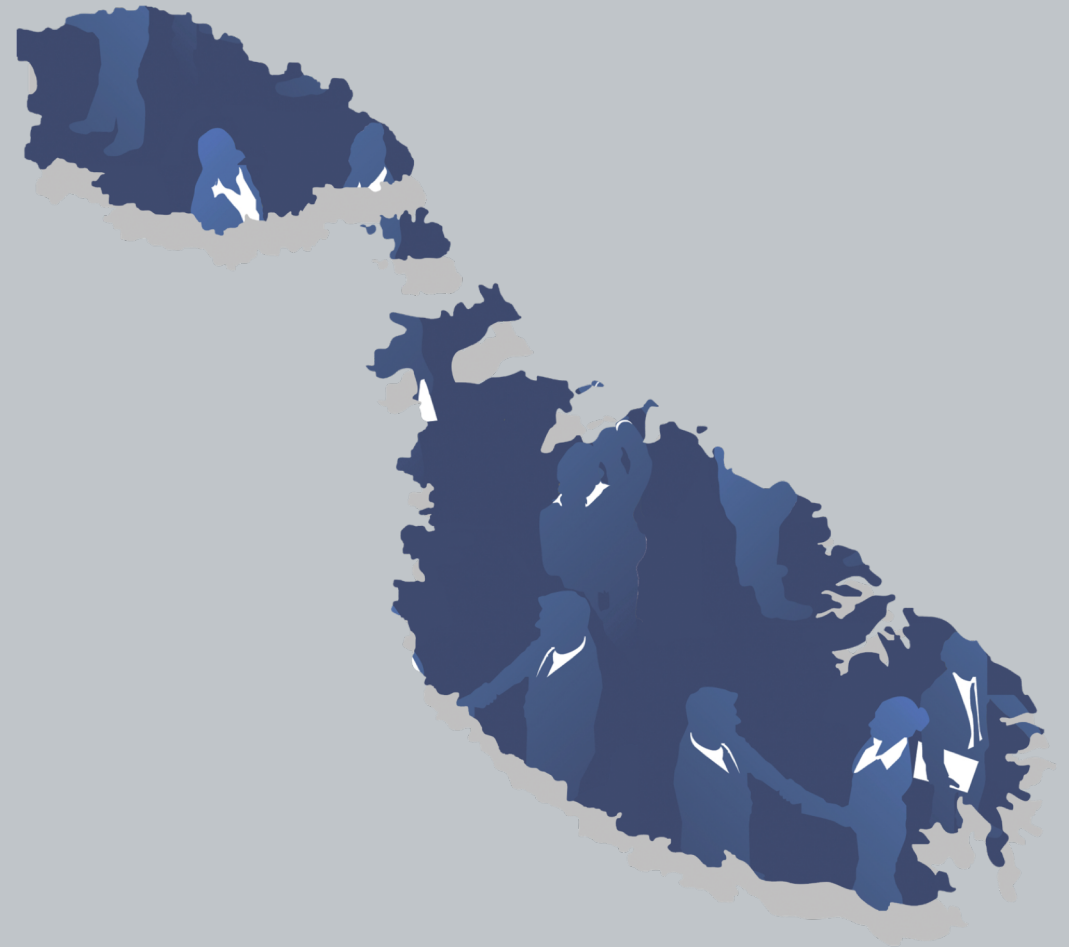


State of University- Business Cooperation MALTA

Business Perspective

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



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

Partners



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Executive summary

Summary

This report seeks to contribute to our understanding of the business perspective on university-business cooperation (UBC) in Malta. Examining the perceptions of a wide range of businesses provides positive signs for the future, with 100% of businesses that cooperate with universities planning to maintain or increase their cooperation in the future. Yet, more still can be done, for example, in supporting businesses with the development of initiatives and activities that can facilitate their cooperation efforts. Furthermore, the capabilities of businesses towards UBC should be further developed, in particular of those organisations not currently engaged in cooperation.

About the study

The results presented in this report reflect the perceptions of business representatives in Malta with respect to cooperation between universities and business. Data was collected by means of an online survey distributed via email to a European business database that was developed from publicly available information for 33 countries during October-November 2016, leading to a total of 56 Maltese business responses. The study measured the perceptions of respondents with respect to their businesses and cooperation efforts.

University-Business Cooperation

Education-related cooperation between the businesses involved in this survey and universities is highly diverse and much lower compared to the

European average. While 35,7% of respondents cooperate with universities in student mobility and 33,9% in lifelong learning and dual education programmes, much fewer businesses are involved in the design and delivery of the curriculum (14,3% respectively). Over 70% of businesses do not undertake any management, valorisation or research related collaboration. Particularly low is the commercialisation of R&D results, with only 14,4% of respondents being active in this area.

Just like Maltese businesses perceive themselves as the main actors reaching out for collaboration, they also see individual academics, university alumni and government as proactive initiators of UBC. On the contrary, Maltese business representatives identify internal and external intermediaries as well as current university students and university managers as those stakeholders that less often initiate UBC.

Barriers to overcome

Primary barriers identified by Maltese respondents relate to the cultural differences between businesses and universities expressed in their differing motivations. Moreover, bureaucracy related to UBC and a limited absorptive capacity represent further significant barriers for businesses. Business respondents also point towards the universities and state that people working within universities lack the commercial understanding necessary for a successful collaboration. Interestingly, the lack of government funding for UBC is the only financial barrier for Maltese businesses.

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

Relationships matter

While funding to undertake cooperation emerges as one of the top five facilitators, relationship related factors are much more prominent. These facilitators include the existence of a shared goal, the mutual commitment and mutual trust alongside prior relations with a partner. These results indicate that any effort towards fostering cooperation between businesses and universities should focus on the development of their relationship as a key to the successful UBC.

UBC is beneficial

Maltese business see, equally to European businesses, less benefits from UBC for themselves than for university stakeholders, including students and universities. But what motivates businesses to cooperate with universities? Apart from expected outcomes such as access to knowledge and new technologies, results indicate 'enhanced reputation' as the most highly rated benefit motivating Maltese businesses to cooperate with universities. Their willingness to improve their reputation and skills of their employees as well as positively impacting society is largely pronounced.

More support for UBC

Compared to the European average, the development of mechanisms supporting UBC within Maltese businesses lags considerably behind. In

particular, the Maltese business managers are significantly less devoted to UBC than their European counterparts. However, almost one fifth (18%) of Maltese business respondents report that lifelong learning programmes are well developed in Maltese businesses, which aligns with Malta's National Lifelong Learning Strategy for 2020. Another important mechanism is related to the provision of networking sessions for employees to interact with academics (also 18%). The most underdeveloped supporting UBC mechanisms in Malta include joint technology parks or joint laboratories (2% respectively).

More to learn

Maltese businesses perceive themselves and their environment as supportive towards cooperation with universities, but more negatively than their European counterparts. Yet, they believe that universities play a crucial role in their innovation efforts. Maltese businesses are also generally more supportive towards UBC in education and training than towards cooperation in R&D.

Maltese business respondents also reported their own lack of knowledge of what universities would want from collaboration with them. Thus they miss skills and general knowledge about UBC.

Introduction

About the study

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

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

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

Main activities

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

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

Why care about university-business cooperation?

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

Study Objectives

The specific objectives for the study are:

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



UNIVERSITY-BUSINESS
COOPERATION IN EUROPE

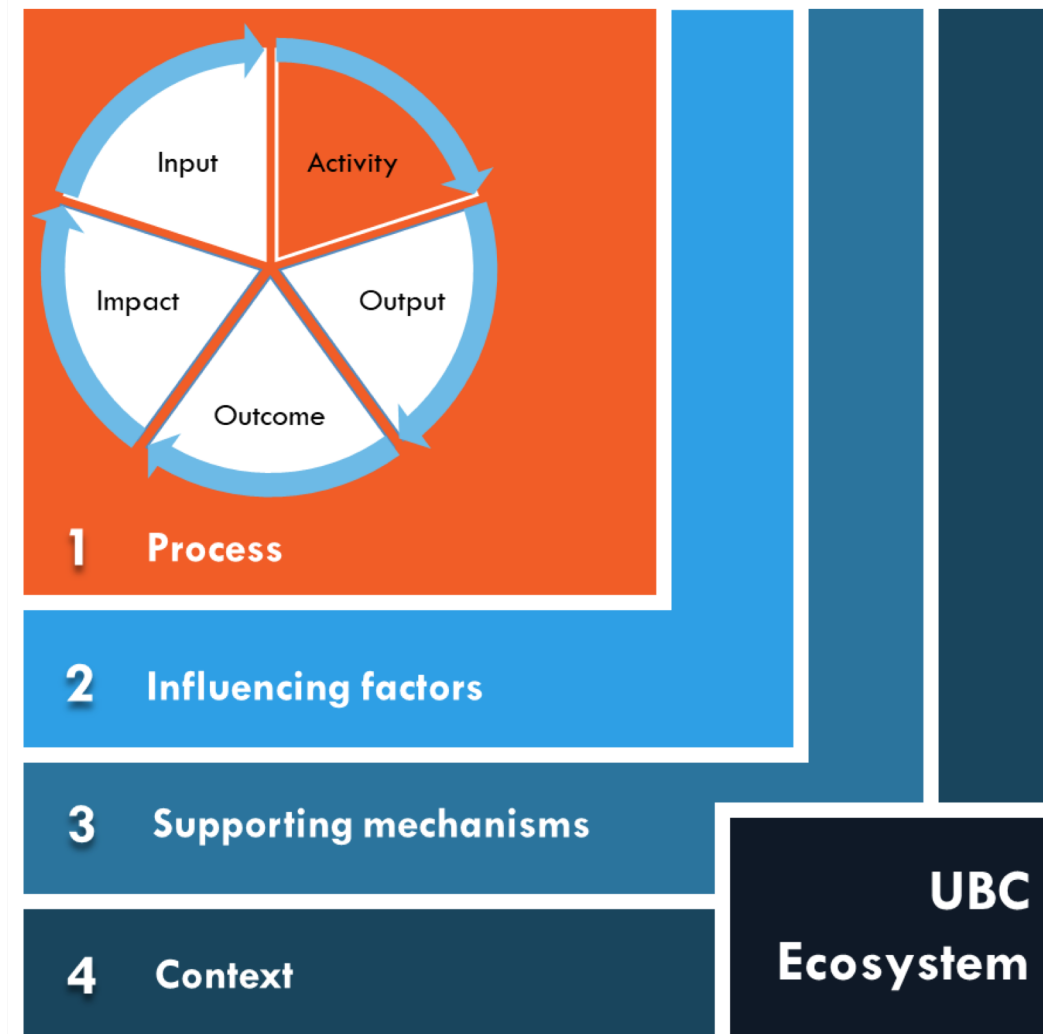
UBC activities

UBC Ecosystem Framework™

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

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

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



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

UBC activities

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

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

Development of UBC activities

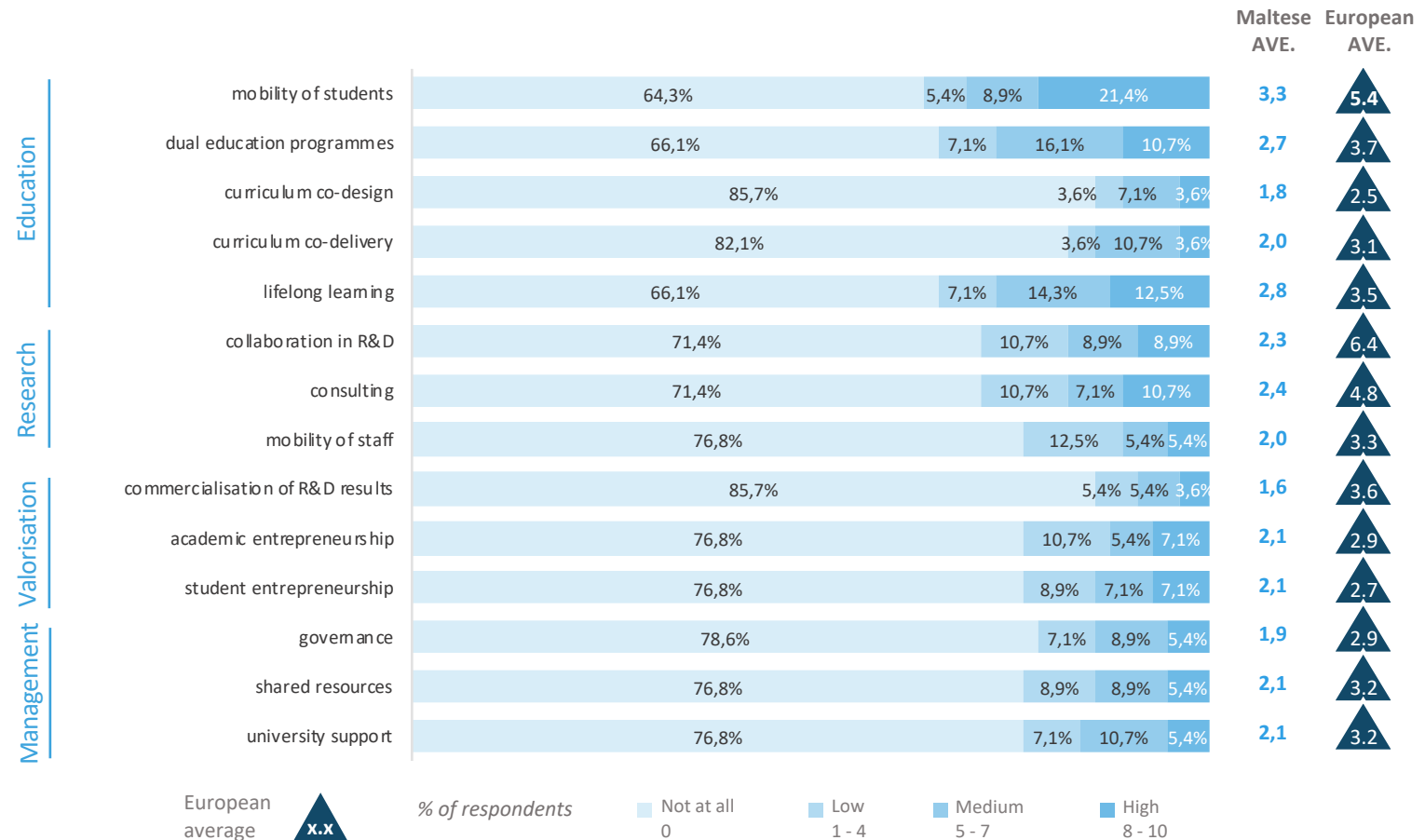
Maltese businesses engage mostly in mobility of students (3.3) and lifelong learning (2.8). As for research related UBC, consulting (2.4) is the most developed UBC activity.

Over 75% of businesses do not undertake any management or valorisation related collaboration, with commercialisation of R&D results being the least developed activity.

In comparison with the development of the UBC activities for European businesses, Malta is behind European average in all activities, which shows that there is significant room for improvement and further advancement of collaborative activities.

UBC activities development

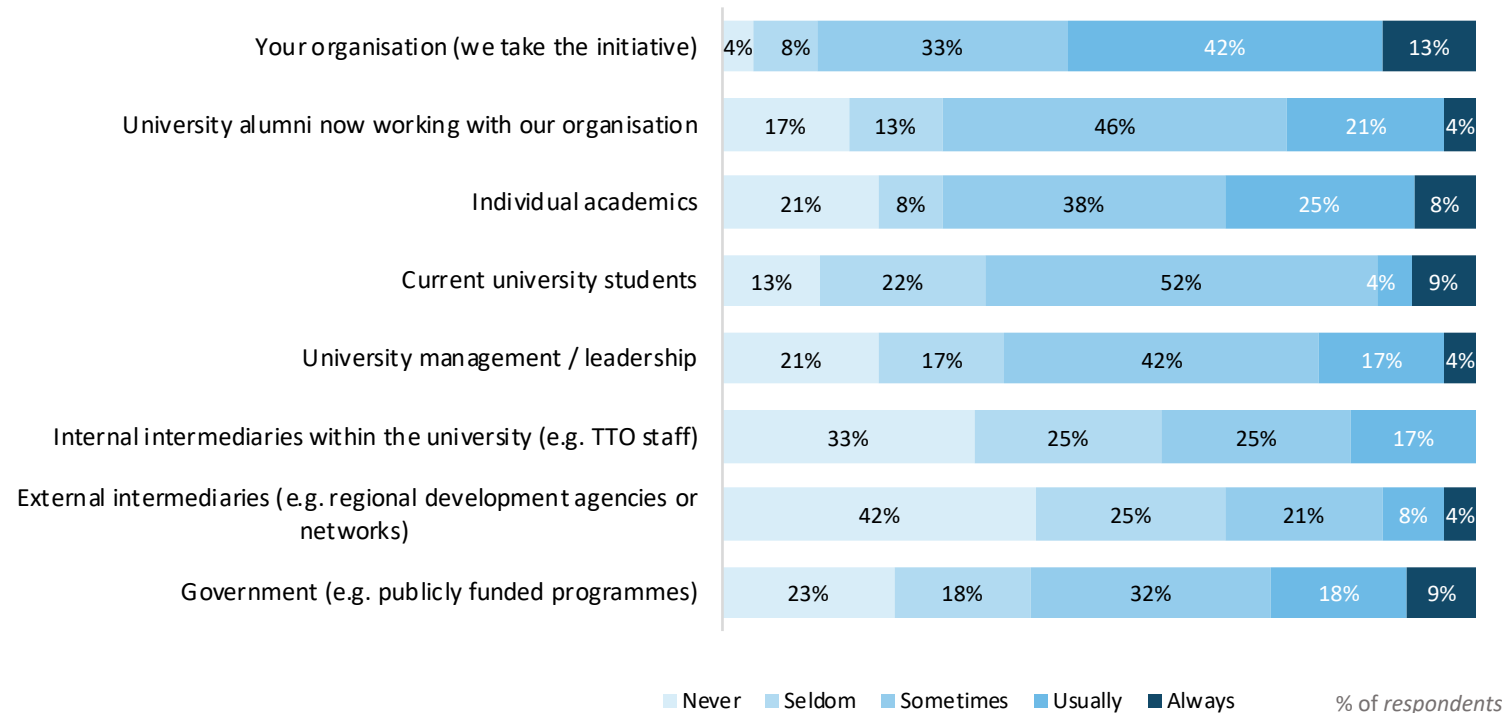
'Which UBC activities do you collaborate with universities in?'



Initiation of UBC

How UBC is initiated

'How often various stakeholders initiate UBC activities'



Maltese businesses clearly see themselves as the main initiators of cooperation with universities. In fact, 55% of businesses state that their organisation always or usually initiates UBC. This demonstrates Maltese businesses' willingness to cooperate with universities but also highlights the opportunity to do more.

Additionally, according to Maltese businesses, UBC is initiated by individual academics, university alumni and the government.

On the contrary, both external and internal intermediaries are perceived as passive when it comes to UBC initiation. Respectively 67% and 58% of the businesses report that the intermediaries never or seldom undertake any first actions towards UBC initiation.

35% and 38% of businesses are of the opinion that current university students and university managers do never or seldom initiate UBC.

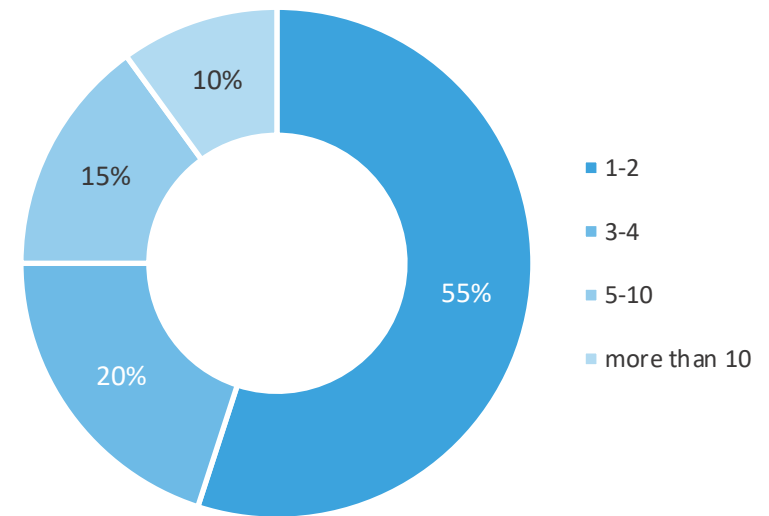
Geographical location still matters

Location of university partners

Percentage of cooperating businesses with...	
universities in their region	80%
universities in their country	82%
universities outside their country	84%

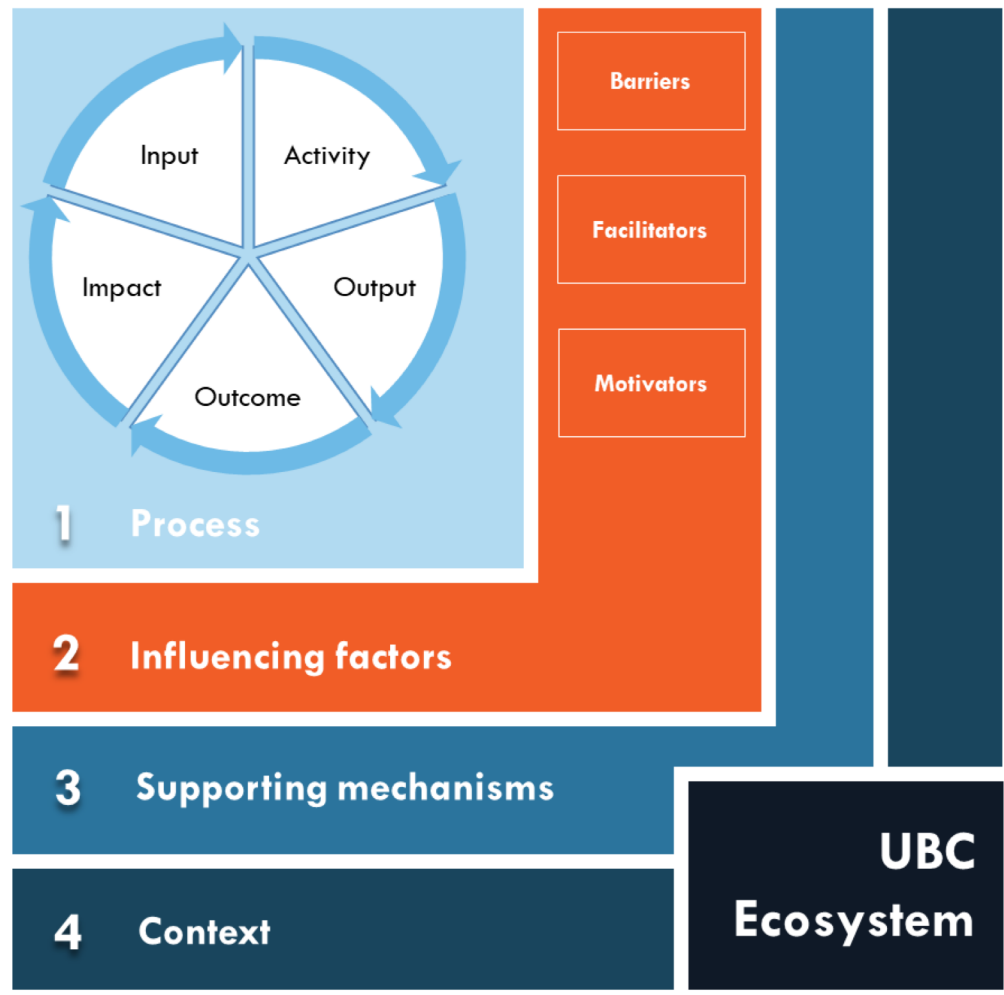
While most Maltese businesses cooperate with international universities (84%), they also cooperate with university partners from the region and Malta (80% and 82% respectively).

Number of university partners



Three quarters (75%) of the Maltese businesses cooperate with less than 4 university partners, while 15% have established relations with 5-10 partners, only 10% cooperate with over 10 universities.

Factors influencing UBC



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

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

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

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

Barriers hindering UBC

Barriers

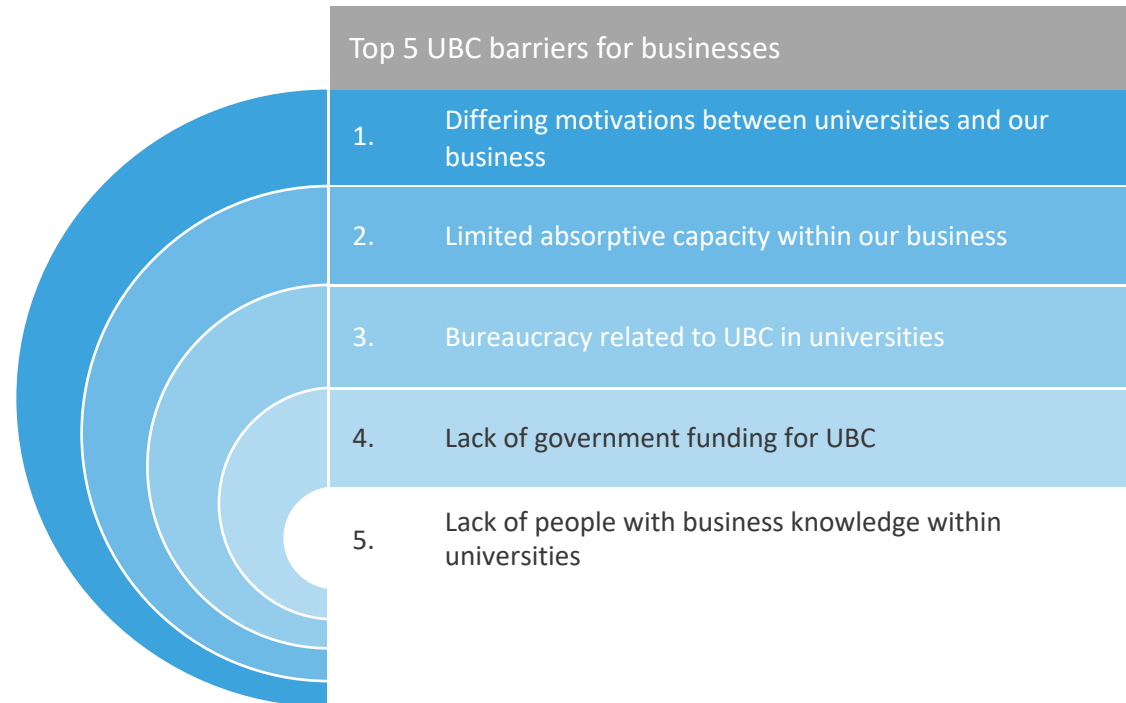
'What is inhibiting your cooperation with universities?'

The main factor inhibiting Maltese business' cooperation with universities is related to the differing motivations between universities and business. Mostly, academics do not share the same drive towards profit, which is the main goal of businesses. This clearly demonstrates the need to establish an ecosystem in Malta in which engagement is easy and rewarding for both parties.

The limited absorptive capacity is also an important barrier for businesses, as well as bureaucracy related to UBC in universities. This is particularly the case when considering that 93.5% of businesses in Malta are micro-sized companies – thus, they might lack the necessary resources and time needed to initiate a UBC¹.

It is also interesting to note that the lack of government funding for UBC is the only financial barrier. Additionally, Maltese businesses are also hindered by the fact that people working within universities lack the commercial understanding and business knowledge in general.

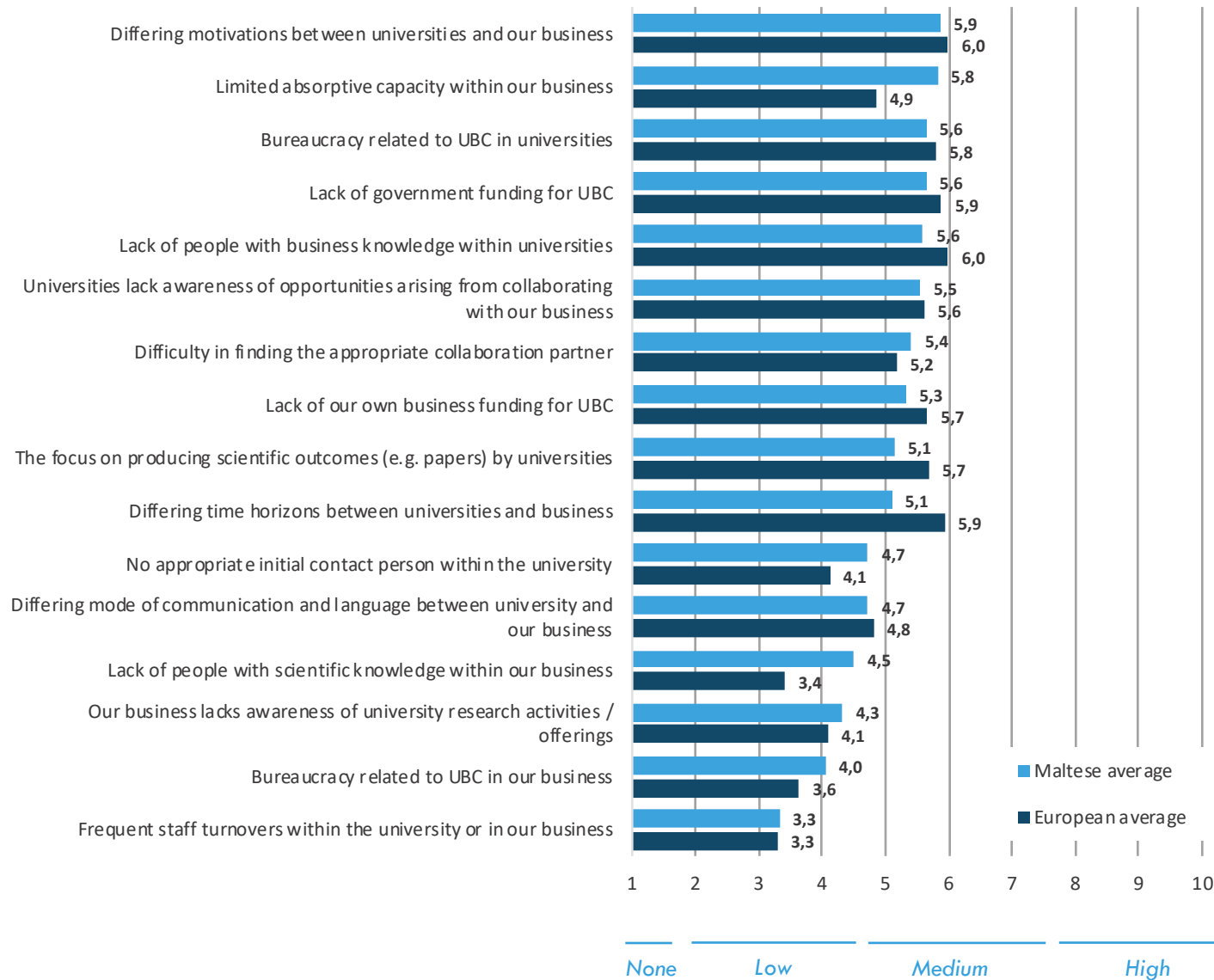
¹European Commission (2017.11.23). SME Performance Review. SBA fact sheets. Retrieved from URL: http://ec.europa.eu/growth/smes/business-friendly-environment/performance-review-2016_en



Barriers hindering UBC

Barriers

'What is inhibiting your cooperation with universities?'



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

The differing time horizons and the focus on producing scientific outcomes, are significantly higher barriers for European businesses than they are for Maltese businesses.

The two strongest barriers for Maltese businesses are related to the differing motivations and limited absorptive capacity.

On the contrary, frequent staff turnover within the university or businesses is the weakest barrier for both groups.

Drivers stimulating UBC

The main factors that facilitate Maltese business cooperation with universities are related to their personal relationships.

A prior relationship with the university partner and the existence of mutual commitment, trust and shared goal highly facilitate cooperation for Maltese businesses, resulting in smoother and more successful collaboration with universities.

Funding is another important UBC facilitator for Maltese businesses.

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

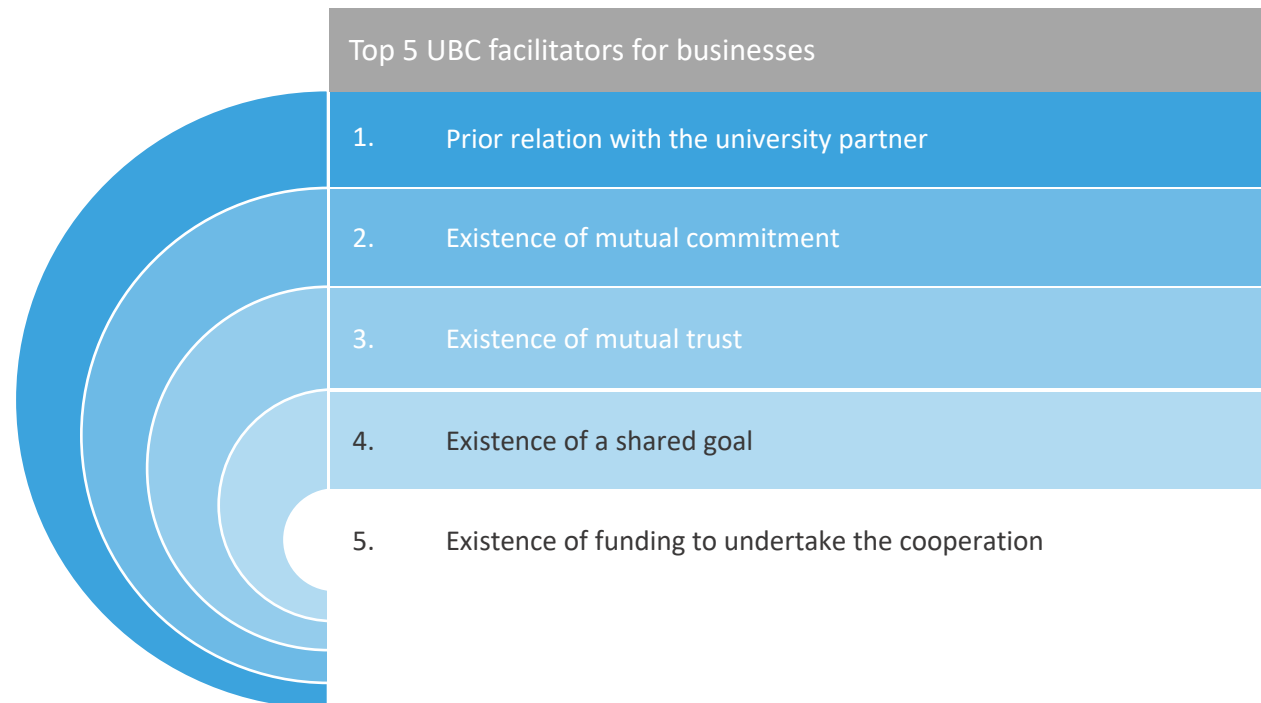
1. **Facilitators** – factors that enable or ease cooperation
2. **Motivators** – incentives or benefits that the respective stakeholders would like from the cooperation

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

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

Facilitators enabling UBC

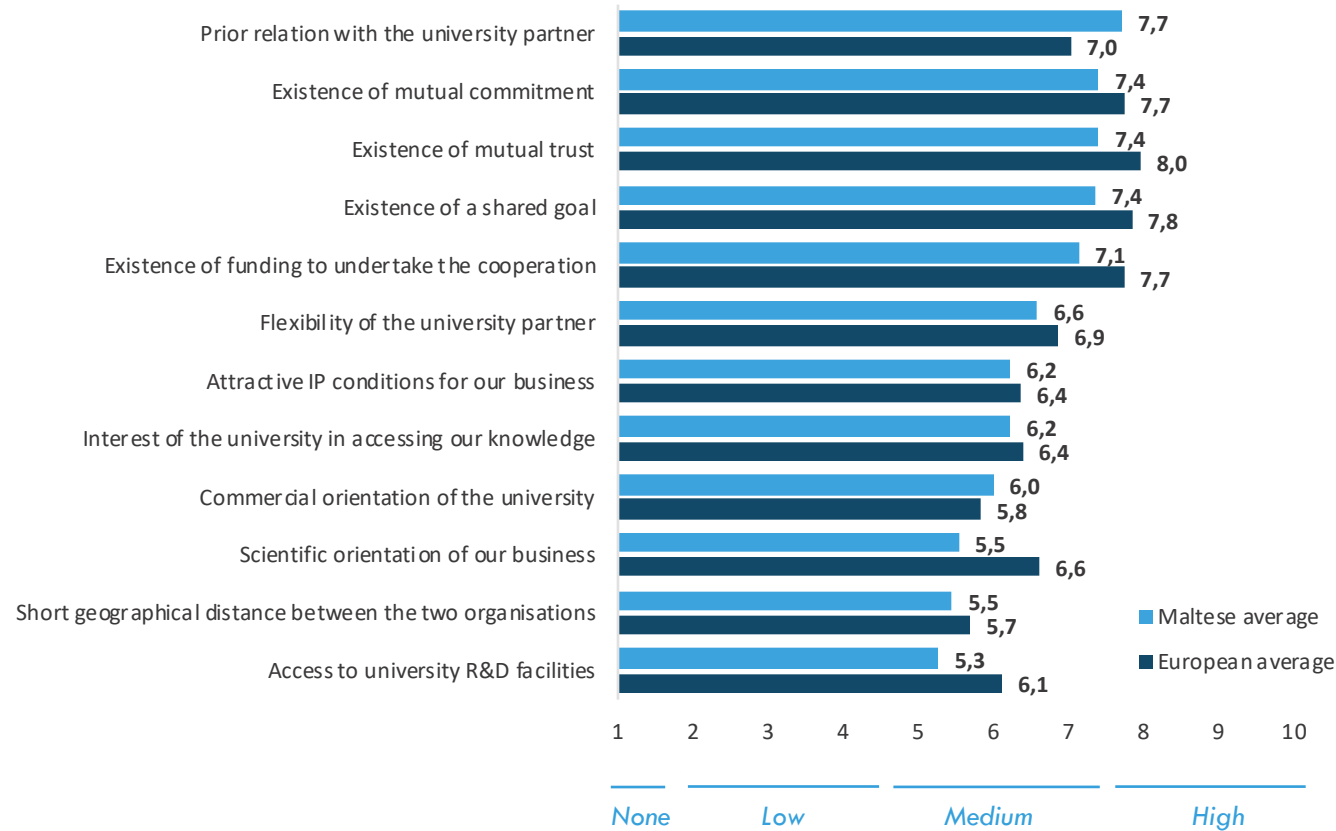
'What is facilitating your cooperation with universities?'



Drivers stimulating UBC

Facilitators

'What is facilitating your cooperation with universities?'



Most facilitators are perceived lower by Maltese businesses compared to European average.

This is the case for scientific orientation of businesses and existence of funding, which bear greater importance for European businesses. The prior relationship with the university partner facilitates UBC for Maltese businesses to a larger extent, although relationship factors are strongly perceived by both groups.

The short geographical distance between two organisations and access to university R&D facilities are not considered as important facilitators by local businesses. Long distance communication has become much easier due to the advancements of ICTs. This, together with the fact that Malta is a small country and therefore all organisations are close to each other, may explain why geographical distance is not given much importance.

Drivers stimulating UBC

The main motivators for Maltese businesses to undertake UBC are related to their willingness to improve their reputation and skills of current employees. In today's highly competitive markets and with the ever-growing influence of social media, businesses must be conscientious of their reputation on a constant basis in order to be able to survive¹ (Goldberg et al., 2003).

Maltese businesses are also motivated to access the new technologies and obtain funding. A less important but still relevant motivation is to positively impact society.

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

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

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

Motivators

'What motivates you to cooperate with universities?'

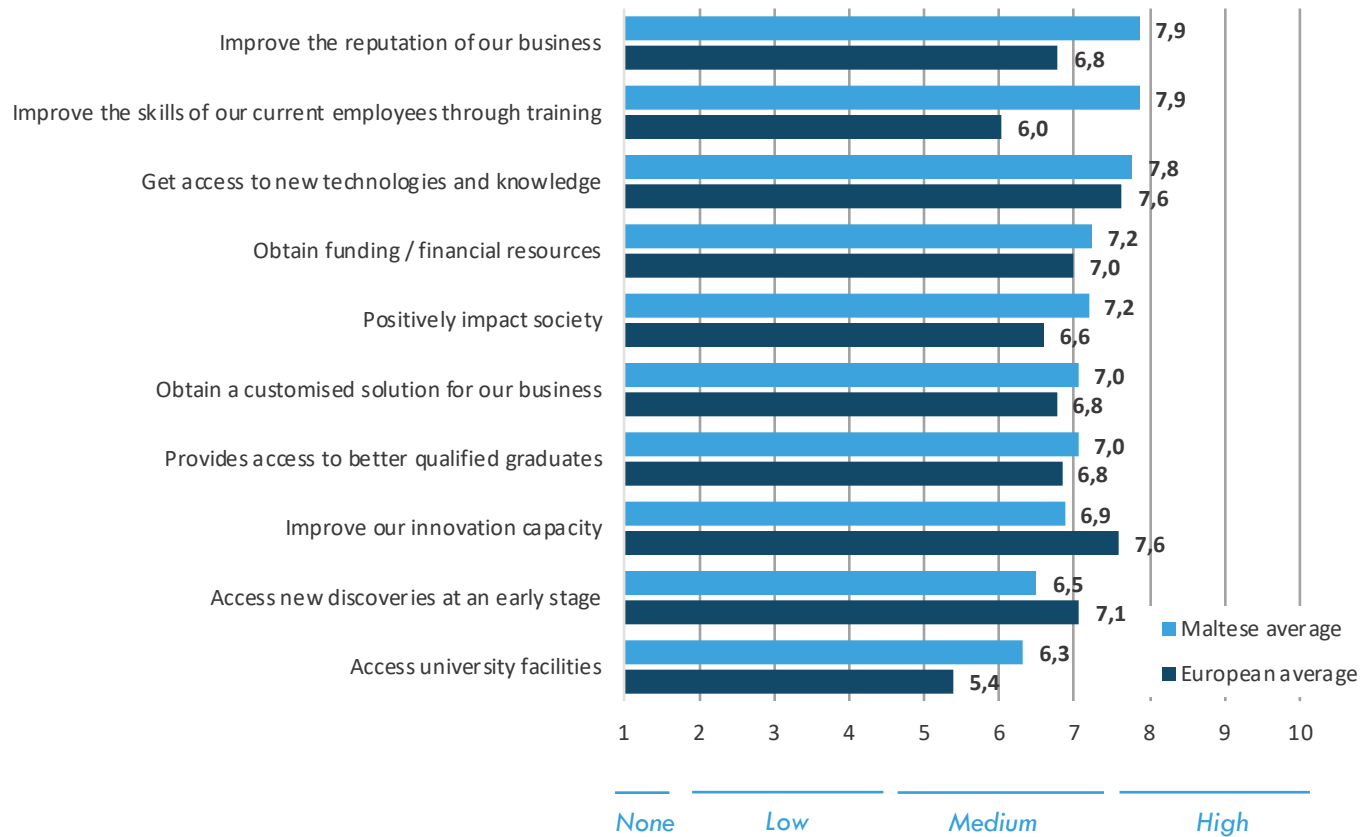


¹Goldberg, A. I., Cohen, G., & Fiegenbaum, A. (2003). Reputation building: Small business strategies for successful venture development. *Journal of Small Business Management*, 41(2), 168-186.

Drivers stimulating UBC

Motivators

'What motivates you to cooperate with universities?'



Overall, Maltese and European businesses have different perceptions of UBC motivators.

The motivation to improve the reputation of businesses and the skills of employees is significantly higher for Maltese than for European businesses. This may be explained through the close-knit nature of the Maltese society whereby the word-of-mouth of consumers as well as employees is still an important factor in Maltese markets.

On the other hand, Maltese businesses are less motivated by the willingness to improve innovation capacity and access new technologies at an early stage. The willingness to access university facilities is the lowest motivator for Maltese businesses.

Benefits of UBC

Both Maltese and European businesses have almost the same perceptions in respect to which stakeholders groups benefit more or less from UBC.

Both groups see students and universities as the primary beneficiaries of UBC.

Notably, Maltese and European businesses perceive themselves also as beneficiary but to a lower extent.

The lowest benefits are perceived to be for academics, society and government.


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

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

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

Benefits of UBC

'Who receives the benefits of UBC?'

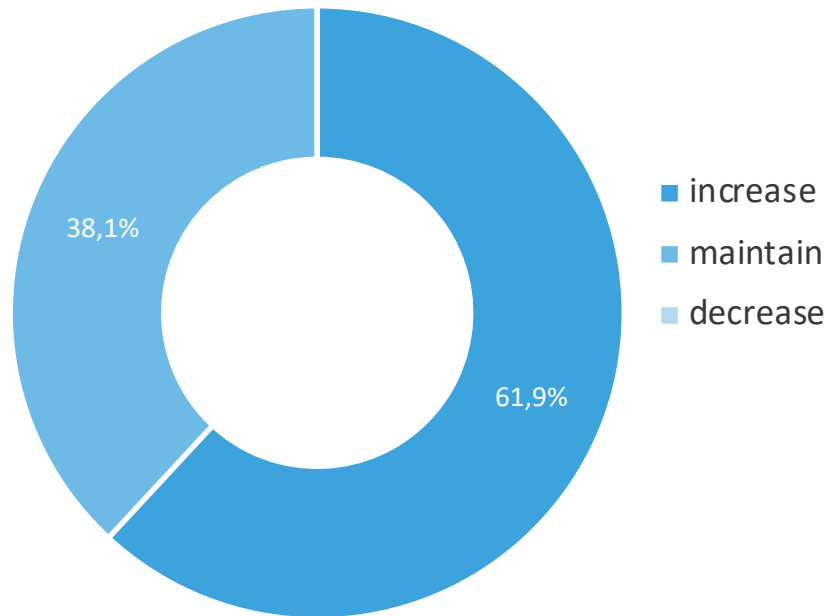


	Maltese businesses	European businesses
1.	Students	Students
2.	Universities	Universities
3.	Businesses	Businesses
4.	Society	Academics
5.	Academics	Society
6.	Government/public authorities	Government/public authorities

Future intentions

Future UBC intentions – MALTA

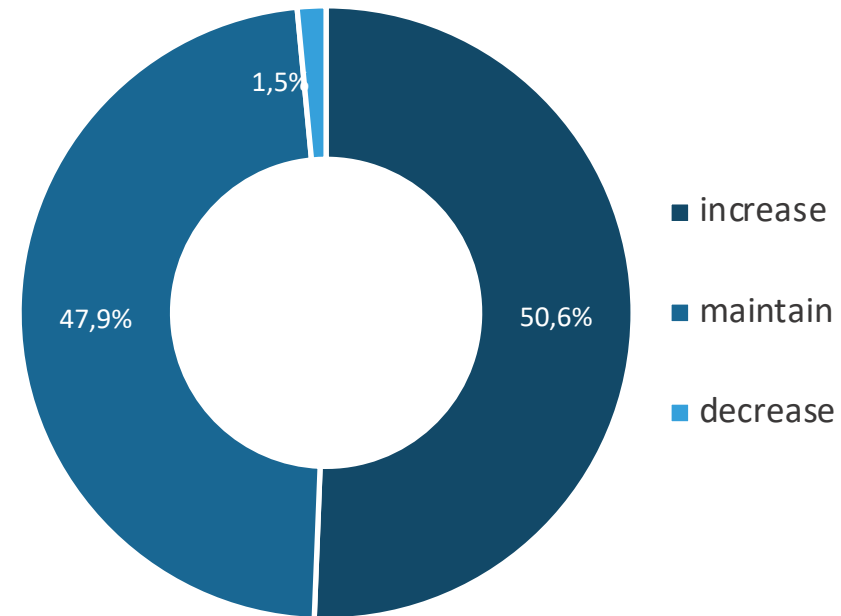
As answered by Maltese businesses



100% of Maltese businesses that currently cooperate with universities plan to maintain or increase their cooperation. This shows an important momentum for UBC in Maltese industry.

Future UBC intentions – EUROPE

As answered by European businesses



European businesses are slightly less confident in their future intentions towards UBC. Only half of them plan to increase their cooperation activities, and 1,5% plan to decrease them.

Willingness to recommend UBC

The willingness of Maltese cooperating businesses to recommend to a colleague to engage in UBC slightly varies depending on whether this cooperation is in research or in education.

Maltese businesses are almost equally satisfied with UBC in research as their European counterparts (NPS=33). While 44% of them will promote it positively, only 11% would do it negatively.

Maltese businesses are slightly less satisfied with their cooperation in education (NPS= 20). Nevertheless, Maltese businesses appear to be more satisfied with UBC in education and training than their European counterparts.

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

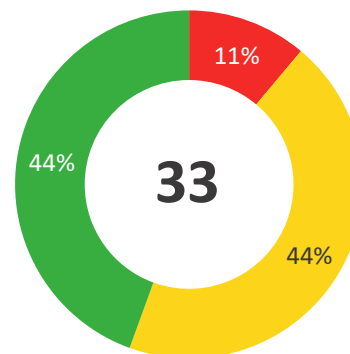
education and training (E&T). The *Net Promoter Score* metric offers a proxy for customer satisfaction.

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

	Detractors	Passives	Promoters	Net promotor score
Business cooperating with universities in R&D	11%	44%	44%	33
Business cooperating with universities in E&T	15%	50%	35%	20

Satisfaction with cooperation with universities (net promoter score)

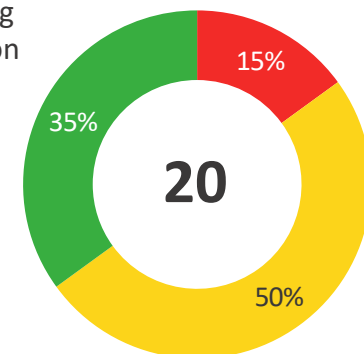
Business cooperating in research



■ Detractors ■ Passives ■ Promoters

European business NPS result: 28.2

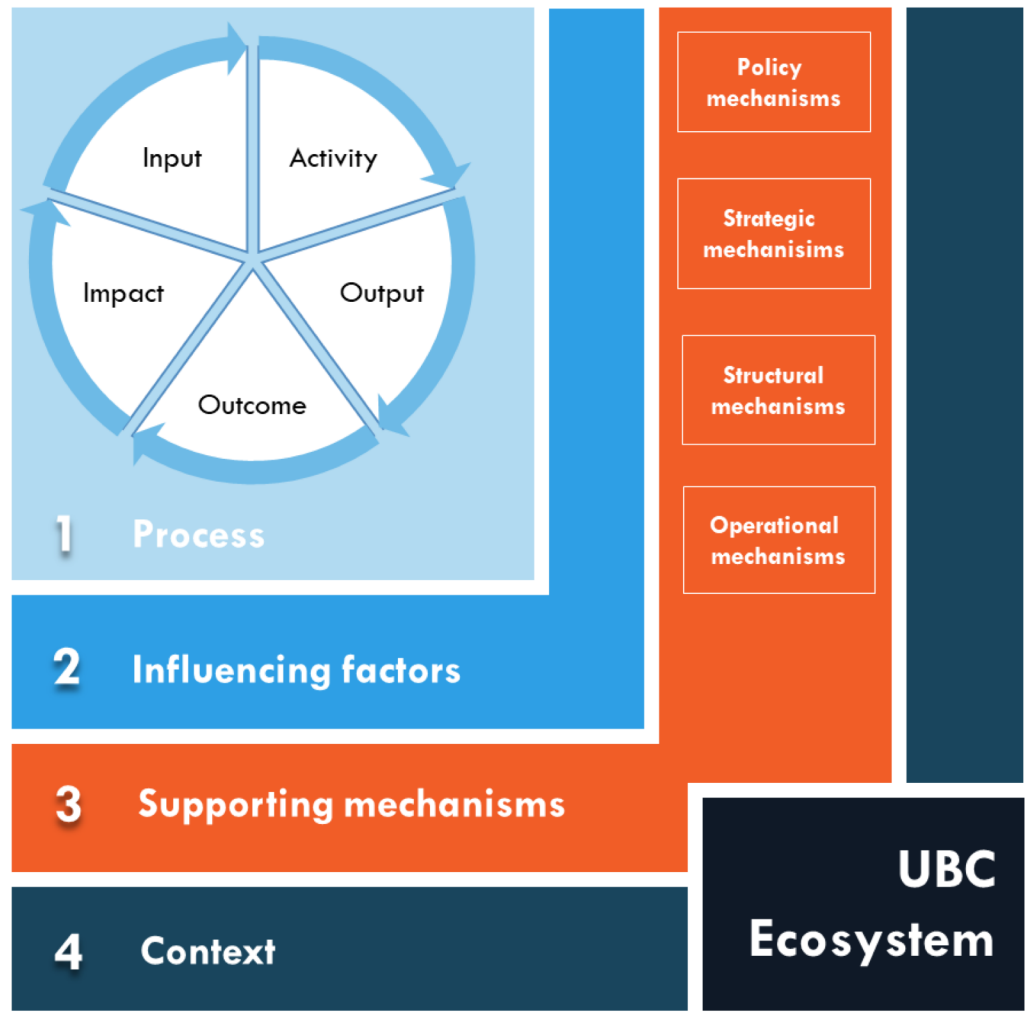
Business cooperating in education



■ Detractors ■ Passives ■ Promoters

European business NPS result: -2.1

Supporting mechanisms for UBC



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

There are four types of supporting mechanisms:

- Policy
- Strategic
- Structural
- Operational

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

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

Supporting mechanisms for UBC

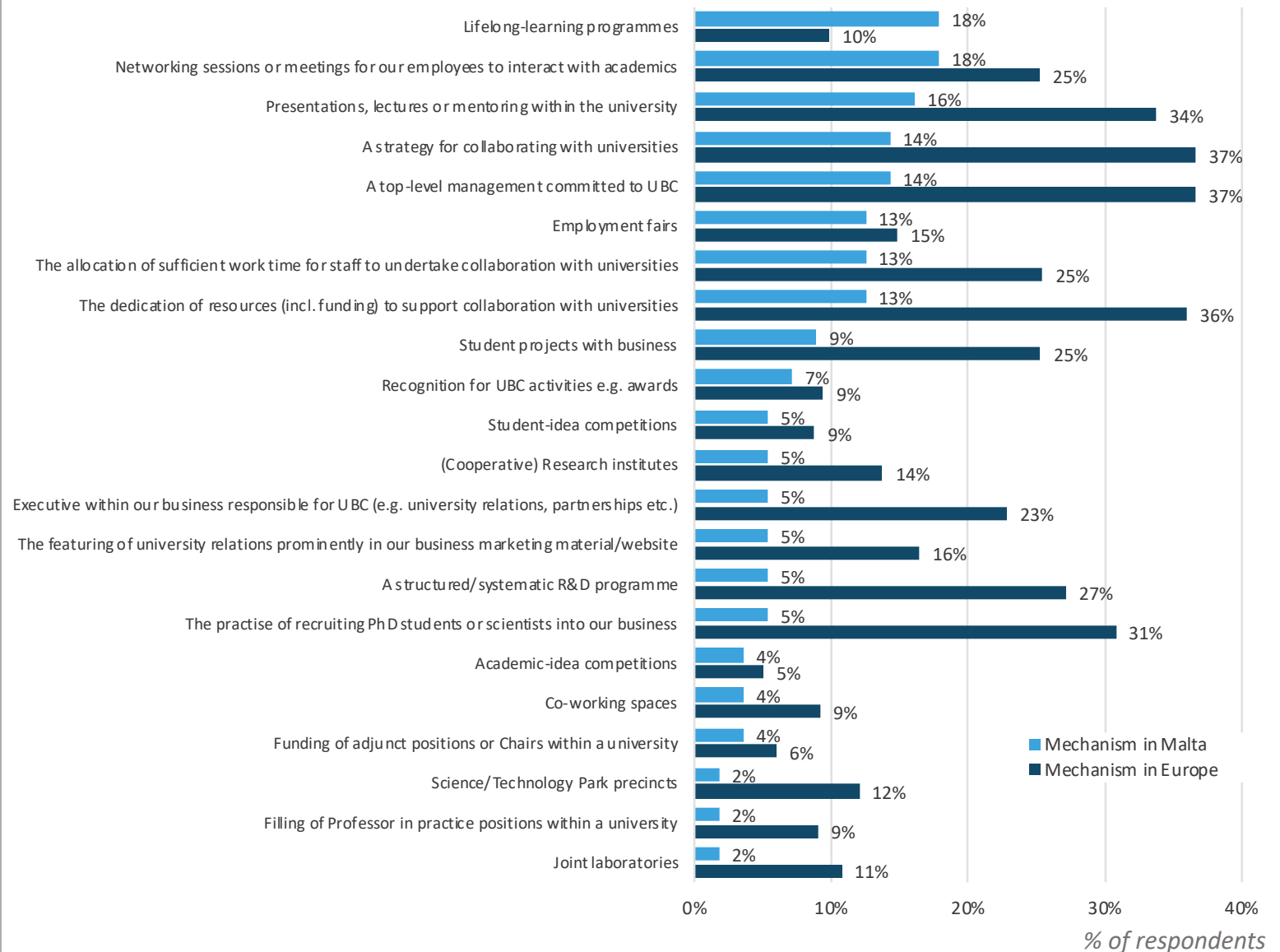
The development of mechanisms supporting UBC within Maltese businesses lags considerably compared to the European average.

Provision of lifelong learning programmes is perceived as the most developed mechanism within Maltese businesses. This is related to Malta's National Lifelong Learning Strategy for 2020 that aims at implementing various initiatives including the establishment of the National Skills Council as well as the provision of various courses through the Directorate of Lifelong Learning¹.

Other important mechanisms that are established in Malta include networking sessions for employees to interact with academics (18%), and presentations and lectures within the university (16%).

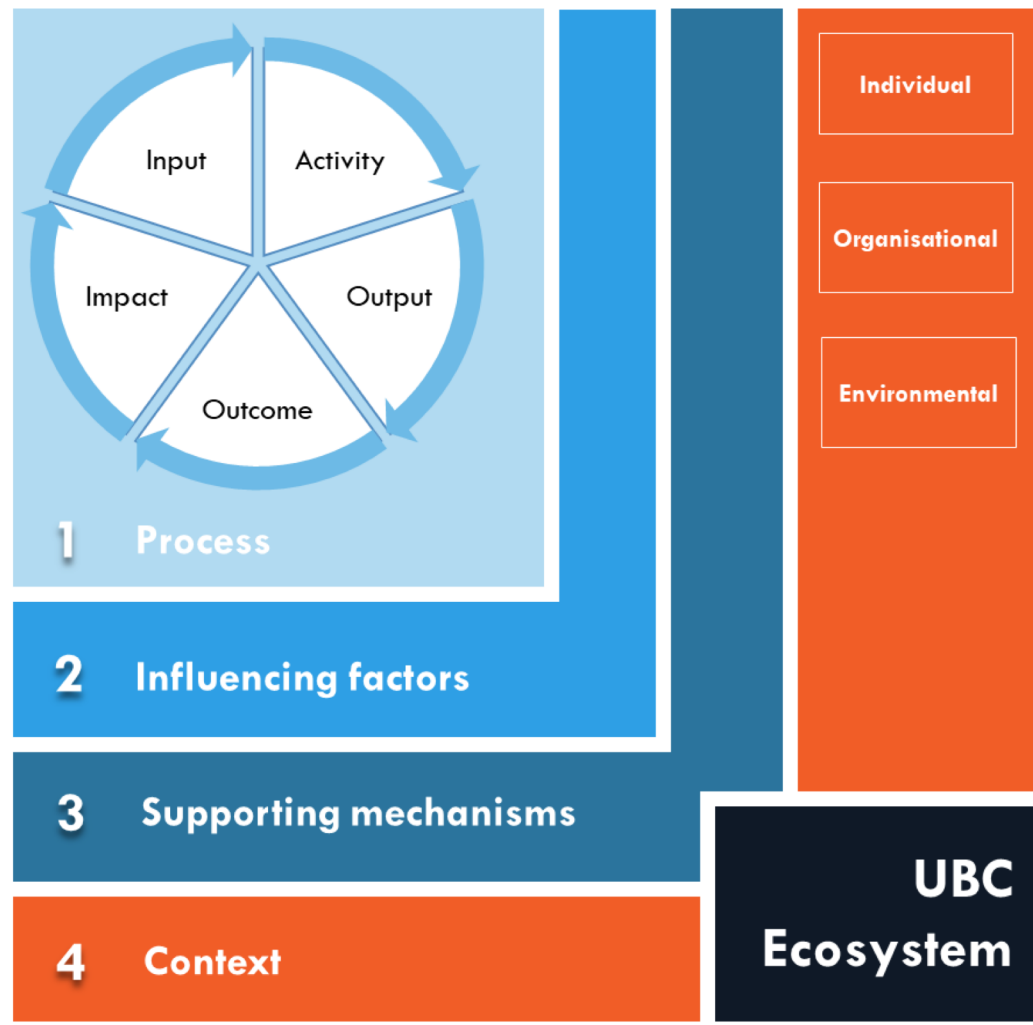
Mechanisms supporting UBC

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



¹European Commission (2017.06.02). 2017 European Semester: National Reform Programmes and Stability/Convergence Programmes. Retrieved from URL: https://ec.europa.eu/info/2017-european-semester-national-reform-programmes-and-stability-convergence-programmes_en

Context



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

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

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

Context

Maltese and European businesses cooperating with universities perceive their context differently.

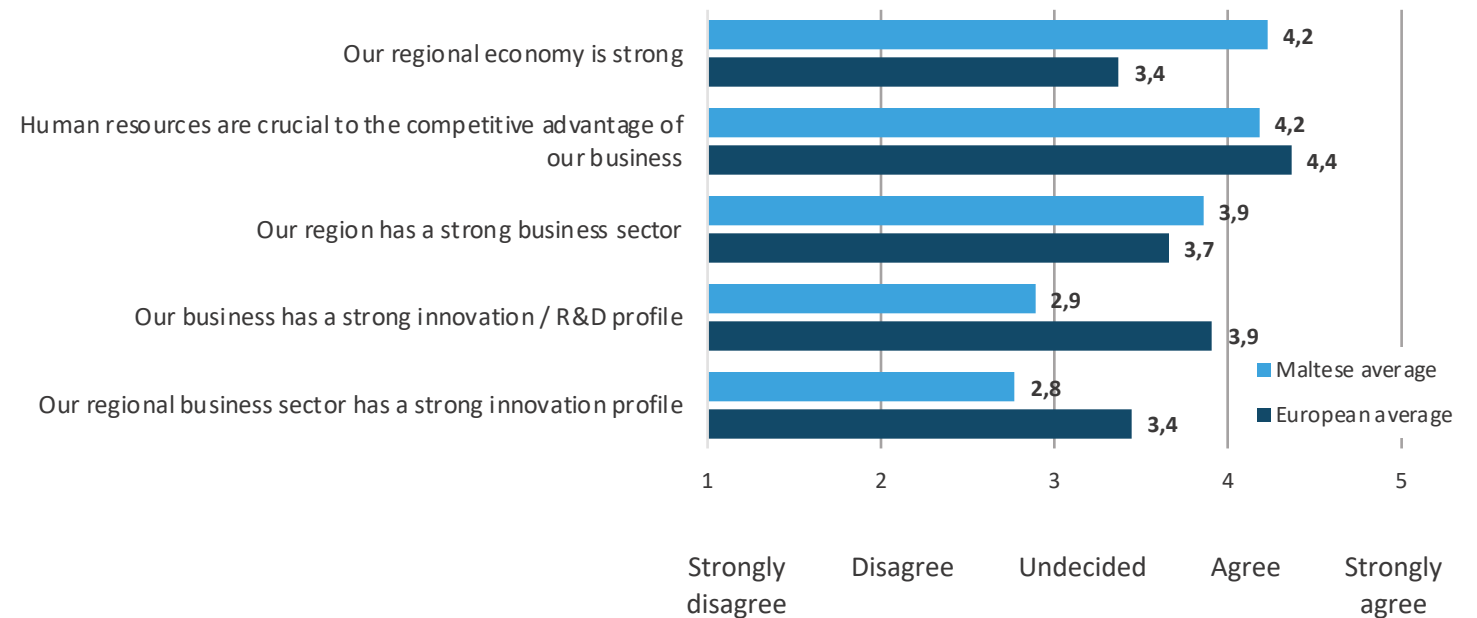
With regards to the regional economy, Maltese businesses perceive it as strong, which is not the case for European respondents.

Considerably lower perceptions emerge regarding the characteristics of the regional business sector and innovation strength.

Nevertheless, both Maltese and European businesses perceive human resources as essential for their competitive advantage.

Contextual factors affecting UBC

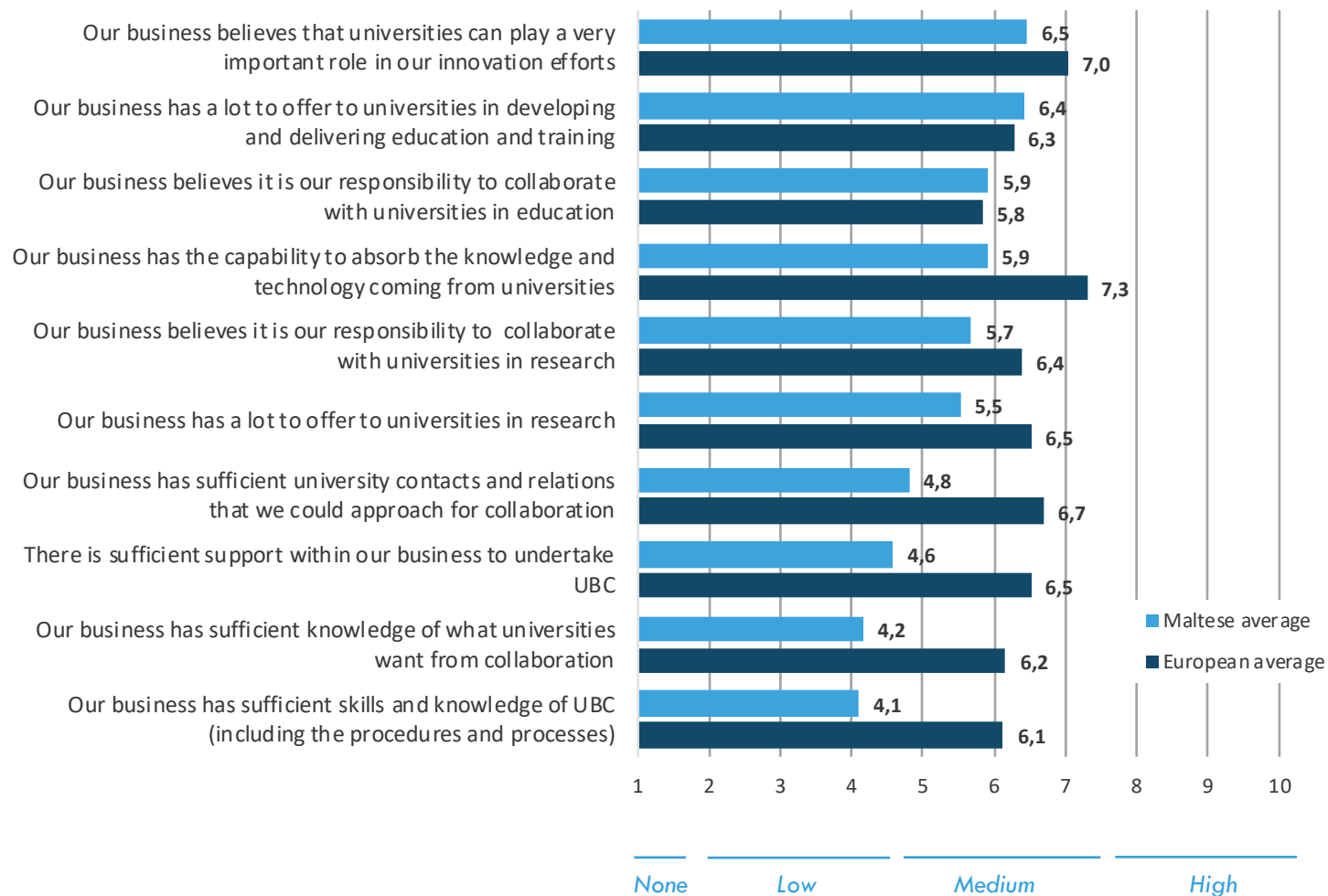
'To what extent do you agree with the following statements?'



UBC capabilities and beliefs

Supportive UBC environment

How supportive are your organisation and environment for UBC?'



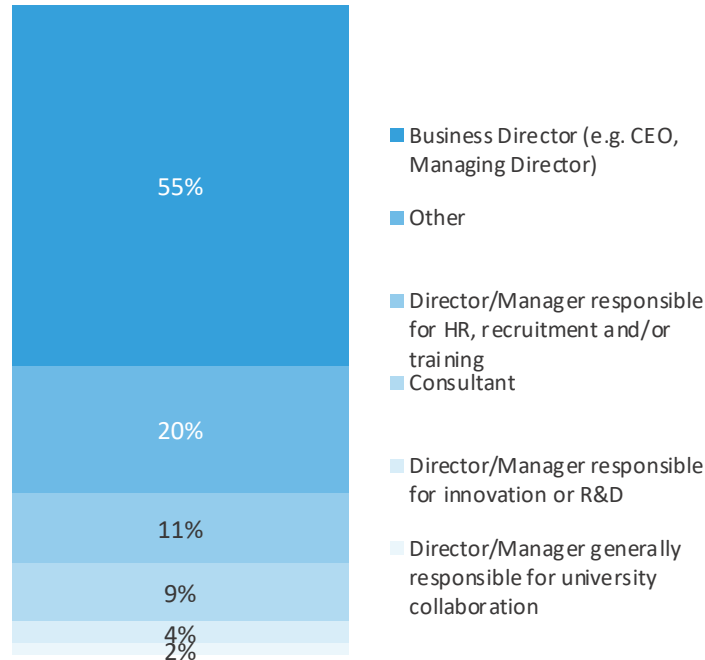
Maltese businesses perceive themselves and their environment more negatively than their European counterparts.

Yet, they perceive themselves as supportive towards cooperation with universities. In particular, they believe that universities can play a very important role in their innovation efforts.

Maltese businesses are also generally more supportive towards UBC in E&T and training than towards cooperation in R&D. They however believe they do not have sufficient knowledge of what universities want from collaboration nor sufficient skills and knowledge of UBC.

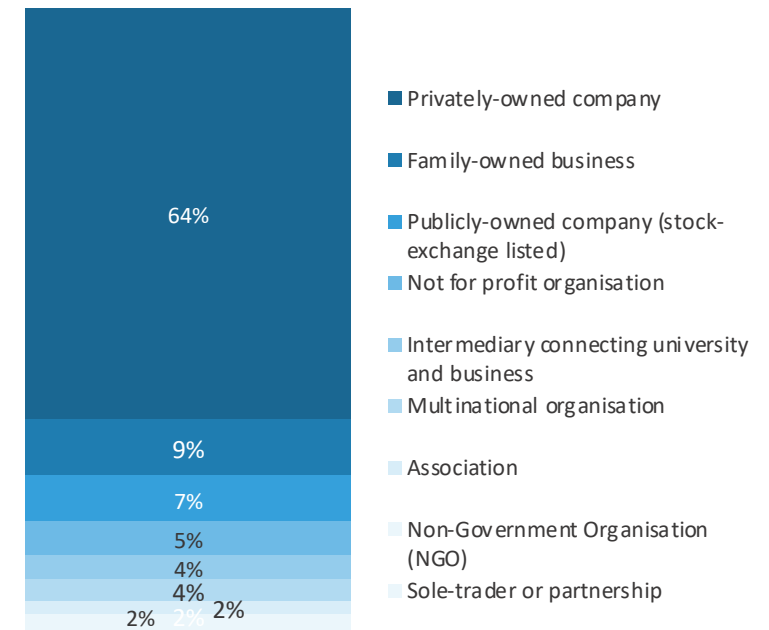
Respondents profile

Position of respondent



Over a half of the Maltese business sample (55%) is represented by business directors. This group is followed by directors responsible for HR and consultants (11% and 9% respectively). The remaining businesses identified themselves as directors responsible for innovation or R&D (4%) and directors responsible for university collaboration (2%). 20% of Maltese respondents hold 'other' positions.

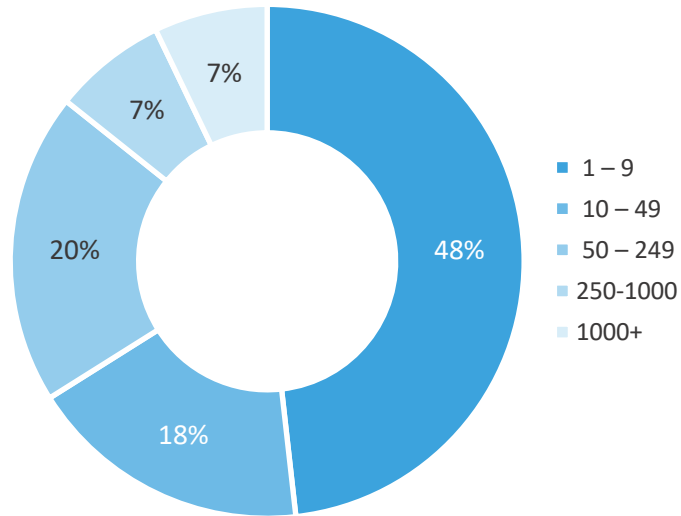
Type of business



A wide variety of businesses were represented in the Maltese sample, with privately-owned companies forming the largest group (64%), followed by family-owned businesses (9%). The type of businesses with less than 10% representation included publicly-owned companies, not for profit organisations, multinational organisations, associations, intermediaries connecting university, and businesses and sole-traders.

Respondents profile

Business size



Sample Size	
Maltese business representatives	n = 56
European business representatives	n = 3.113

Almost three quarters of the Maltese business sample is comprised by either micro-sized or small companies (1 to 49 employees). 20% of business managers work for medium-sized companies. Larger companies (250 to 1000+ employees) are represented by 14% of the business representatives in the sample.

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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