 5 years. 14% of academics in the sample have never engaged in UBC.

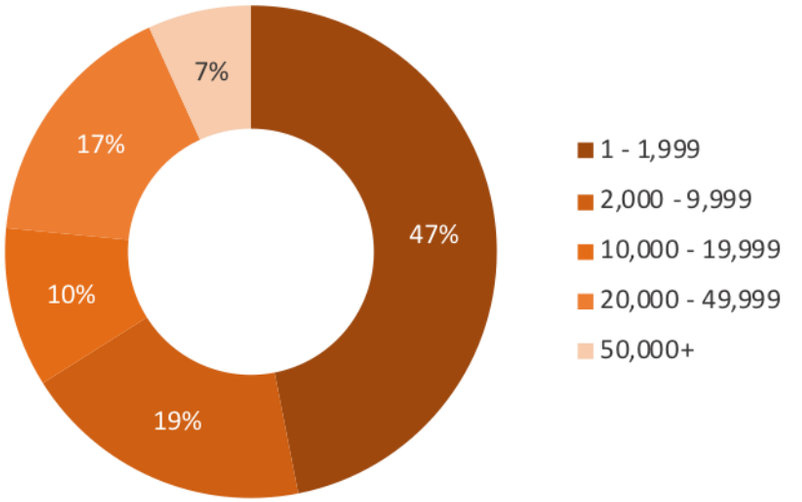
Respondent profile – HEI representatives

Position of respondent



French HEI representatives hold a variety of roles. A quarter of them are heads of departments (26%). Members of the senior university management (20%) are the second largest group, followed by vice-rectors or vice-presidents (19%), rectors or presidents (16%) and technology transfer professionals (10%).

Number of students of the HEI



Overall, over two thirds of French HEI representatives work for small HEIs (under 9,999 students), from whom 47% work for very small HEIs (under 1,999 students). 17% are based in medium-large HEIs (20,000 – 49,999 students) and 10% in medium-sized HEIs (10,000 – 19,999). Only 7% work in large HEIs (over 50,000 students).

UNIVERSITY-BUSINESS COOPERATION IN EUROPE

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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

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UIIN University Industry Innovation Network

ingenio CSIC-UPV Instituto de gestión de la innovación y del conocimiento

EURASHE European Association of Institutions in Higher Education

University of Ljubljana