INCREASING INTERNATIONAL SCIENCE, TECHNOLOGY AND INNOVATION COOPERATION BETWEEN BRAZIL AND THE EUROPEAN UNION

Deliverable 1.1 – Research and Innovation (R&I) Cooperation Survey Report

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Short Summary of results (<250 words)

D1.1 – R&I Cooperation Survey Report within WP1. This report aims to identify the major barriers and difficulties that hamper a more active Brazilian participation in the European Union's Horizon 2020 programme.

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Main Author(s)	Teresa de Oliveira, Centre for Social Innovation, Vienna, AT

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Contributors:	Fernando Ruiz Diaz [2], University of Vienna, AT Constantin Scherer, Centre for Social Innovation, Vienna, AT
Quality Assurance	Alexander Degelsegger – Centre for Social Innovation, Vienna, AT
Quality control	Elna Schirrmeister – Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung Nicholas S. Vonortas – Universidade Estadual de Campinas (UNICAMP)

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[2] Fernando Ruiz Diaz is a Brazilian student currently enrolled at the Master International Development at the University of Vienna. Mr Ruiz Diaz is being supervised by Dr. Klaus Schuch, Scientific Director & CEO at the Centre for Social Innovation. Mr Ruiz Diaz completed an “Analysis of the International Cooperation for the Innovative Development: Case study about the INCOBRA Project” within the framework of his Master thesis.

CONTENTS

FIGURES

Lis of Abbreviations

DoW: Description of Work

WP: Work Package

RTDI: Research, Technology Development and Innovation

R&I: Research and Innovation

S&: Science and Technology

MS: Member States

UBC: University-Business Cooperation

HE: Higher education

FINEP: Funding Authority for Studies and Projects

STI: Science, Technology and Innovation

FP7: The Seventh Framework Programme

HORIZON 2020: Horizon 2020

S&R: Science and Research

ZSI: Centre for Social Innovation

FFG: Austrian Research Promotion Agency

UNICAMP: University of Campinas

PUCRS :Pontifical Catholic University of Rio Grande do Sul

SPI: Sociedade Portuguesa de Inovação.

SME: Small, Medium Enterprise

Executive Summary

The present report constitutes deliverable D1.1 of the INCOBRA project – Increasing International Collaboration between Brazil and the European Union, which is funded under the EU Framework Programme for Research and Innovation – Horizon 2020 (HORIZON 2020).

The overall objective of INCOBRA is to focus, increase, and enhance Research & Innovation (R&I) Cooperation Activities between Brazil (BR) and the European Union (EU) Research & Innovation actors, so that both regions can benefit from mutual cooperation. Therefore, one of the major goals set forth by this project is to overcome obstacles hindering the participation of Brazilian actors in EU programmes for Science, Innovation, and Technology. Throughout this process, it is crucial to identify barriers that are hampering the cooperation, and explore the incentives and motivations that could potentially increase the participation of these organisations in the Horizon 2020 programme.

This report is part of the Work Package 1 – Supporting BR-EU Policy Dialogue by providing evidence-based guidelines, through deploying a comprehensive survey, which targets a set of questions to better understand the motivations to engage in Research and Innovation collaboration activities, specifically in FP7 & Horizon 2020 projects, critical factors (for success and failure) for the applications presented, and several other aspects related to proposal development and project implementation.

This report aims to identify the major barriers and difficulties that hamper a more active Brazilian participation in the European Union's Horizon 2020 programme. It also discusses the incentives and motivations that could potentially increase the participation of these organisations in the aforementioned programme. The data used for the analysis comes from a survey that was developed by the project team, targeting organisations that submitted proposals within the Brazilian national programmes supporting Science, Technology, and Innovation (STI) activities between 2007 and 2016. In a joint effort of key consortium members, institutions that have submitted proposals to one of the major Brazilian funding agencies were invited, including information on institutions that had applied to one of the EU's Framework Programmes.

Around 1.788 Brazilian institutions received the online survey invitation in June 2016. Of the 1.788 Brazilian institutions that were invited to participate in the study, 1.532 were

companies (small, medium and large companies) and 256 were universities and public/ private research centres.

The survey encompassed a broad range of aspects, which included the barriers and difficulties related to the preparation and the submission of the proposals as well as the interests in STI and questions relating to steps that could potentially increase the participation of Brazilian organisations in Horizon 2020.

The analysis presented here investigates three major aspects of Brazilian institutions that participate in Brazilian national calls for ST&I projects. First, there is the characterization of the profiles of such actors. Secondly, it was conducted an analysis of the barriers that hinder participation in EU's R&D cooperation programs. Thirdly, it was presented possible support actions and the potential of these actors to participating and increasing their participation in HORIZON 2020.

In conclusion, the report summarizes principle findings, and highlights some key recommendations for the policy makers involved within the framework of ongoing policy dialogue between the European Union and Brazil.

The data demonstrates a clear need for awareness raising campaigns to inform Brazilian organizations of the opportunities for partnership that European Union projects represent, and the INCOBRA project stands as one such tool – designed to provide not only information and resources concerning EU upcoming projects, but to provide a fertile ground in which stronger bonds can begin to emerge between EU and Brazilian stakeholders.

The research also concludes that the current state for organizational support in applying for EU projects is already a choke point for future collaborations. By highlighting such structural pressure points, the INCOBRA project is positioned to help partner organizations forge support networks for international projects. Through INCOBRA meetings and network building, it is intended to strive participants will be able to find appropriate peers and mentors who can assist one another in overcoming the challenges of the tender process.

01 | INTRODUCTION

1 | Introduction

The INCOBRA project – Increasing International Collaboration between Brazil and the European Union – is funded by the EU's Research Framework Programme Horizon 2020. The project main objective is to focus, increase and enhance Research and Innovation (R&I) Cooperation Activities between Brazil (BR) and European Union (EU) R&I actors, so that both regional get the best value out of the mutual cooperation.

This report is part of the Work Package 1, which focuses on understanding the research and innovation cooperation patterns among Brazilian and European Research and Innovation actors in priority areas. One of the main tasks of this work package is to assess the cooperation performance of Brazilian and European Union Research and Innovation actors in projects funded by the R&I program at the bilateral and EU level, particularly under the 7th Framework Programme and Horizon 2020.

The main objective of this study is to raise awareness on the obstacles and difficulties in RTDI cooperation, as well as to explore solutions to solve these bottlenecks. The results of the study should be useful for STI policy makers of both regions: The information gained can be applied towards evaluating the previous and/or current state of R&D cooperation. As a result, more attention can be paid on planning future activities to bridge gaps.

This document summarises major findings, conclusions, and indications, which result from descriptive statistical analysis of the responses collected via a web-based survey. The number of respondents that survey reached was determined by the level of dissemination that the INCOBRA network allowed (relying on the networks and databases of Brazilian project partners). Of the 1.788 Brazilian institutions that were contacted, 481 answered the questionnaire. Among the 481 answers, 234 are complete and 247 were considered incomplete. Out of the 247 incomplete answers 27 have been included into the final data set. The ones included into the final data set incomplete answer sets had to fulfil the criteria of covering a minimum of 15 questions and at least overall 80 clicked multiple choice answer-options. Thus, in total the answers of 261 participants were used for the analysis.

One important element for the characterization of the sample was the role occupied by the respondents who answered to the survey. Upon analysis, the most represented category were directors, with almost 46% of the total answers. The survey was designed to be answered by individuals with certain high-level positions within the Brazilian organisations,

such as directors, research´s coordinators, all those who have a wider perspective about their own international collaboration with the European Union. After directors came managers with 36,25% and coordinators of research projects with about 26,67%. As expected, only 15% of the total respondents belonged to the category of technical and administrative staff, whereas researchers were about 9,17%.

It was first defined and drafted the survey in English that will be later translated into Brazilian Portuguese. Considering that the survey aimed at reaching all relevant stakeholders in the field of STI in Brazil who have submitted projects at the Brazilian national level, it was decided to conduct a pilot testing of the survey. The phase within the survey workflow consisted of selecting key stakeholders from different institutions targeted by the survey, universities, companies (regardless of their size) research centres, and public policy institutions. In total, seven interviews (phone/web interviews) were conducted with the officers identified to answer the questions posed by ZSI. The purpose of this pilot testing exercise was to make sure that all questions were specifically targeting the experiences of those dealing with EU projects in collaboration with the European Union. Considering the relevant experience of the interviewed officers, they were able to highlight some issues exclusively linked to the Brazilian reality that ZSI, as non-Brazilian analysts, could easily ignore.

Those interviews allowed the achievement the appropriateness and the relevance of the questions. All in all, the questions and overall contents were well perceived by the selected group of pilot testing interviewees, albeit some options of answers were added to the general survey. The phase of definition of the questions and the overall translation from English into Brazilian Portuguese, as well as the pilot testing took about two months of preparation and implementation.

In designing the questionnaire, ZSI worked together with the WP1 leader, Fraunhofer Society (Germany), along with other partners from the consortium, such as FFG (Austria), UNICAMP, PUCRS and FINEP (Brazilian partners), supported by the Portuguese coordinator, SPI, Sociedade Portuguesa de Inovação. The survey was solely designed and implemented by ZSI. ZSI defined the objectives and sequentially organized the questions, all of which were then presented to, and discussed with, the partners within the consortium.

Regarding the dissemination of the survey, the Brazilian partner, FINEP, was responsible for the dissemination and for the official launch of the survey to the Brazilian organisations, as

they are identified as Brazilian relevant stakeholders for the circulation in Portuguese language. Additionally, FINEP possesses the datasets that were used for the dissemination of the survey. Two datasets were used for the collection of email addresses, as the survey was an online public consultation. The first one, the CORDIS dataset, collected all relevant data regarding the Brazilian participants in European framework programmes. This data is public knowledge, and contains relevant data about the Brazilian participation within FP7 and HORIZON 2020 for those who participated in the EU proposals, successfully or not.

Along with this dataset, an internal dataset from FINEP on nationally funded projects was used. Considering the privileged position, they had access to substantial and extensive data about Brazilian applicants who had submitted projects within the national framework. As it is confidential information, FINEP is not authorized to disclose any details relating to personal or contact information. This is why it was important and useful that FINEP was in charge of the dissemination.

After the initial invitation emails, several reminders to answer the survey were sent out. In addition to this, FINEP had a dedicated team calling key interlocutors in Brazil reminding them to answer the survey. The survey was available for a period of four weeks. During this process of feedback collection, the leader of the task, ZSI, monitored the number of respondents and the quality and consistency of the answers. Finally, the exploitation of results and the overall drafting of the report were carried out by ZSI.

It was assumed that the potential number of participants would be about 1.788 institutions, and that the expected answer rate would be about 10% (considering the success rate of the previous surveys e.g within INCO.NET projects). At the end of the process, 481 questionnaires were received. Thanks to the use of the CORDIS and FINEP databases, the coverage of these target groups that were reached was quite extensive.

The data analysis was conducted using the statistical software SPSS and Excel, as a cross analysis with Excel was applied. Some statistical methods were equally applied. The first level of the analysis was descriptive statistics of the general data. Data on the socio-demographic characteristics of the respondents according to their region, role, and field of expertise was explored and presented. The second level of analysis includes key crossing analysis, measuring the distribution of key variables, such as, barriers of the participation between the European Union and Brazil and potential activity supports for the enhancement of participation.

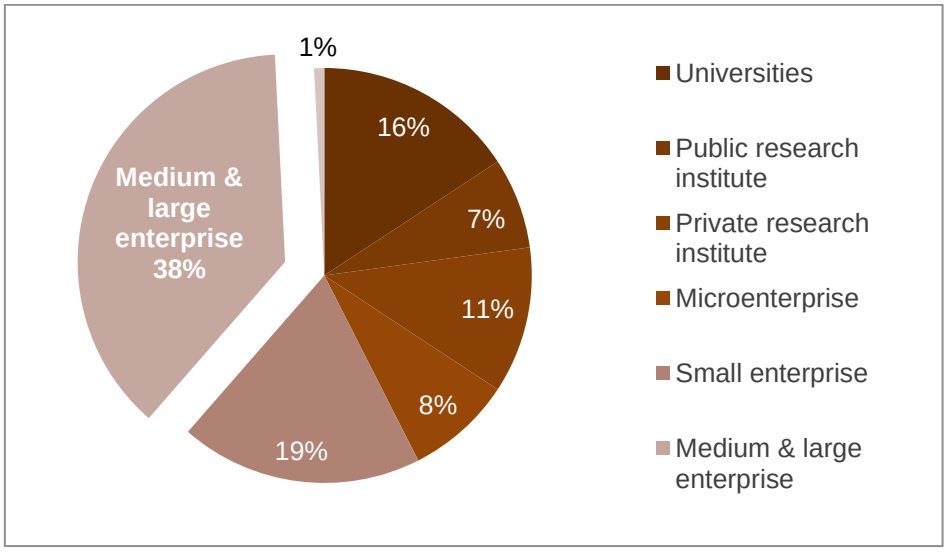
02 | Basic characteristics of the sample

2 | Basic characteristics of the sample: analysing the Brazilian institutions within the context of the survey

In this chapter, basic characteristics of the investigated sample are presented: the type of organisation of the respondents, their role and region, their field of scientific work, and their participation in the EU framework programs and at the bilateral level. These elements help getting a better understanding of the sample before proceeding with further analysis.

Therefore, starting with the most frequent type of organisation, 38% of the respondents of the survey were medium and large enterprises, followed by small enterprises with 19% of the respondents. This means that the private sector group sum up 57% of the total respondents to the survey, and is therefore by far the most frequently represented organisation type. They are then followed by Universities with 16% of the respondents, private research institutes with 11% of the answers, and micro enterprises with 8% of the total answers. Lastly, it is also important to highlight that only one percent of the respondents were public authorities and agencies, and therefore, they should not be considered representative. Overall, those categories of organisations of the respondents are representative of the innovation and research system within the Brazilian landscape.

Figure 1 Distribution of respondents per type of organisation



Another element to be considered in the analysis of the general sample description is the region. Unsurprisingly, the majority of institutions that answered are located in the southeast

of Brazil, totalling 61% of the total answers. The Southeast Region of Brazil is composed by the states of Espírito Santo, Minas Gerais, Rio de Janeiro and São Paulo. Considering these regions, 32,24% of these institutions are located in São Paulo, 16,94% in Rio de Janeiro, 9,29% in Santa Catarina, 8,74% in Rio Grande do Sul, 7,65% in Paraná, and 7,65% in Minas Gerais. This data confirms that the state of São Paulo is leading in terms of industrial and knowledge-intensive activities, as also Comin *et al* (2010) noted. São Paulo concentrates a significant percentage of the country's economy, and is responsible for 32% of the Brazilian GDP.

Figure 2: Answer's distribution to the INCOBRA survey by Brazilian state

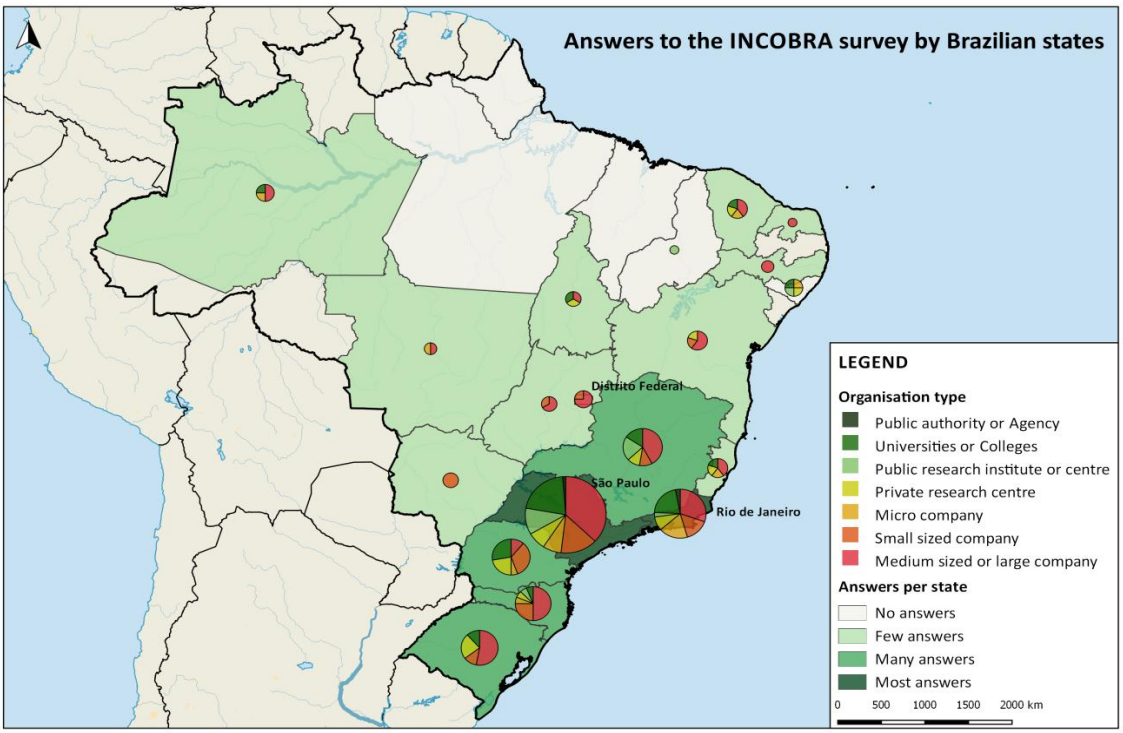
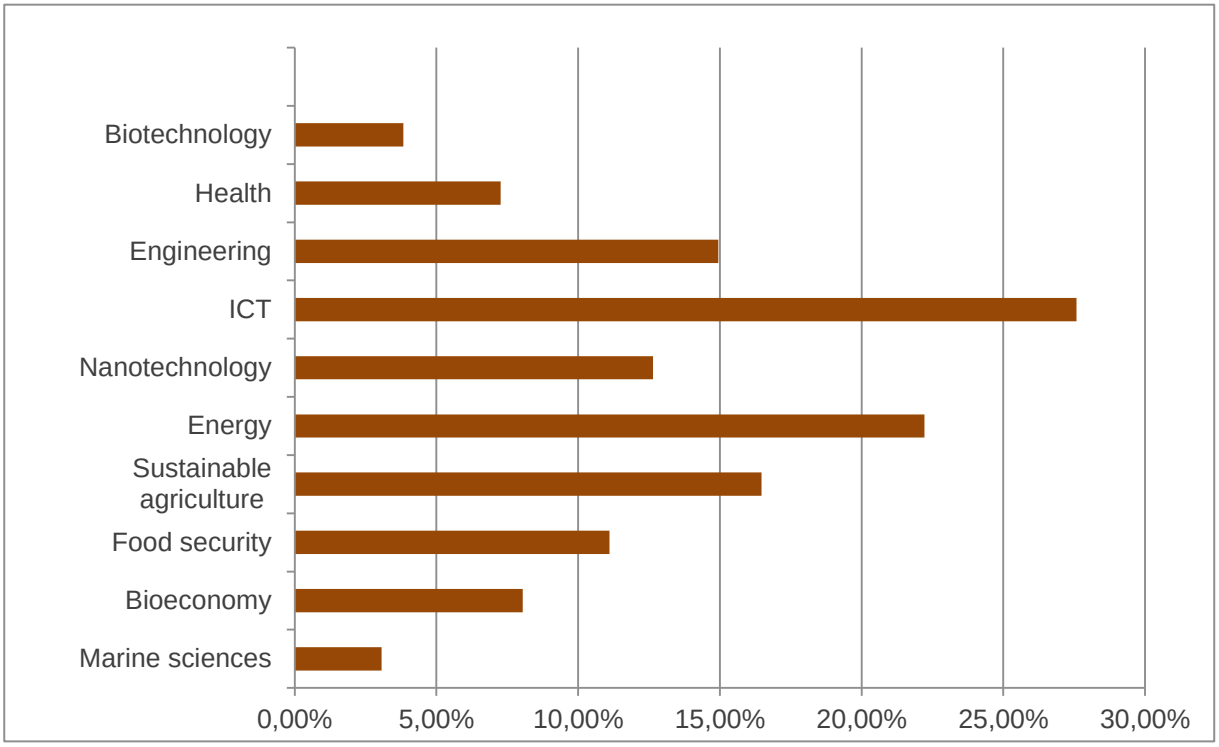


Figure 3: Distribution of answers that participated in the survey per scientific field3



The scientific area most represented is ICT (27,58%), followed by Energy (22,0%), Sustainable agriculture (16,48%), and Engineering (14,94%). Food Security 11,0% and Nanotechnology (12,64%) both have close participation rates. On the other hand, Bio Economy has a participation rate of 8% of the total answers, according to Figure 3.

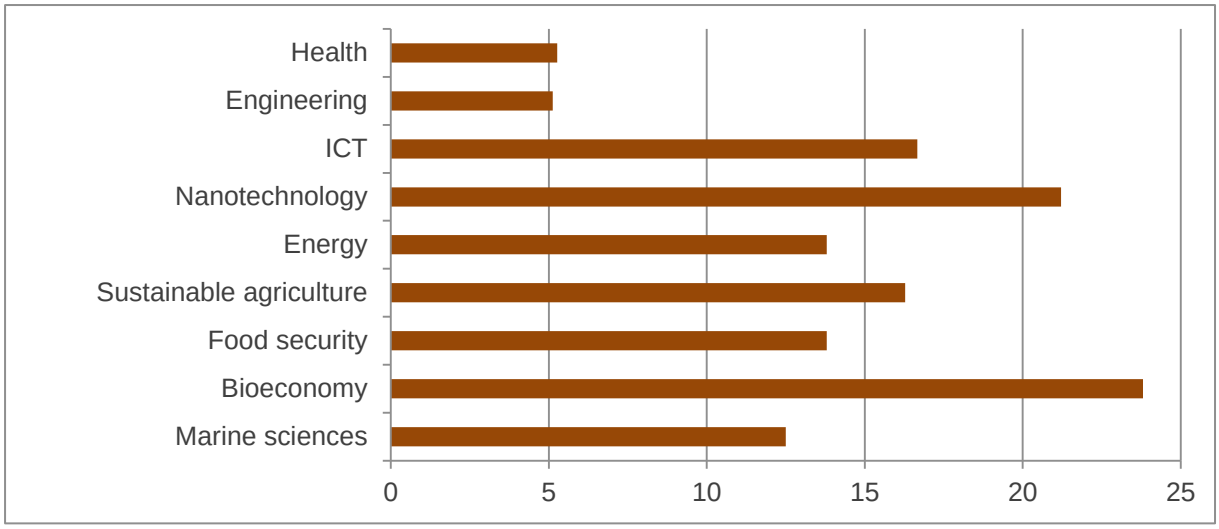
Regarding the central question within this survey, which was intended to measure the participation of Brazilian organisations within FP7 and Horizon 2020, as well as bilateral calls between Brazil and at EU Member States level, there were quite revealing results. About 74% of the respondents (193 out 261 total respondents[4]) answered the question “Have you ever participated in any bilateral calls, which support collaboration between Brazil and a designated European country?” (e.g.: Brazil & France; Brazil & Germany...) with “no”.

Moreover, a lower percentage of respondents, only 11,08% of these institutions, have already submitted a project within the framework of FP7 and Horizon 2020. At the same

[3] Within this question, it was possible to select multiple scientific fields.
[4] Those were the answers considered valid.

time, even if the majority of the Brazilian organisations have never submitted any proposal at the EU level, a remarkable percentage of almost 70%[5] of the respondents intended to submit a proposal under Horizon 2020. According to the Figure 4, when examining the institutions who had only ever submitted a proposal under the FP7 and Horizon 2020, the majority of them are from Bio-economy (23,80%), followed by Nanotechnology (21,21%), and ICT (16,66%).

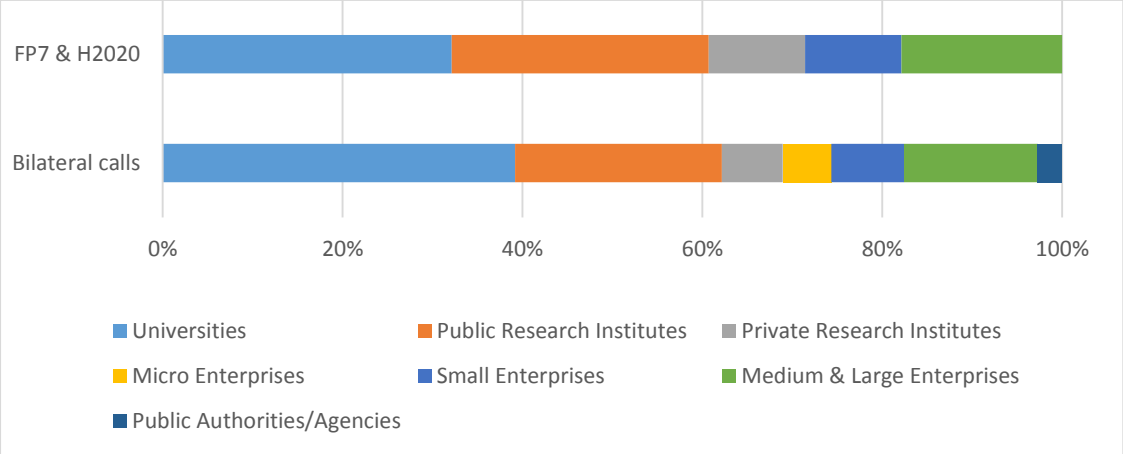
Figure 4: Distribution of Institutions that applied in EU programs per scientific field[6]



Almost 90% of the respondents answered that they had never submitted any project under the FP7 or the Horizon 2020, and only about 10% of the Brazilian respondents had submitted a project at EU level. According to Figure 5: Distribution of the participation of Brazilian institutions according to the type of organisation, Universities hold the highest share among the participants in both bilateral calls and FP7 or Horizon 2020, 39 (19%) and 32 (14%) respectively. Public Research Institutions show the second highest level of participation rate within the EU framework programmes and bilateral programmes (22,97% and 28,57%), followed by medium and large enterprises with (14,86%) and (17,86%), small enterprises (8,11% and 10,71%), private research institutes (6,76% and 10,71%), microenterprises (5,41% and 0%), and public authorities and agencies (2,7% and 0%).

[5] The reasons for this will be further developed further in the results concerning the interests for ST&I cooperation.
[6] Within this question, it was possible to select multiple scientific fields.

Figure 5: Distribution of the participation of Brazilian institutions according to the type of organisation

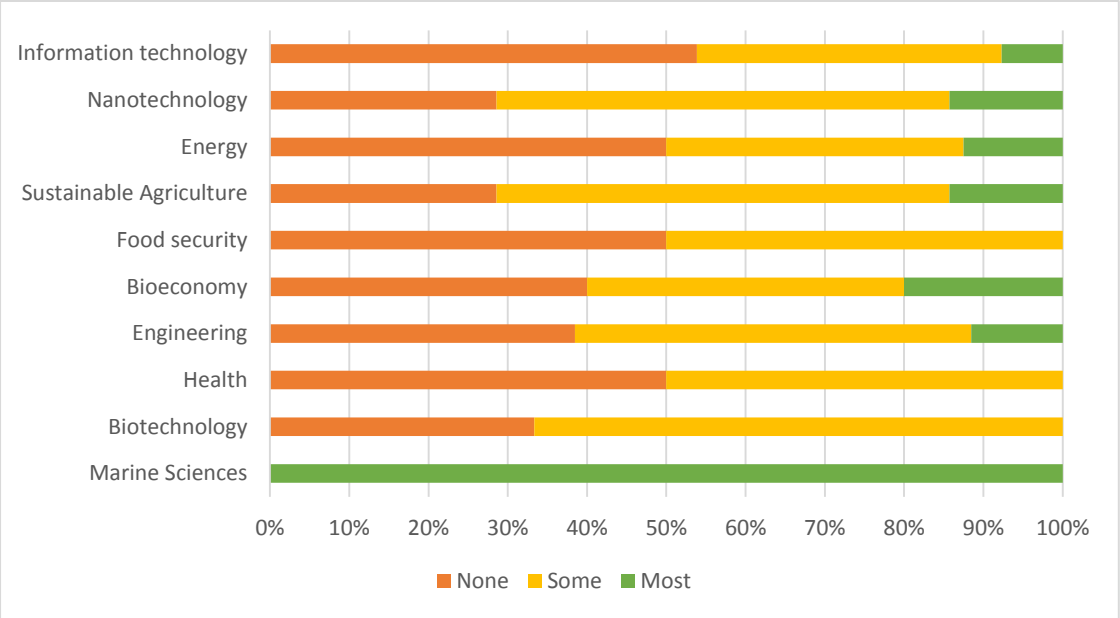


Among those who submitted a proposal within FP7 and the Horizon 2020, about 40% had every proposal rejected, while 48% had some proposals accepted and 11,43% had most of their proposals accepted. Most surprisingly, among these three categories, the intention to submit a future project under Horizon 2020 grew to more than 90% each time, even by those who had every project rejected. However, considering the scientific field,

Figure 6 shows that ICT, Energy, Food Security, and Health have the highest frequency of unsuccessful organisations – with every project being rejected.

The organisations with a higher success rate are active in the fields of Nanotechnology, Sustainable agriculture, Biotechnology and Marine Sciences. The organisations under Marine Sciences have a clear success under FP7 and Horizon 2020 with all organisations attesting that most of their proposals were accepted. Nonetheless, it is important to state that these organisations under Marine Sciences sector are only 1,32% of the sample, therefore with low absolute numbers. Furthermore, proposals submitted under Bio-Economy have the highest success rate, 20%, followed by Nanotechnology and Sustainable agriculture with 15%. Engineering and Energy follow with around 12% and 13% of organisations with a high success rate, as depicted in Figure 6: Distribution of the share of accepted projects submitted to the EC per scientific field.

Figure 6: Distribution of the share of accepted projects submitted to the EC per scientific field[7]



One of the elements considered fundamental for the participation of Brazilian organisations within the FP7 and Horizon 2020, is the level of knowledge about FP7 and HORIZON 2020, as depicted in Figure 30.

An outstanding 56,3% of Brazilian organisations consider themselves not at all informed about FP7. When added together with those stating they were “slightly informed,” the total number raises to 86,22%. This is indeed a very expressive result of this survey: the lack of knowledge about these programmes is one of the most important features presented this far. Only 3,15% of the respondents considered themselves to be “very well informed”.

Regarding the level of information within the Horizon 2020 frameworks, the numbers are not that different when compared to the antecedent programme. Consequently, about 50,39% are not informed at all about the funding opportunities that were and are currently open to the Brazilians organisations, as depicted Figure 30 in the annex.

In terms of absolute numbers, medium and large enterprises are the most affected by the lack of information in both the FP7 and Horizon 2020, with more than 60 respondents stating

[7] The sum of percentages here is more than 100% for the reason that the respondents have answered more than one answer as multiple answers were possible.

that they are not informed. If the level of information about EU Framework Programmes between FP7 and Horizon 2020 was compared, it is possible to identify an increase in the level of information in the case of small enterprises, as depicted at the Figure 7 and Figure 8.

Overall, organisations that are very well informed constitute only a minority within the overall sample. The data suggests that one of the challenges that must be worked on within the years to come regarding the collaboration between Brazil and the European Union is an increase of communication and dissemination, regardless of the organisation in Brazil. This will be explored this in more detail in the section on incentives.

Figure 7: Distribution of participant´s information about FP7 per organisation type

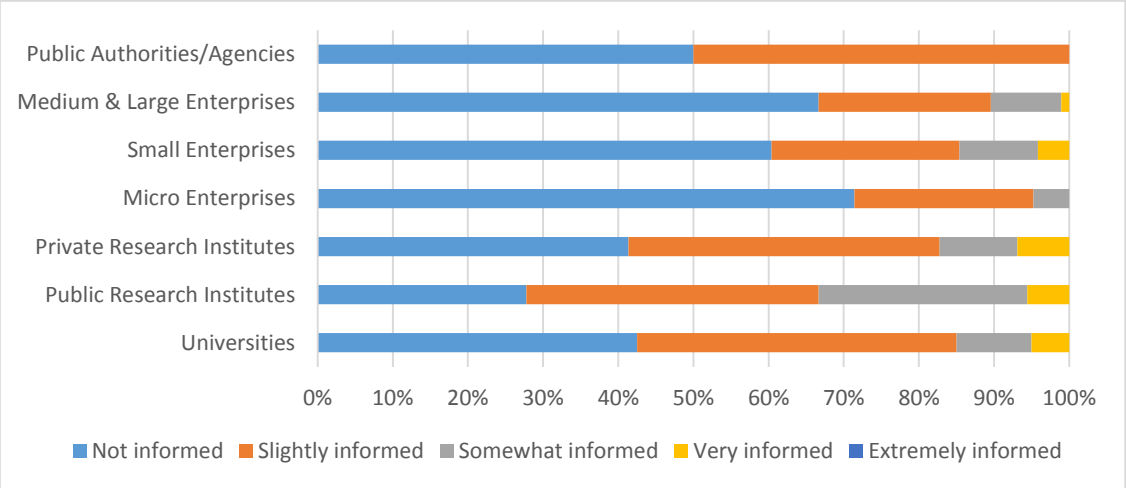


Figure 8: Distribution of participant's information about Horizon 2020 per organisation type

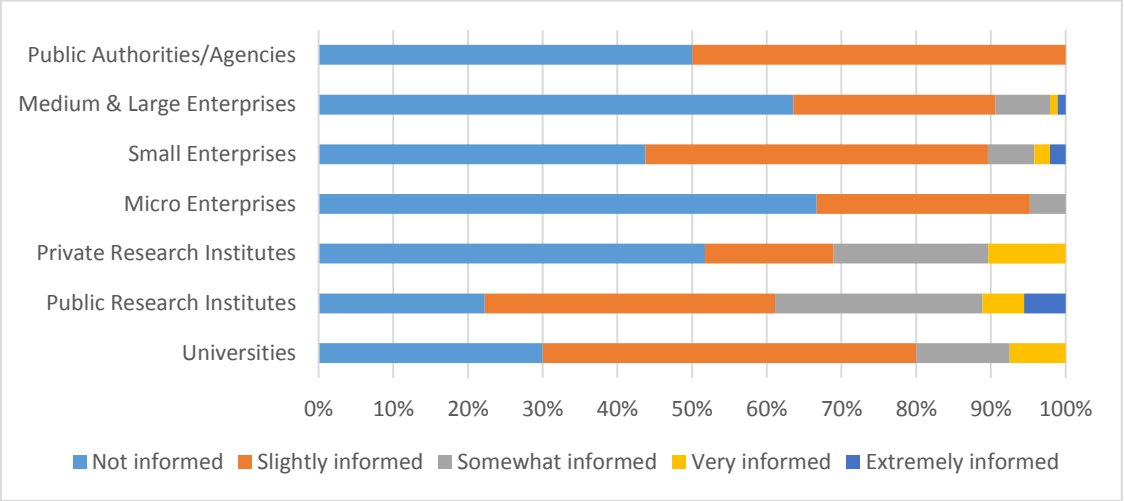
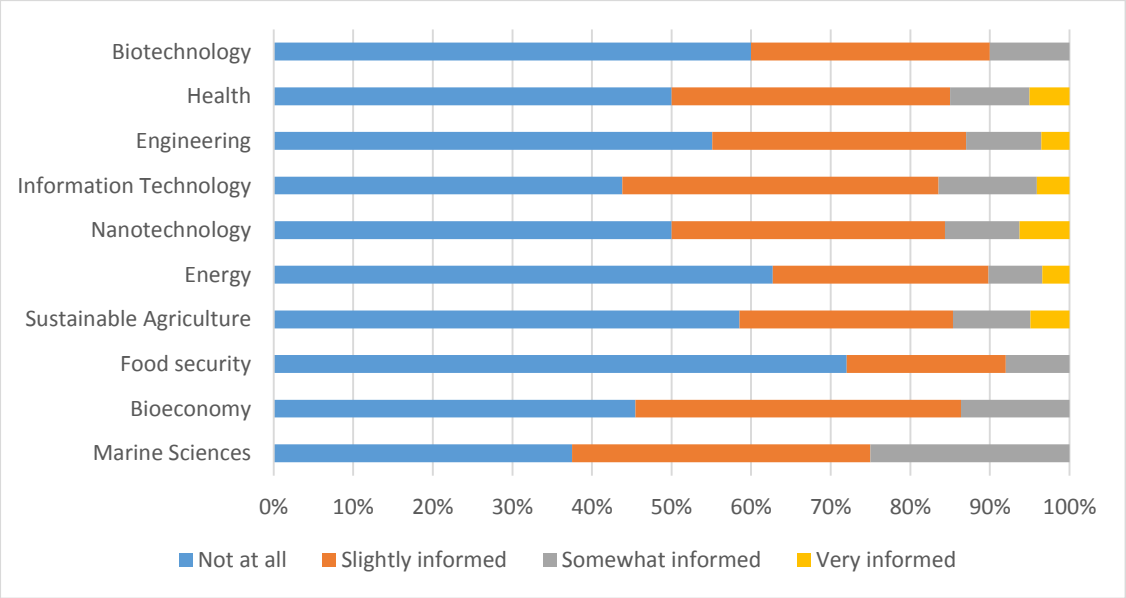


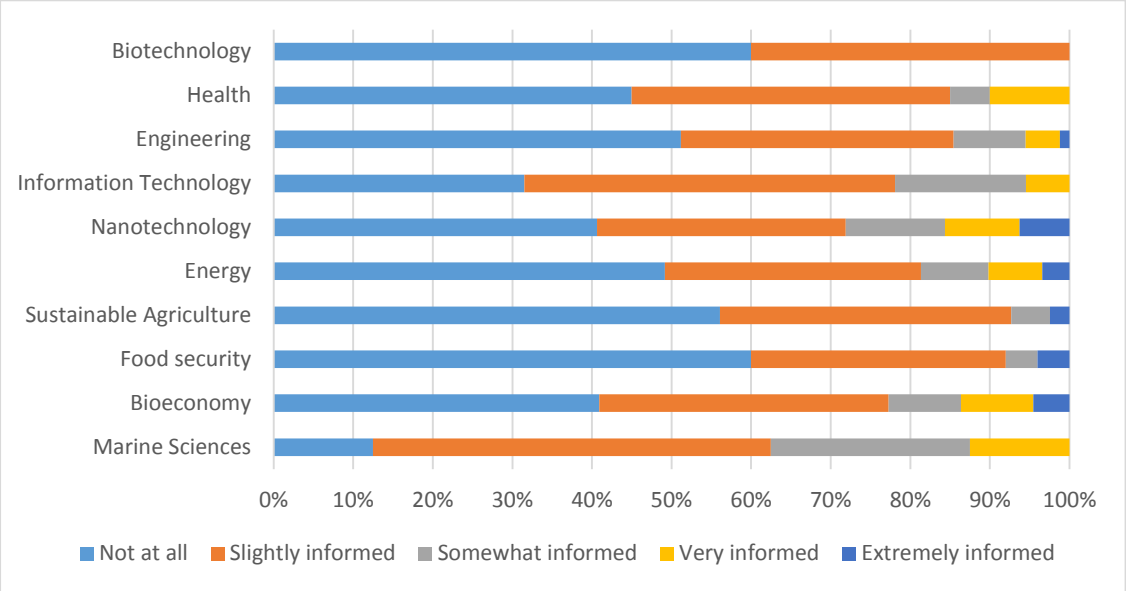
Figure 9: Distribution of information about FP7 per scientific field



It is important to note that the fields considered as key priority areas (Marine Research, Bio-economy, Food Security, Sustainable Agriculture, Energy, Nanotechnology and ICT) within the policy dialogue between the Brazil and the European Union, had more than 35% of their total respondents answer that they are “not at all informed”, according to the Figure 9. On the other hand, the areas of Nanotechnology, (6,06%), Sustainable Agriculture (4,65%), Energy (3,44%), and ICT (4.16%), were exactly the fields that had received the highest scores within the category “very well informed”. It can also be concluded that

thematic scientific areas that are well informed about FP7 have had significant success when submitting proposals at the EU level within the framework of FP7 or Horizon 2020, according the Figure 6: Distribution of the share of accepted projects submitted to the EC per scientific field .

Figure 10: Distribution of information about Horizon 2020 per scientific field



Regarding the participant's information about HORIZON 2020, the level of information tends to be slightly higher, but in the overall, there is no significant change in terms of relative numbers, between the two programmes. From FP7 to HORIZON 2020, the data suggests that there is an overall lack of information crossing all Brazilian organisations investigated, from public authorities to universities, research centres, and private companies, regardless of their size.

2.1 | Some key conclusions about the profile of the Brazilian institutions

Some conclusions can be drawn from this first part of the sample´s characterisation. First of all, the empirical study clearly demonstrates that among the Brazilian organisations that have submitted projects in the field of Science, Technology and Innovation, only a few had submitted projects at the bilateral level between Brazil and a European Member State. In addition, when it comes to EU projects within the EU's framework programmes, the percentage of participation of the studied population is even lower. Therefore, among the institutions investigated, it can be concluded that there is a low rate of participation of Brazilian Science, Technology, and Innovation actors within the framework of the Seventh Framework Programme and the current Horizon 2020.

The business sector, notably micro, small, medium and large enterprises, was most represented within the sample. This was due to their extensive participation, as they totalled almost 46% of the total answers received.

Furthermore, about 45% of the respondents occupied relevant positions in their own structures' organisation, as they were mostly directors. Additionally, in terms of geographical representation within the Brazilian territory, most of the Brazilian respondents were located in the southeast of Brazil. As expected, these organisations were most frequently located in São Paulo, 32,24%, and in Rio de Janeiro, 16,94%.

In terms of the participation per thematic field within the survey, ICT was the most represented area (27,58%), followed by Energy (22,0%), Sustainable agriculture (16,48%), and Engineering (14,94%). Food Security 11,0% and Nanotechnology (12,64%) were the most represented scientific thematic fields. Considering the participation of Brazilian organisations within the 7th Framework Program and the Horizon 2020, Universities had submitted more projects than any other group of STI actors.

Among those who submitted projects within the framework of FP7 and Horizon 2020, about 40% were not successful. Interestingly, although the success rate is low, more than 90% of the Brazilian organisations are willing to submit proposals under the framework of Horizon 2020. This clearly shows that Brazilian STI's organisations find this programme attractive and worth a try. Finally, when it comes to ensuring the participation of Brazilian institutions in the EU programmes, more than half of the respondents are not informed about the funding opportunities regardless of their type of institution.

The empirical study strongly suggests that a lack of knowledge and information greatly contributed to a low rate of participation of Brazilian organisations within the EU's programmes framework. It seems the lack of information tends to negatively affect the participation of Brazilian organisations within FP7 and Horizon 2020. The data suggests that one of the challenges that must be worked on within the years to come regarding the collaboration between Brazil and the European Union is an increase of communication and dissemination, regardless of the organisation in Brazil.

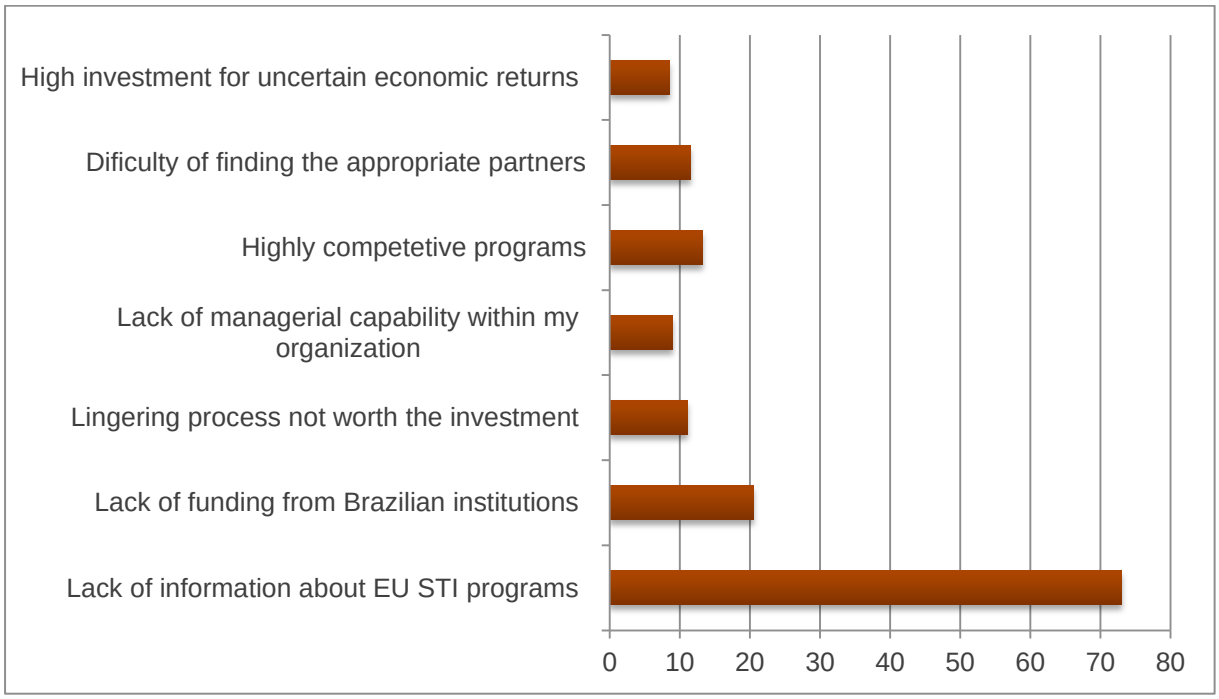
03 | Barriers that have hindered the participation of Brazilian institutions in FP7 and Horizon 2020 programs

3 | Barriers that have hindered the participation of Brazilian institutions in FP7 and Horizon 2020 programs

This section presents and explores the barriers that have hindered the participation of Brazilian institutions within the framework of FP7 and Horizon 2020.

Figure 11 compiles the reasons for not submitting any project under FP7 and Horizon 2020. Almost three quarters (71%) answered that the lack of information about EU STI programmes was the reason behind their lack of participation. Secondly, the lack of funding (20%) from the Brazilian institutions seemed to be a factor that just as strongly impacted the participation of Brazilian organisations. In addition, about 12 % stated that the programs are competitive and more oriented to bigger organisations which already have experience with EU programs. Finally, the last reason stated pointed to the difficulty of finding the appropriate partners (12%).

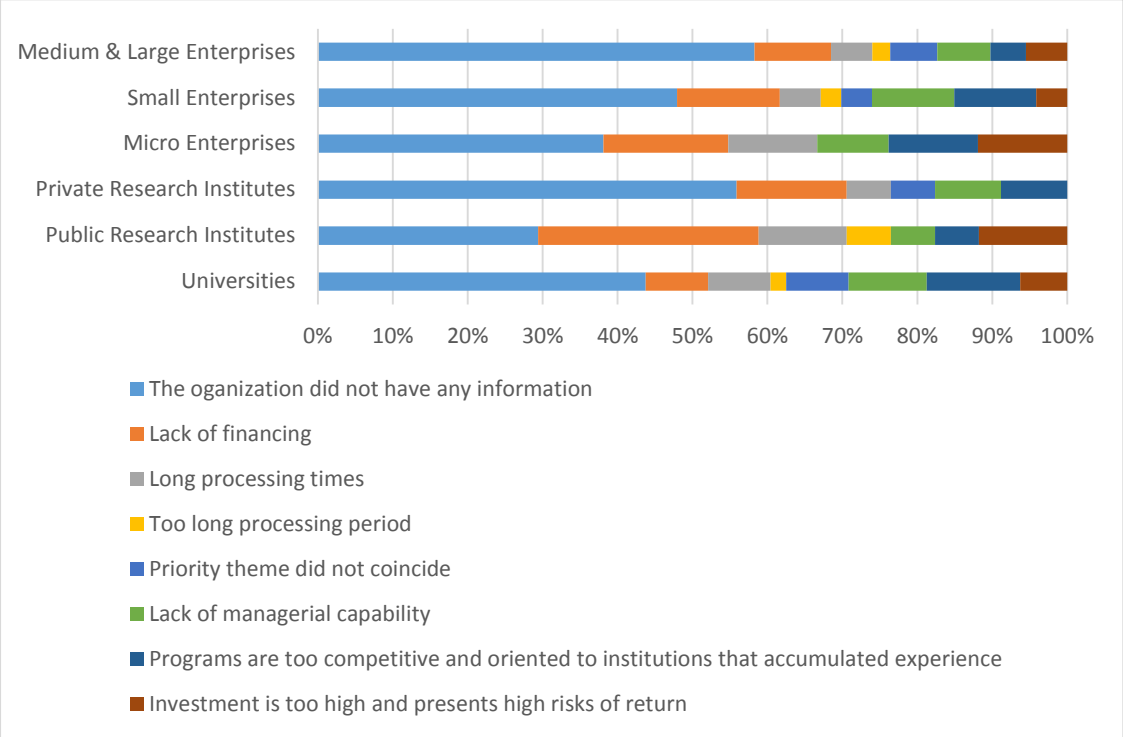
Figure 11: Reasons for not submitting any project under FP7 and Horizon 2020



When differentiating the answers by type of organisation, the lack of information appears once again as the main reason for not submitting any project from the perspective of medium and large enterprises: almost 60% of them reported this within the survey. Again, as depicted in Figure 12, all categories of organisations listed in the survey, small and micro

enterprises, and private and public research institutes and universities claim that their organisations did not have any information about FP7 and HORIZON 2020. It is worthwhile to highlight that the lack of funding is an obstacle for most organisations, but clearly less for universities.

Figure 12: Distribution of the reasons for not submitting any project under FP7 or Horizon 2020 per organisation



When interpreting the indications of a "lack of funding", the removal of emerging economies (including Brazil) from the possibility of automatic funding under Horizon 2020 has to be kept in mind. Compared to FP7, Horizon 2020 has experienced a strong decrease in third country participation thus far. As participating organisations from affected third countries had to secure their own funding (except under certain circumstances), the programme became less attractive. Under FP7, Brazil still was one of 139 International Cooperation Partner Countries (ICPC) that received automatic funding in successful collaborative projects[8]. Therefore, those who have mentioned the lack of funding as the reason for not submitting are referred to this period of Horizon 2020´s implementation, as Brazilian organisations that have to provide their own funding.

[8] For more information: Policy Paper on Horizon 2020 opportunities for India, (2016), Sean Angiolillo, Indigo Policy (FP7 project, shortly publically available).

Finally, the lack of managerial capacity to deal with the EU proposals, both for the preparation and implementation, was mentioned by small and micro enterprises as another element that hindered submission.

Additionally, respondents were given the opportunity to add some more reasons for not submitting any projects within FP7 and HORIZON 2020 as part of an open-ended question. A total of 22 open-ended responses were received. After reviewing them all and eliminating those not directly related to the issue, a total of 21 remained for qualitative analysis. The answers can be grouped in four arguments:

- The submission process is particularly demanding, notably for Brazilian small companies which don't have departments experienced with EU proposals;
- The projects for which funding was sought were putting emphasis on forward-looking innovation. Issues or topics like that lack funding in HORIZON 2020;
- There is a lack of coordination among the Brazilian institutions when it comes to sending the information to the potential applicants;
- There is a lack of funding for disruptive innovation both within the Brazilian funding system and within HORIZON 2020.

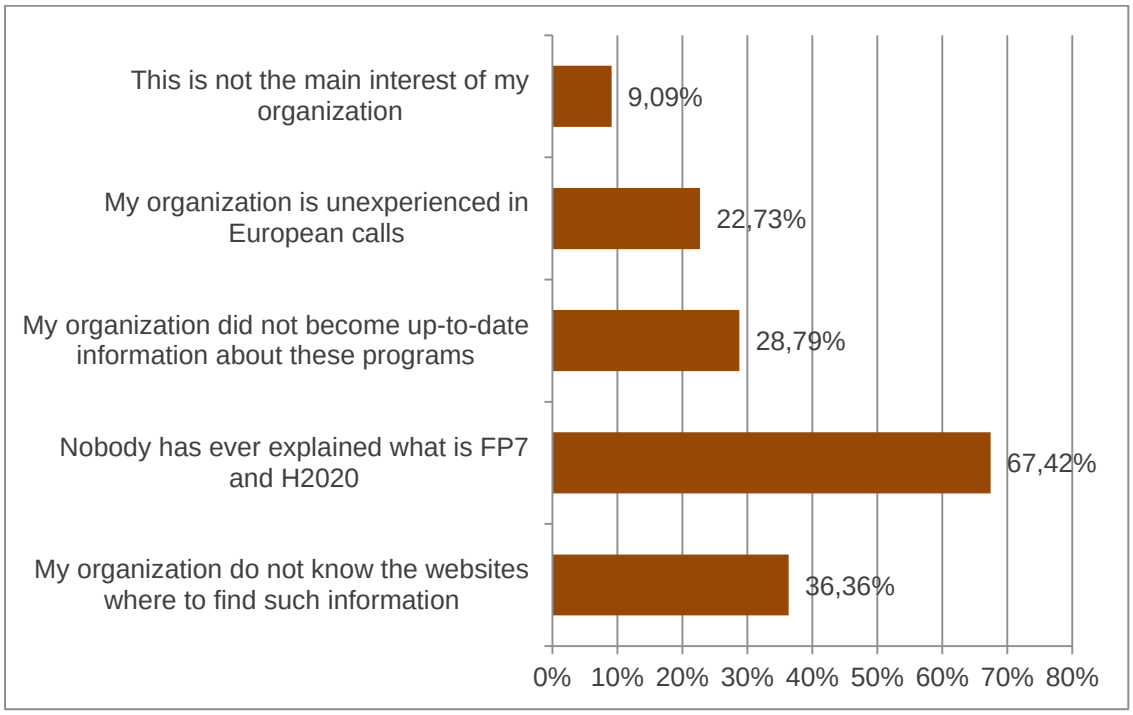
The first group of answers is particularly common among micro enterprises who often consider the submission process fastidious and requiring experience, and who often lack knowledge and specific skills required for participation. Some of the business sector actors that were inquired mentioned that neither FP7 nor Horizon 2020 were putting emphasis on forward looking-innovation. Therefore, these respondents prefer national funding over EU funding.

When it comes to the lack of coordination and lack of information, several respondents said there is no single channel of dissemination, and they are simply not informed about the funding opportunities. Finally, some of the respondents considered that their project ideas could not find resonance in terms of funding access neither within the framework Brazilian national funding schemes nor within the European framework.

Moreover, when taking a closer look at the reasons for the lack of information, as demonstrated by Figure 13, it is possible to see that more than half of the sample (67%) noted that "nobody has ever explained what FP7 and Horizon 2020 is about". The second reason connected with the lack of information was that Brazilians seemed to ignore where

they can find information about the funding opportunities within the frameworks of EU programs open to Third Countries (36%). Finally, the third reason given is that Brazilian organisations mentioned that they never obtained updated information about such programmes (29%).

Figure 13: Reasons for the lack of information about calls under Horizon 2020 9



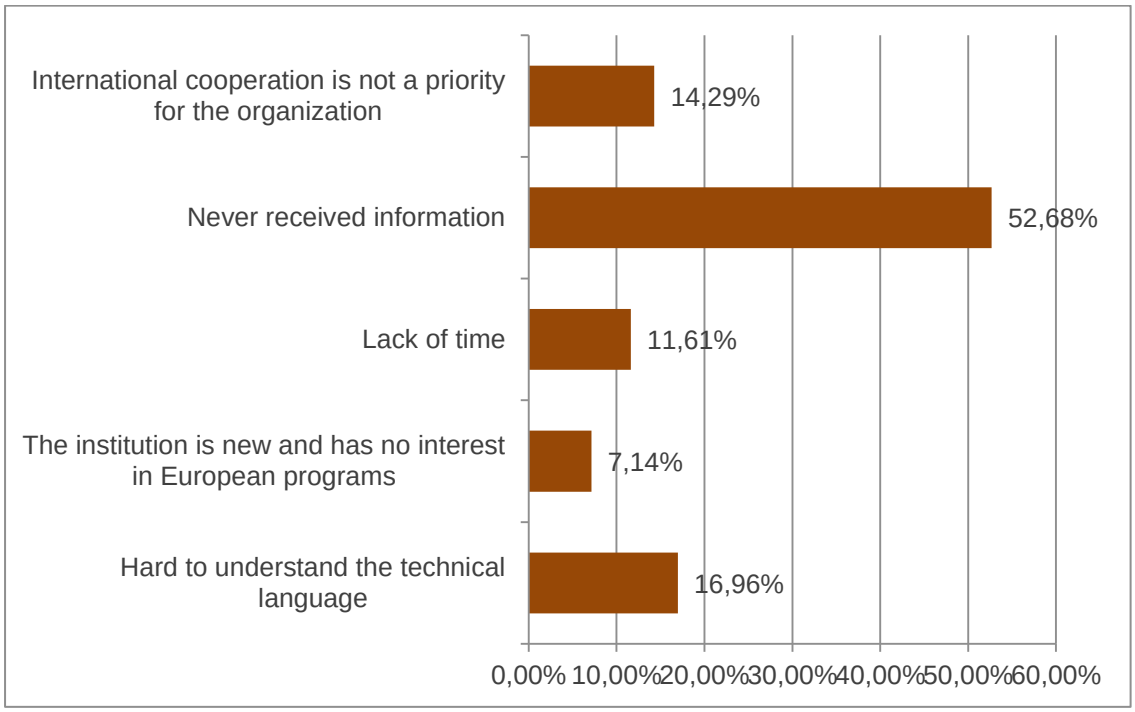
The lack of information affects all Brazilian organisations dealing with bilateral and international programmes for science, innovation and technology.

Figure 31: Distribution of reasons for the lack of information per organisation type[10] depicts in a more detailed manner, which organisation types were most affected by the lack of information. Medium and large companies scored 49.30% in all five categories of reasons[11]. Nevertheless, the top two reasons were “no one has ever explained FP7 or Horizon 2020” and “my organisation is relatively inexperienced with these kinds of programmes”. Most institutions do not have any information about the European programmes; however, nonetheless, some institutions are slightly informed. Within this context, “slightly informed”

[9] The sum of percentages here is more than 100% for the reason that the respondents have answered more than one answer.
[10] This is figure is available in the annex.
[11] The five categories are: unware where to find the information, do not have up to date information, no one has ever explained about FP7 or Horizon 2020; My organisation is relatively unexperienced; not main interest of the organisation.

means that those institutions received and knew where they could find the information, but their knowledge is limited. One of the reasons most flagged for being only “slightly informed” is strongly connected with the language and the technical jargon used within the EU calls and programmes, as suggested by Figure 14. This is notably true for the universities and public research institutions, and surprisingly less important for small and medium enterprises. Still, a remarkable share of respondents indicates that international cooperation is not a priority for their organisation.

Figure 14[12]: Distribution of the reasons for being only slightly informed in relative numbers



In addition to the lack of information that clearly constitutes a great obstacle for the enhancement and growth of Brazilian participation within the EU frameworks programmes, the process of drafting the proposal and all necessary steps associated to it also play a major role. Almost half of the sample of respondents, about 48,28%, answered that it was hard to convince their institution to commit financially. It seems then the lack of funding available within the Brazilian institutions clearly represents a challenge that needs to be tackled.

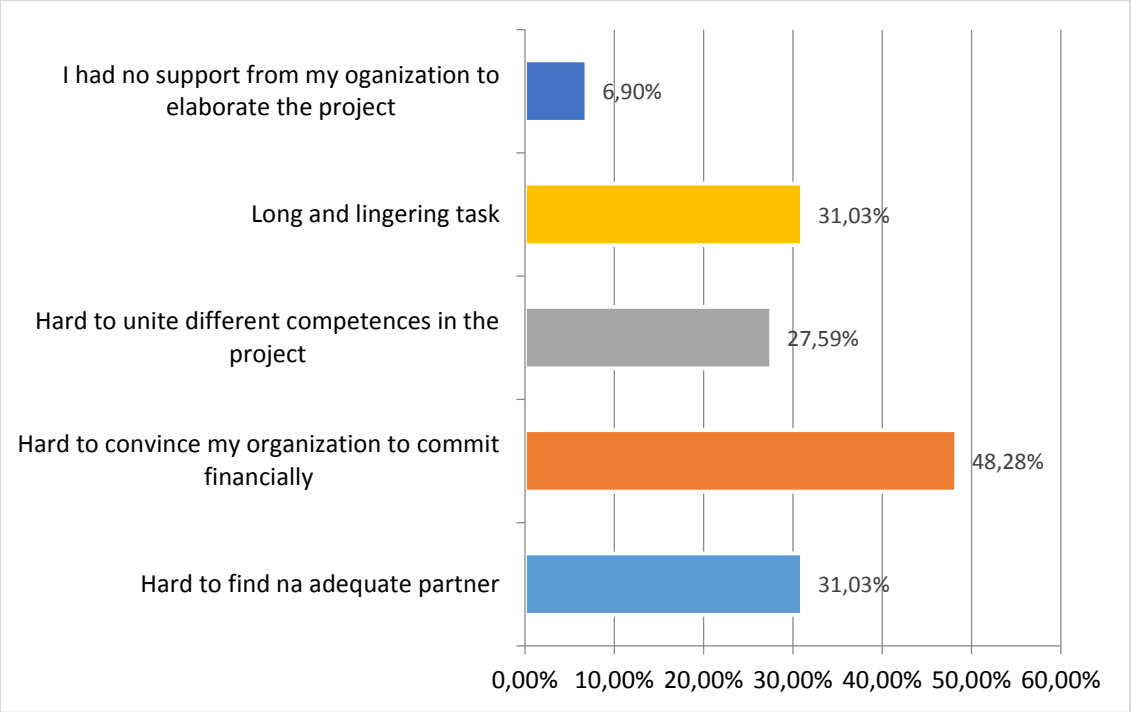
[12] The sum of percentages here is more than 100% for the reason that the respondents have answered more than one answer.

The framework conditions of the Brazilian organisations assigned to research and innovation activities seemed to be hampering factors, which also explain, the very low number of EU project submissions within the sample. Yet, in the case of FP7, Brazil, as previously mentioned, had received direct funding, which is not the case within the framework of Horizon 2020. The removal of the automatic funding can add more difficulties for the Brazilian organisations in the future. It seems then that institutional barriers have some influence on the conduction of the EU-BR collaboration too. Institutional factors are defined as factors mostly induced by the inner fabric of the participating institutions. Most important are the financial issues and the value of international cooperation for internal promotion (which, at the end, also has a financial implication).

In addition, another barrier pointed out by 31,03% of the participants was the difficulty of finding an adequate partner to elaborate a proposal, followed by the long elaboration time of a competitive proposal, also 31,03%, as depicted by Figure 15: Distribution of difficulties while elaborating a proposal in relative numbers, 31% of the organisations in the sample do not intend to submit a proposal within the framework of Horizon 2020.
Figure 16: Distribution of the reasons for not intending to submit a proposal under Horizon 2020[13] depicts the most frequent reasons for this. For 66,22% of the total respondents, it is the lack of information about the program that leads to non-participation. This again strongly suggests that the lack of information is the biggest barrier when it comes to the participation of the Brazilian organisations within the framework of HORIZON 2020. Secondly, the lack of financial resources from the Brazilian organisations seems to be one of the reasons that hinder potential candidates from submitting proposals. Interestingly enough, only 17,57% of the total respondents mentioned that the EU programmes were very competitive and therefore not worth a try.

[13] The sum of percentages here is more than 100% for the reason that the respondents have answered more than one answer.

Figure 15: Distribution of difficulties while elaborating a proposal in relative numbers

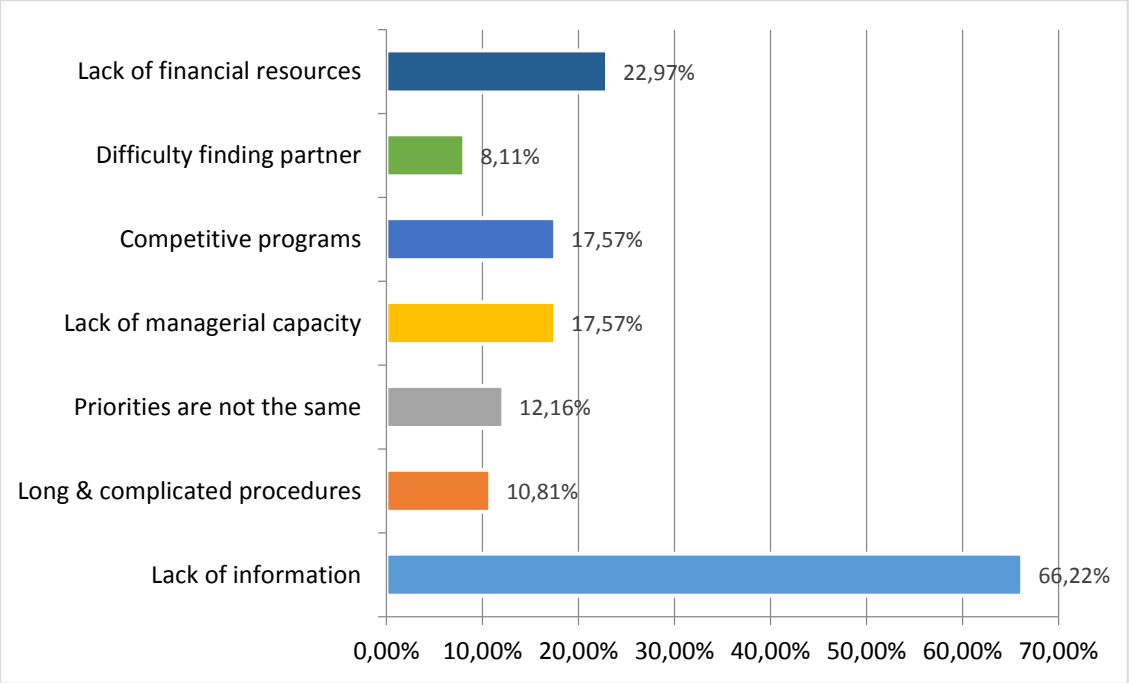


The lack of managerial capability was as well rated significantly (17,57%). Finally, 12,16% of the respondents stated that their own field of expertise and work was not among the topics addressed within the Horizon 2020 calls.

When comparing these answers with organisation types, it is possible to get a more accurate picture about the Brazilian institutions that have rated the reasons for not intending to submit any proposals. Therefore, Figure 33: Distribution of the reasons for not intending to submit a proposal under Horizon 2020 per organisation type clearly shows that medium and large enterprises, as well as private research institutes, considered the lack of information as a major explanatory reason for not submitting, whereas, the private research institutes highlighted that their scientific fields of expertise did not match the topics of the calls under the FP7 and Horizon 2020 framework (also 50%). The same argument is valid for some public research institutes, about 20%.

The lack of financial resources affects universities (45%), as well as micro enterprises (around 33%), whereas 20% of public research institutes seem to consider it. Moreover, small enterprises are very affected by the lack of information (30%) and the competitiveness of the programmes (30%).

Figure 16: Distribution of the reasons for not intending to submit a proposal under Horizon 2020



3.1 | Conclusions about the barriers that have hindered the participation of Brazilian ST&I institutions in FP7 and Horizon 2020

The barriers identified in this first section can be summarised as follows. The lack of information among Brazilian Science, Technology and Innovation organisations is the main barrier that has hindered participation in the 7th Framework Programme and Horizon 2020. It seems that the programmes are considered competitive, especially by those who do not have experience with these programmes. The task of finding the appropriate partners when setting up a consortium was as well mentioned as an obstacle for the participation in the above mentioned programmes.

The lack of information with the EU programmes is linked to the access of information and to knowledge on information sources (websites, etc). Brazilian organisations are often not aware where they can find the information and they have difficulty accessing up-to-date information. As far as the organisation types are concerned, the lack of information affects the enterprises more than universities and research institutes. The latter are more constrained by the lack of updated information, and by the lack of experience with EU calls, both in view of preparing the submission and the implementation of a project.

Additionally, the technical jargon used by the EU programmes negatively affected the Brazilian institutions' intentions to submit a proposal. Universities and research institutes tend to receive more information than other Brazilian organisations. However, they state that the calls are designed in a rather complicated manner that is hard to understand for non-EU partners.

Those who have been unsuccessful within FP7 or HORIZON 2020 pointed to the lack of complementarity of the consortium, as well as the absence of full justification related to the impacts of the projects. Another barrier mentioned by those who unsuccessfully submitted proposals was the lack of time to properly set up a competitive proposal. From the respondents' point of view, the lack of funding within their own institution affected the participation of Brazilian organisations in FP7 and Horizon 2020.

Finally, for those respondents who do not intend to submit projects within the framework of Horizon 2020, the absence of information and national funding were barriers that greatly influenced them. In the next section some activities that could boost the Horizon 2020 participation of Brazilian STI institutions in years to come will be presented.

04 | Aspects that could potentially increase the participation of Brazilian ST&I institution in Horizon 2020

4 | Aspects that could potentially increase the participation of Brazilian ST&I institution in Horizon 2020

In this section, aspects that could potentially boost the participation of Brazilian institutions in the Horizon 2020 are highlighted. Drivers and motivations for international collaboration in science, technology and innovation are manifold as reported by literature[14]. At policy-making level, these can encompass: tackling societal and global challenges through research, S&T capacity building, maintaining and developing competitiveness, achieving research excellence and ease free exchange of ideas, as well as enhancing researcher's mobility, and t growing importance of science as a means in international diplomacy[15].

Brazilian research has been an internationalised endeavour for a long time now (Freire Junior *et al*, 2016[16]). International cooperation in the field of STI can play a significant role for the enhancement of the bilateral relations between Brazil and the European Union. According to Freire Junior *et al* (ibid.), "as far as research is concerned, notwithstanding the economic crisis, Brazilian production and relevance are growing every year." Brazil is responsible for 2.5% of all scientific publications in English in the world (Adams & King, 2009). Not least in the light of this importance of Brazilian research and Brazil-EU research cooperation, the survey offered us the opportunity to consult research institutions on their view of what could enhance the participation, or create further incentive, of Brazilian STI institutions under the current EU framework programme for Research and Innovation, Horizon 2020.

Before looking into ideas on what could enhance Brazil-EU cooperation in the Framework Programme, it was inquired about Brazilian organisations' view on the importance of certain aspects of international collaboration: personnel, collaborative projects, publications, business and infrastructure.

[14] SEA-EU-NETs' own work on Southeast Asia and Europe (see chapter 6), as well as Boekholt, Patries et al, (2009): Drivers of International collaboration in research. Final Report, Brussels: European Commission.
[15] SEA-EU-NET: Spotlight on: Science and Tecnology Cooperation Between Southeast Asia and Europe 2011.
[16] José Celso Freire Junior (2016), São Paulo State University (UNESP)/ Brazilian Association for International Education (FAUBAI), Patricia Spadaro, Sao Paulo State University (UNESP), and Leandro R. Tessler, IFGM, University of Campinas, (UNICAMP), provide an overview of the internationalisation policies and practices in Brazil, focusing mainly on the governmental level, page 3.
Sustainable Cooperation with Brazil – Internationalisation of Higher Education – A Handbook, Supplemental volume No 2, 2016.

As illustrated by Figure 17, the Medium and Large Enterprises have the biggest score in all categories, personnel, collaborative projects, publications, business, and infrastructures[17]. Not surprisingly, they are also more interested in business opportunities. In total, 64,54%,of the 251 organizations have indicated this aspect as very important. This result is followed by the importance of collaborative projects, which had 146 answers and represented 57,48% of total respondents, then by infrastructure and equipment which was very relevant to 55,56%, personnel with 49,61%, and publications with 40,73%. Unlike the enterprises, public research institutes tend to assign lower importance to the business opportunities.

Another important feature is that, while giving a lot of emphasis to business, enterprises tend to give almost no importance to publications as an important result of international cooperation. All in all, it seems that there is no aspect that clearly emerges as being the most important and crucial one.

Figure 17: Distribution of the importance of selected aspects in international cooperation per organisation type

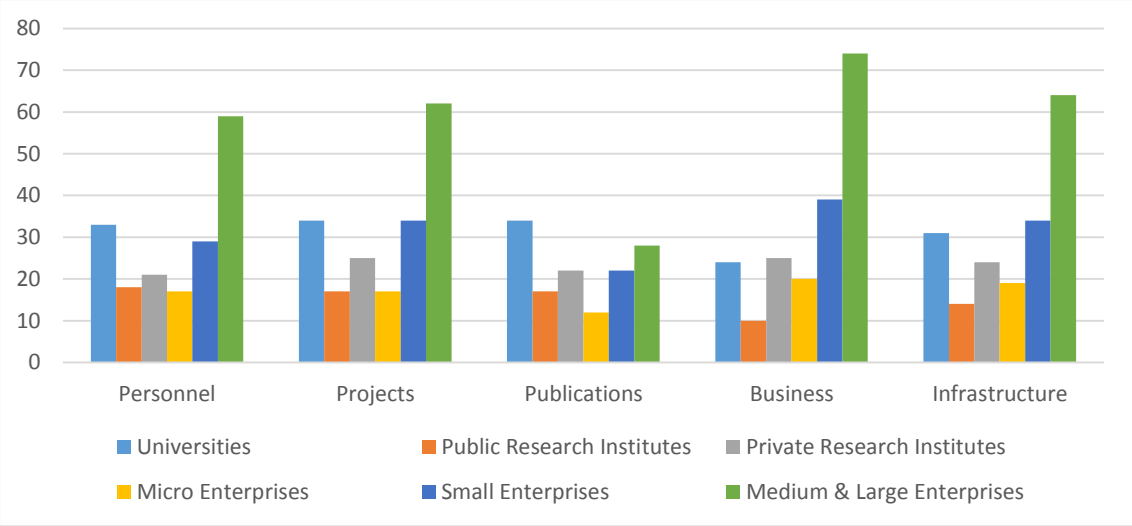


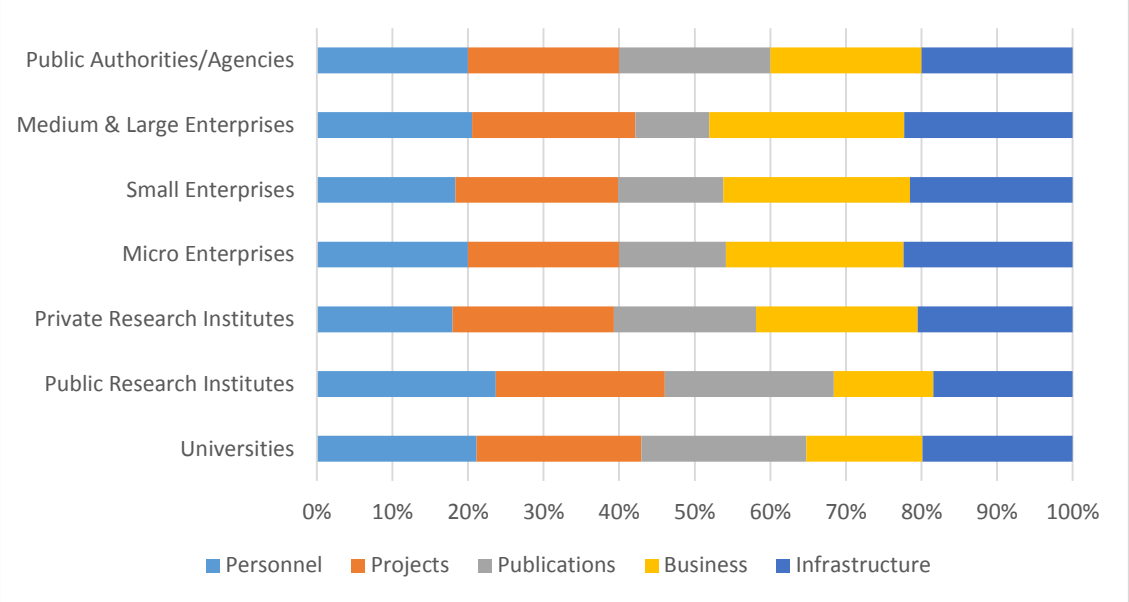
Figure 18, presents the results in relative numbers, in place of absolute. The category "personnel" scores almost 20% for each organization. Regardless of the organization type, about 20% of the respondents considered that having the possibility of exchanging

[17] Within this section, each respondent could select multiple answers.

research personnel (both incoming and outgoing[18]) as the most important feature of international cooperation. Indeed, all across the globe, several organizations within the United States and European context have been developing special programmes for the enhancement, sharing, and transfer of knowledge.

These kinds of programmes seem to be very attractive for the sample of Brazilian organizations, as they can benefit as destination organizations to fill the gap in expertise and knowledge, benefiting organisations through the periodic influx of fresh ideas and talent. A principal advantage of exchanges of scientific personnel is the exposure to different processes and structures, allowing researchers to learn new skills that can then be applied in their home organisations, and which can improve job performance[19].

Figure 18: Importance assigned to aspects of international cooperation per organisation type, in relative numbers



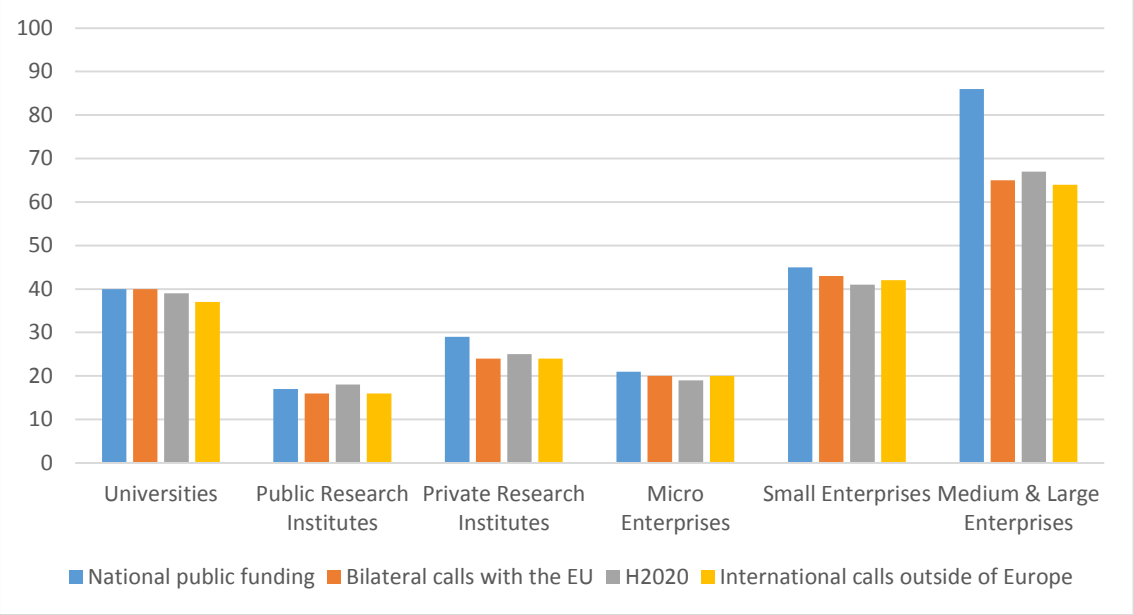
It was also analysed the question of the importance assigned to different aspects of international cooperation differentiating the various scientific fields. However, according to the results, the scientific fields do not change the previous results. In other words, it seems that, regardless of the scientific field, for instance, Marine Research, Bio-economy, Food Security, or Sustainable Agriculture, there is no difference in importance to the "personnel" category. Secondly, the importance given to collaborative projects and

[18] Those categories were not differentiated.
[19] https://www.ida.org/idamedia/Corporate/Files/Publications/STPIPubs/D-4906.ashx

infrastructures and equipment are relatively alike considering the different types of organisation, each scoring 20%.

One interesting point to be made is the importance attributed to publications and businesses. The major difference is that medium and large Enterprises do not seem to give that much importance to publications; on the other hand, business opportunities are considered the most important aspect of international cooperation. As expected, universities and research institutes exhibit another mind-set. Business is not then their core interest within the STI collaboration; instead publications are their top interest - notwithstanding among universities all features of international collaboration have, to some extent, the same level of importance.

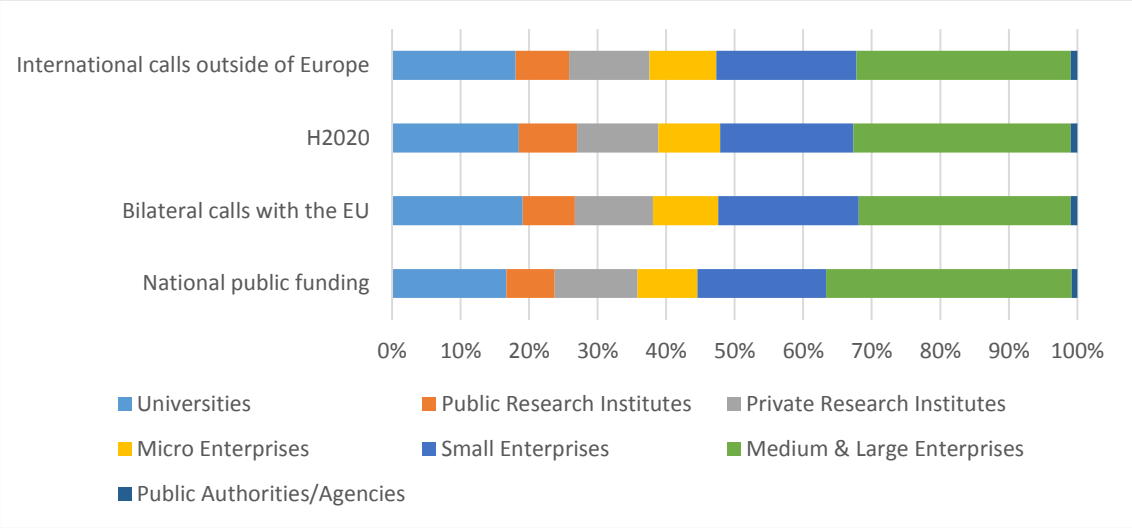
Figure 19: Distribution of the interest on funding opportunities per organisation type, in absolute numbers



It was also asked the Brazilian organisations about their interest in funding opportunities. Four options to answer this were offered, according to different frameworks of funding opportunities: a) national Brazilian public funding; b) bilateral calls between Brazil and the European Union; c) funding within the framework of Horizon 2020; d) international calls outside the European Union.

Surprisingly enough, among all 248 institutions that answered this particular question 89,11 % were most interested in calls coming from the Brazilian States.[20] On the other hand, the other funding opportunities remained relatively similar. In fact, funding from bilateral calls with European countries were interesting to 69,08% of the Brazilian STI institutions. Horizon 2020 was interesting to 67,87%, and international calls outside Europe interested 65,86%.

Figure 20: Distribution of the interest on funding opportunities per organisation type, in absolute numbers



In Figure 20 the medium and large enterprises scored the highest values for four frameworks of funding opportunities. They are most interested in Brazilian national fund opportunities. Every other organisation type specified approximately the same interests for each of the four funding opportunities. Universities, for instance, were interested in both, the national and the EU/ international level.

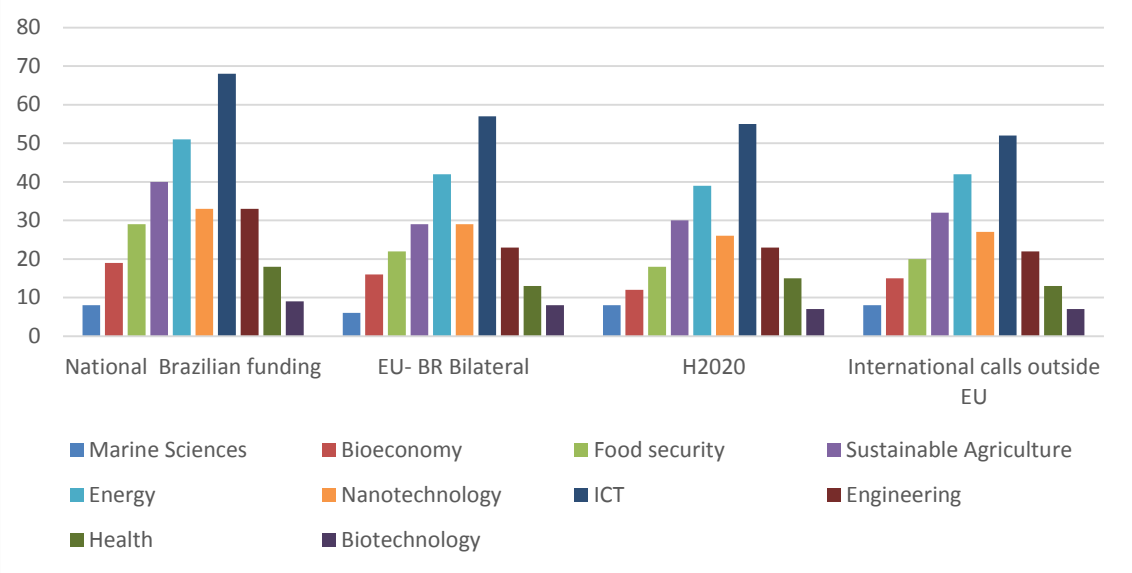
These results are not surprising considering that universities are often focused on a spectrum of funding opportunities, such as grants, public procurements and services covering national and international funding opportunities. The graphic representation of the interest in funding opportunities in relative numbers corroborates the above-mentioned numbers. Therefore, there is a similitude of interests concerning different funding opportunities. Even so, medium and large enterprises present a sound rise of interest from around 30% to 32% in their funding opportunities, whereas concerning the national public funding, the interest ascends to approximately 38%. As previously stated,

[20] Within the question, there was the possibility of multiple answers.

universities had a relatively homogenous interest that went from 17% to 19%, private research institutes have a steady interest at around 10%, as well as micro enterprises, around 8% of expression of interest, and finally, small enterprises around 18% and public research institutes that have their interests between 6% and 8%.

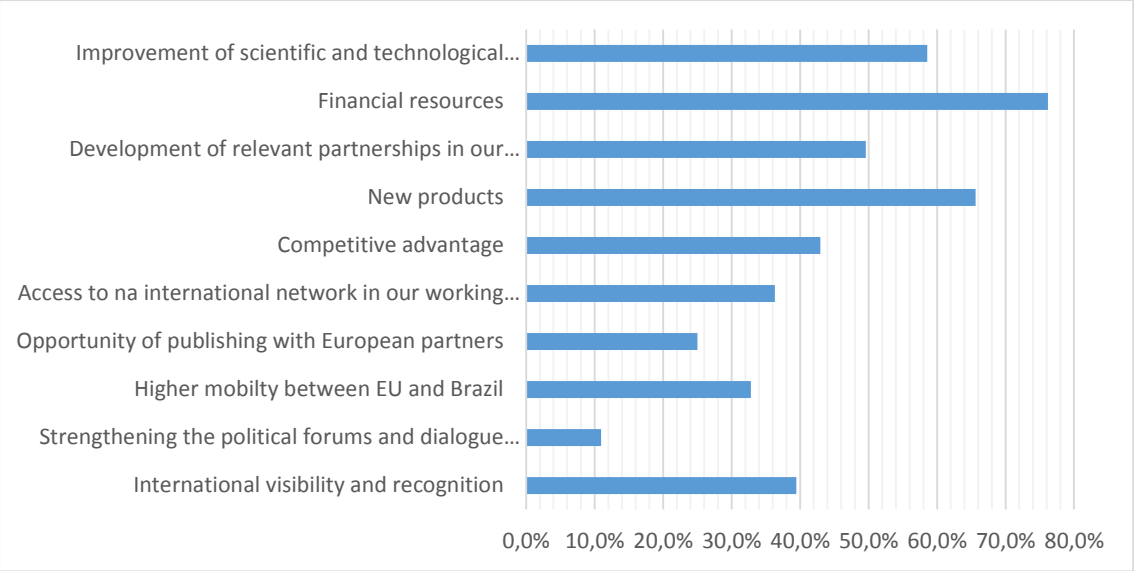
As it is possible to verify through the Figure 21, the data clearly suggests that the scientific fields does not introduce any significant changes when it comes to the interest on funding opportunities. The national Brazilian funding opportunities registers significantly more interest in all scientific areas, being that ICT, Energy and Sustainable Food Security show the highest scores.

Figure 21: Distribution of the interest on funding opportunities per scientific field, in absolute numbers



Deepening the understanding of the expected benefits from Horizon 2020 participation, Brazilian organisations were asked about what the most important results and outputs of participating in Horizon 2020 would be. As seen in Figure 22**: Distribution of main goal if participating in Horizon 2020**, 76.17% affirmed that the access to financial resources was perceived as the most important benefit in participating in Horizon 2020. Next, organisations stated the development of new products, 65,63%, the improvement of scientific and technological knowledge, 58,59%, establishing relevant partnerships in the field, 49,61%, and obtaining competitive advantage, with 42,97%.

Figure 22: Distribution of main goal if participating in Horizon 2020[21]



Furthermore, within Figure 34: Benefits and outputs expected from participating in Horizon 2020 per organization type, in absolute numbers it can be verified that Brazilian universities tend to prioritise the financial gains and mobility scheme possibilities between the European Union and Brazil. There is also a clear interest in publishing with European partners. Furthermore, they are interested in accessing international networks, in developing relevant partnerships in the working area, in financial resources and, finally, in gaining knowledge.

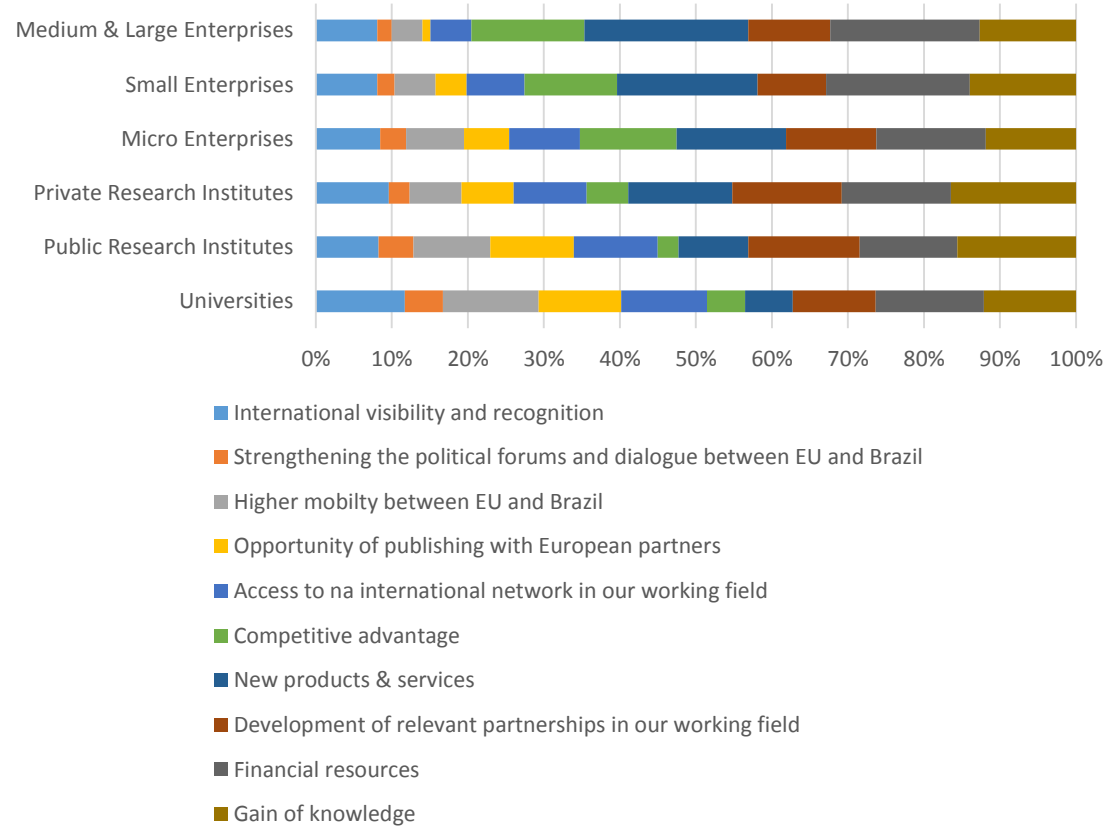
According to the sample, public research institutes are generally more interested in the development of relevant partnerships in their field of expertise, and less interested in gaining any competitive advantage. Similar to universities, they are interested in accessing the international networks in their field of expertise, in publishing with European partners and are in mobility schemes between Brazil and EU.

With regard to the sector of micro, small, and medium enterprises, their core interests in participating in Horizon 2020 are the financial resources available, gaining knowledge and new products and services and obtaining a competitive advantage. Relative numbers offer additional insights. As it is possible to see in Figure 23, universities express a higher-than-

[21] Please refer to the annex section.

average interest in international visibility and recognition. This also applies to the importance assigned to mobility of personnel between Brazil and the EU as well as to the possibility of publishing with European partners. On the other hand, business and innovation actors are more interested than others in obtaining a competitive advantage, developing new products and, surprisingly, in seeking financial resources. Different stakeholders expect different benefits and outcomes from Horizon 2020 participation. Understanding this helps fine-tuning support activities and incentives.

Figure 23: Benefits and outputs expected from participating in Horizon 2020 per organization type, in relative numbers



It was also asked respondents about the support activities that could potentially increase the Brazilian participation in Horizon 2020. The Brazilian organizations seek clear information about Horizon 2020 calls, with 85,12% mentioning this as important. This criterion seems to be essential for increasing the participation of Brazilian organisations in the EU Framework Programme. As previously stated, the lack of information was the most frequently mentioned factor that hindered the participation of Brazil within the 7th Framework Programme and Horizon 2020. The same organisations also perceived the

criteria about the selection process of projects and for funding as very unclear and imprecise. These organisations account for 82,16% of the answers.

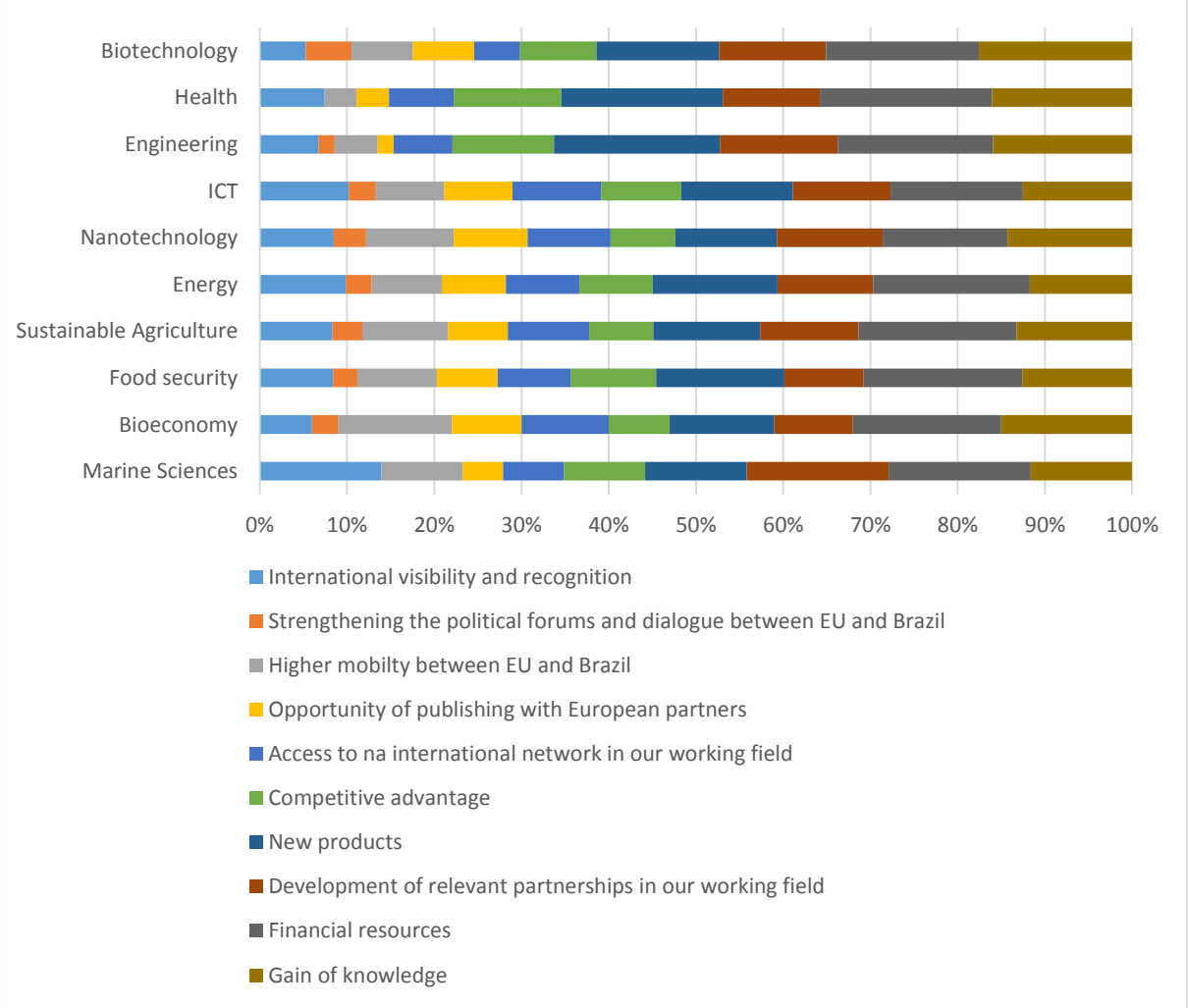
Moreover, a frequently identified criterion is funding availability. This criterion is very important to 78,66% of the respondent organisations. Financial support from Brazilian FAPs[22] and agencies is also a criterion to be improved that could contribute to an increase in Brazilian participation in Horizon 2020, according to the opinion of 76,99% of the organisations. Another relevant criterion that deserves to be mentioned is the absence of an online database where international partners could be identified in a specific field. 66,53% of the Brazilians respondents pointed out that this could increase participation, along with the technical support to elaborate the proposals. Furthermore, an increase of financial support from within the organisation to projects of international cooperation was pointed out to be very important by 55,41% of the participants.

It was also crossed the benefits and outputs from participating in Horizon 2020 per scientific field. Clearly, Brazilian organisations are essentially interested on financial resources, gain of knowledge, and development of new products. The field of Energy, ICT and Sustainable agriculture are the fields that revels high scores, as depicted by Figure 24: Benefits and outputs expected from participating in Horizon 2020 per scientific field, in relative numbers.

The relative numbers depicted in Figure 35: Distribution of criteria that could potentially increase the Brazilian participation in Horizon 2020 per organisation type, in relative numbers, reveal that there are no criteria standing out as being the most representative, as the distribution of the answers is quite homogenous. This being said, universities have attributed more importance to distinct criteria from 16% to 20%, of which the two aspects pointing to the need for clearer information about Horizon 2020 calls and the need for access to an online platform.

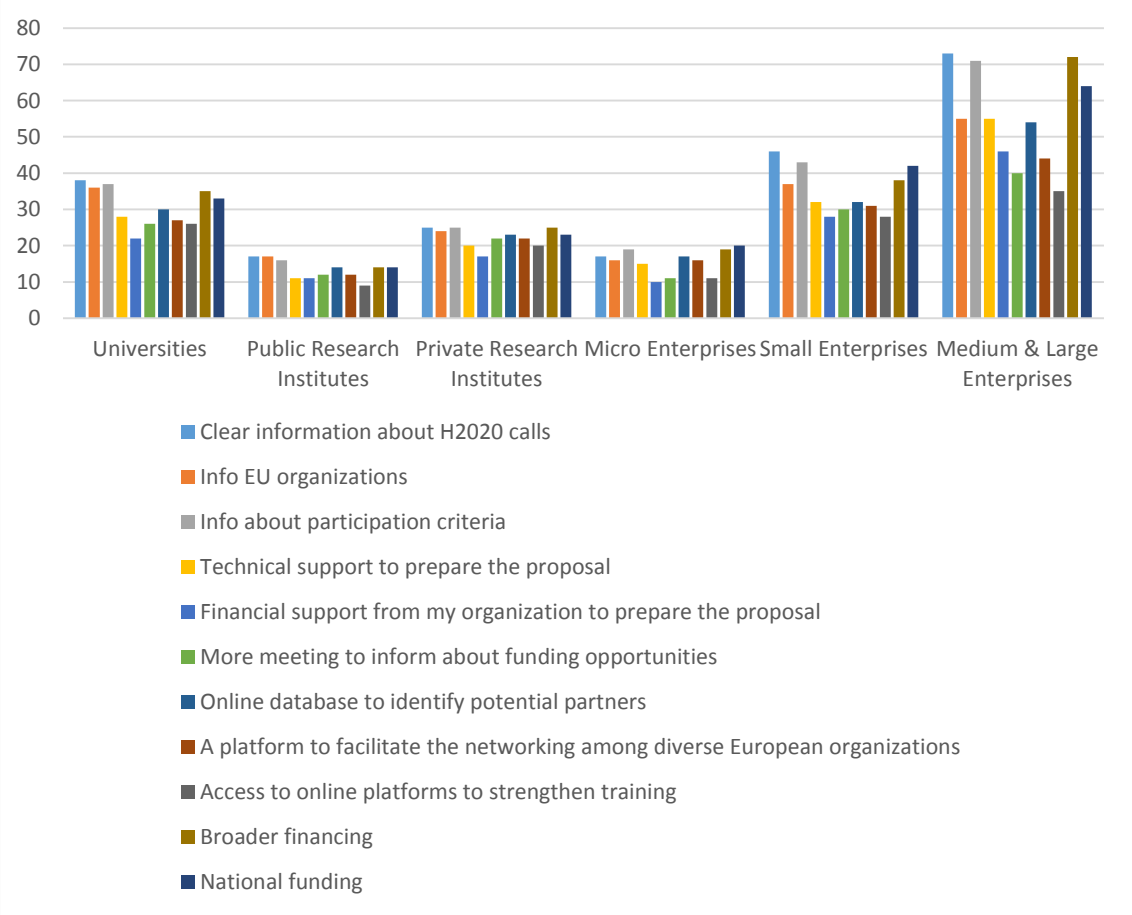
[22] Public foundation of support to research, also known as FAPs.

Figure 24: Benefits and outputs expected from participating in Horizon 2020 per scientific field, in relative numbers



The knowledge and sharing of information could constitute an added value for the Brazilian organizations. This last aspect was also mentioned by the medium and large enterprises as one of the criteria that could help to boost the Brazilian participation in Horizon 2020. After all, for this group of organisations, the most crucial factor is having access to broader funding to finance their activities within Horizon 2020. The other organisations express relatively the same level of importance for all the criteria.

Figure 25: Distribution of criteria that could potentially increase the Brazilian participation in Horizon 2020 per organisation type, in absolute numbers



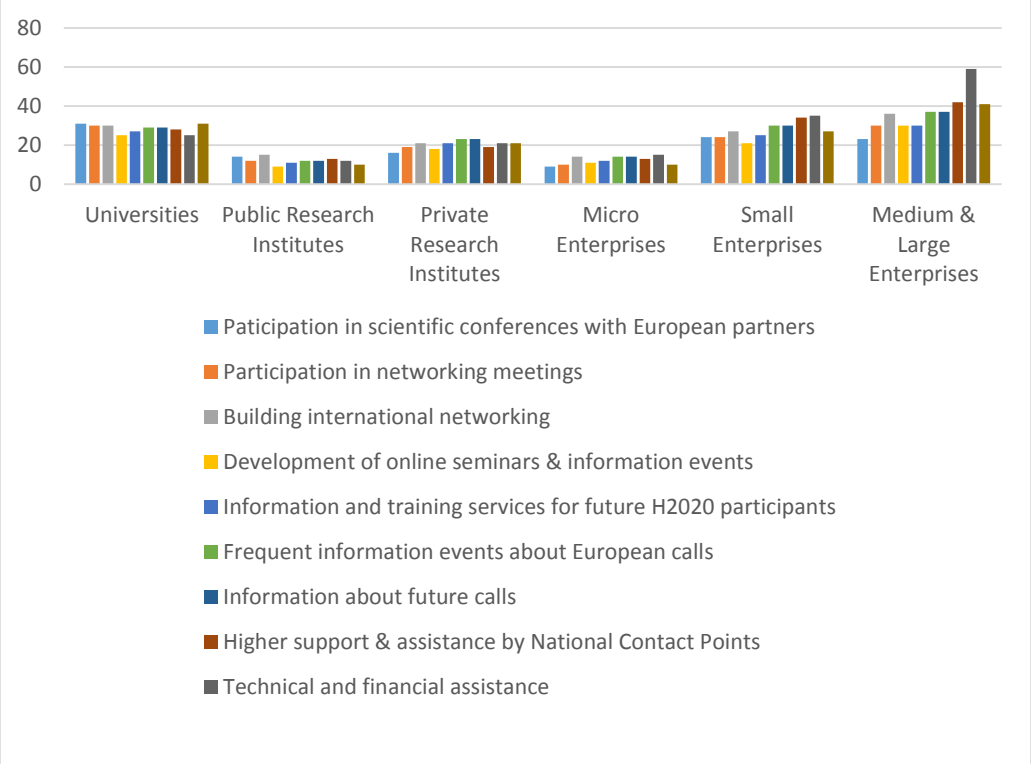
Concerning the support activities that can boost the Brazilian participation in Horizon 2020, the most frequently mentioned activity was the financial and technical assistance for the setting up the proposals (67,1% of respondents selected this as important). This can constitute one of the most challenging dimensions of the EU projects: preparing and submitting a proposal in compliance with the EU requirements. The Brazilian organisations that are not familiar with the EU proposals in the field of STI will find it particularly challenging. Interestingly enough, 59,83% of the Brazilians organisations requested more support and assistance from the National Contact Points (NCP)[23]. As far

[23] NCPs are national structures established and financed by governments of the 28 EU member states and the states associated with the framework programme. NCPs gave personalised on the spot support and in the applicant's' own language. The NCP systems can vary from one country to another, from highly centralised to decentralised networks, and a number of very different actors, from ministries to universities, research centres and special agencies to private consulting companies. For further information:

as the experience of European Member States can testify, NCPs[24] are meant to improve services throughout closer collaboration and standardisation of knowledge and quality of service provided. Within the Brazilian system of NCP, it seems that there is only two NCP for supporting Brazilians one dedicated to the European Research Council and another one to Marie Curie Actions. The result of a functioning NCP system in Brazil is simpler access to Horizon 2020 calls, lower entry barriers to newcomers and a rise of the quality of submitted proposals.

Therefore, one of the challenges within the next months would be increasing personnel supporting the Brazilian community. Then, a network to facilitate the contact with the most relevant international partners, in order to share competences concerning the central interests of Brazil and the European Union (56,28%), as well as events that could help with information about Horizon 2020's future calls (56,09%) and activities to help with the elaboration of proposals and project implementation (54,94%) has been highlighted from the participants point of view.

Figure 26: Distribution of the importance of support activities to enhance the Brazilian participation in Horizon 2020, per organisation type, in absolute numbers



http://ec.europa.eu/research/participants/data/support/20131125_NCP%20Minimum%20standards.pdf

[24] http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

The majority of the Brazilian organisations expressed the same level of importance towards distinctive support activities, with the exception of medium & large enterprises, which tended to value the financial and technical assistance as well as higher support & assistance by the National Contacts Points, conjointly with all activities that could help organisations to elaborate proposals, as illustrated in Figure 26.

In addition to that, frequent informational events about future European calls under Horizon 2020 and informational & training events for successful projects are also cited as important aspects that could boost the Brazilian participation within Horizon 2020. Figure 36 shows the distribution in terms of relative numbers, and it can be said that medium and large enterprises are not that interested in attending and participating in scientific conferences, but again, denote a significant interest in having technical and financial assistance, as previously stated. Yet, every support aspect has been mentioned with a significantly high frequency by all organisations, which tend to conclude as well that all the listed support activities are perceived as capital by Brazilian STI organisations and could potentially increase their participation in Horizon 2020.

The last aspect within this section to be highlighted is related to the personal motivations for participating in Horizon 2020. This question was meant to be addressed not at the organisational level, as were a large majority of the questions within this questionnaire, but rather at the individual level. Nevertheless, there is no surprise with regard to the feedback from the participants, having in mind that the majority of the respondents who answered the survey were enterprises regardless of their size.

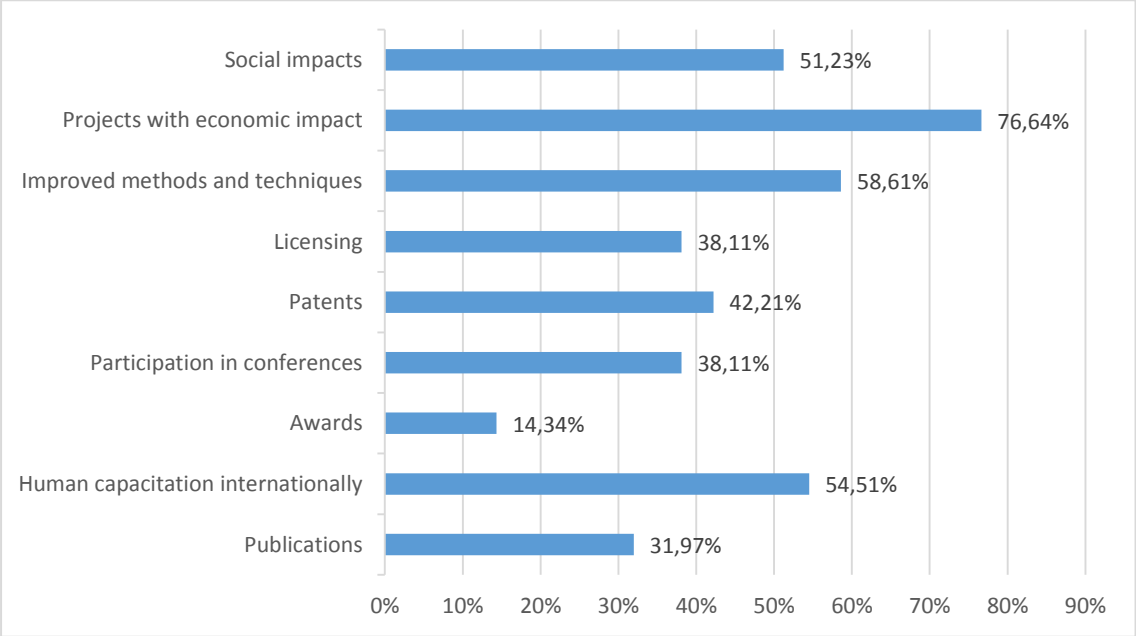
About 76,64% of the total of respondents considered developing projects with economic impacts as their preferred personal motivation. It seems then that the individual role of the respondents within their own organisation is decisive as well for their personal motivation for participating in Horizon 2020. The second most frequent answer was highlighting the improved methods and techniques as their own personal motivation for participating in Horizon 2020.

This dimension is followed by a third personal motivation associated to the development and reinforcement of human capital. 54.51% of respondents specified interest in internationally trained staff. This is clearly one of the positive externalities of EU projects, continuously striving for the capacity building and internationalisation. 51,23% of the

participants pointed out that projects with social and political impacts are equally vital. Patents (42,21%), licensing agreements (38,11%), participation in scientific conferences, seminars & workshops (38,11%), publications (31,97%), and awards (14,34%) were further items that were listed[25].

When crossing the personal motivations with those of organisations, Figure 28 clearly shows that publication is a very important aspect for universities and research institutes. Other than publications, internationally trained staffs, participation in conferences, seminars & workshops, improved methods and techniques, and projects with economic, as well as social and political impacts, are all very important motivations that could enhance the participation of universities and research institutes in Horizon 2020.

Figure 27: Distribution of personal motivations for participating in Horizon 2020



Regarding the enterprises' mind-set, regardless of their size, they show more interest in projects with economic impacts, improvement of methods & techniques and internationally trained staff. Moreover, licensing agreements and patenting is as well very important for these enterprises. It seems that assumptions are confirmed when looking at Figure 37: Distribution of personal motivations for participating in Horizon 2020, per organisation type, in relative numbers. For instance, private research institutes tend to place greater importance on economic results and outputs, without overlooking awards, publications, participation in

[25] All these categories were pre-given within the questionnaire.

conferences, internationally trained staff, patents, and licensing agreements. Small enterprises tend to follow the same pattern. It seems then that the major difference between the previous charts is that medium and large enterprises tend to place less importance on publications, awards, and participation at conferences.

Figure 28: Distribution of personal motivations for participating in Horizon 2020, per organisation, in absolute numbers

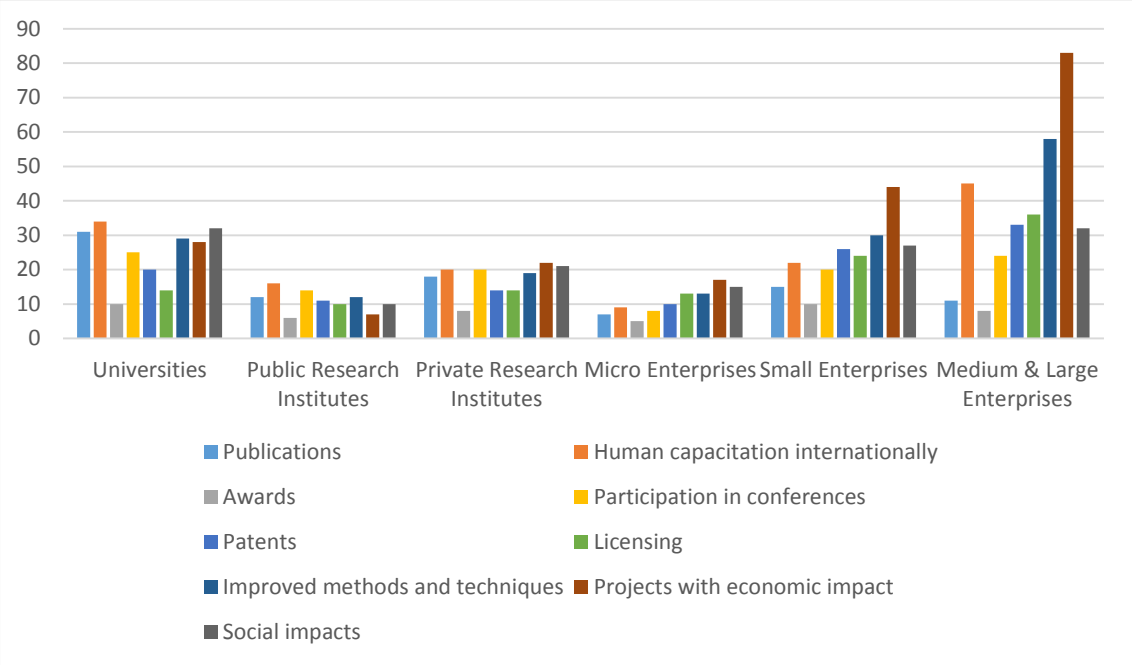
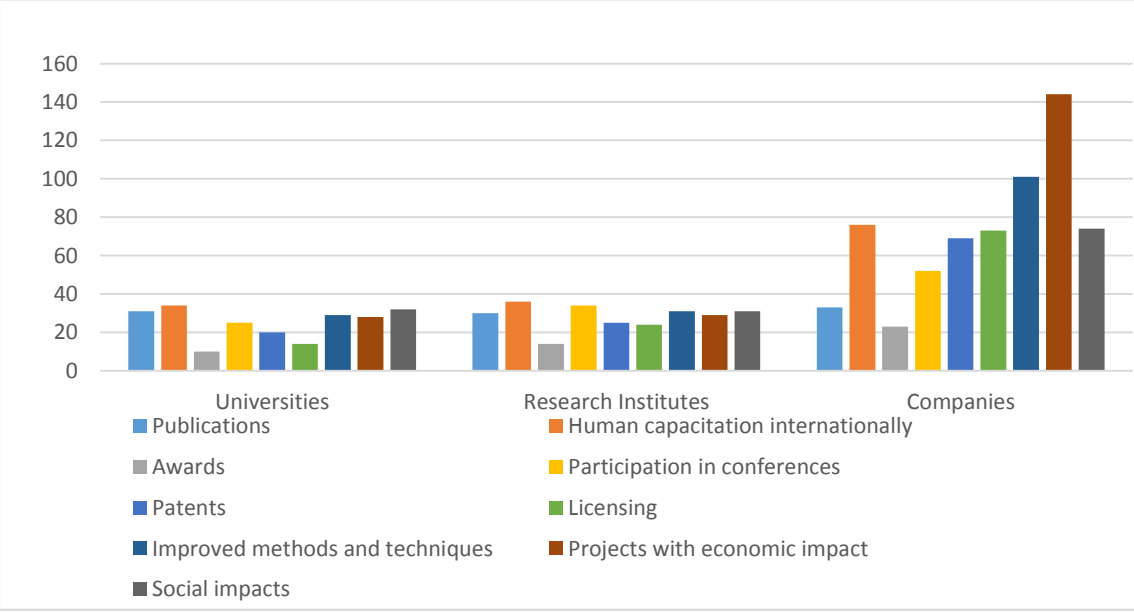


Figure 29: Distribution of personal motivations for participating in Horizon 2020, per organisation, in absolute numbers



4.1 | Conclusions about the conditions and support activities that could potentially boost the participation of Brazilian ST&I institutions in FP7 and Horizon 2020

The conditions and support activities identified in this section can be summarised as follows: First, considering the fact that the sample was mostly constituted by businesses, the biggest interest when engaging with the EU programmes in the field of Science, Technology, and Innovation is the business aspect, immediately followed by the access to the infrastructures and equipment and internationally trained staff. The empirical study clearly suggests that universities are more interested in publications while business opportunities are more appealing for enterprises. Respondents of this survey prefer national funding over European or international funding opportunities. Nevertheless, they are very interested in submitting projects within the framework of Horizon 2020.

The Brazilian organisations were very clear when they pointed out that a key element for enhancing participation within the EU´s frameworks programmes is the availability of financial resources. This resonates with the debate around the lack of automatic funding for participants in countries like Brazil. The development of new products and services along with the improvement of scientific knowledge is definitely something that the Brazilian organisations are looking for. In addition, universities and public research institutions tend to look more at the EU and the international level for international visibility and mobility schemes, as well as financial resources resulting out of the collaborations and enhancement of knowledge.

Medium & large enterprises seem to be more attracted to financial resources and gaining knowledge when engaging in international cooperation. With regard to the support activities and framework conditions that would increase the participation of Brazilian institutions, the respondents pointed out that it is essential to have access to clear and precise information about the pre–condition for submitting proposals.

Secondly, information about the selection criteria and evaluation, as well as a substantially larger and national access to funding, is considered essential criteria. As the support activities were mentioned, the respondents preferred to further enhance the technical and financial support; some key events to raise awareness about the funding

opportunities between EU and Brazil. Additionally, the need to dispose of broader and constant support from the National Contact Points was highlighted.

Lastly, regarding the personal motivations of the Brazilian respondents, projects with economic impact, improved methods, and internationally trained staff are considered most attractive when engaging and participating at the EU level.

5 | Concluding remarks

A trend in the Internationalisation of R&D is the rising number of cooperation agreements or alliances since the 1980's between partners residing in different countries (e.g. Hagedoorn and Schakenraad, 1990, 1993; Duysters and Hagedoorn, 1996). The EU framework programmes are perceived as the key vehicle to foster effective international collaboration. Brazil seemed to be of the Third Countries that greatly benefited, as it can be confirmed by the participation of Brazil on FP7[26].

The main objective of the study was to investigate barriers and difficulties that hamper a more active participation in the European Union's Horizon 2020 programme as well as to examine the incentives and motivations that could potentially increase the participation of these organisations in the aforementioned programme. A survey has been developed for the purpose of targeting organisations that submitted proposals within the Brazilian national programmes supporting Science, Technology and Innovation activities between 2007 and 2016.

Methodologically speaking, 1.788 Brazilian institutions were invited to participate in the study. 1.532 were companies (small, medium, and large companies) and 256 were universities and public/ private research centres. This survey has been answered by 481 Brazilian institutions. More than half of the sample is composed of small, medium and large enterprises. As result of it, most officers who answered the survey were directors and managers. Regarding the geographical representation within Brazilian territory, Southeast and South were the most represented areas. São Paulo and Rio de Janeiro were particularly strongly represented among the respondents as among the knowledge and innovation actors in Brazil in general.

Bio-economy was the largest scientific field among Brazilian organisations that have submitted proposals within the EU's framework programmes, followed by Nanotechnology, ICT and Sustainable Agriculture. ICT, Energy, Food Security and Health present the highest rate of rejection among all scientific field that had submitted projects within the framework of FP7 and Horizon 2020.

[26] Policy Paper on Horizon 2020 opportunities for India- Figure 5 FP7 Participation in Select Third Countries (Table), 2016. Brazil, was ranked seven position, after Russia, USA, China, India, Canada and South Africa. According to this report, Brazil has participated in 235 projects, receiving a total EC Contribution in FP7 Projects (€) 26,185,646.02. This report will be publicly available soon.

Despite the rate of failure and the low participation of Brazilian organisations within the EU programmes, more than half of the participants 73% want to submit a proposal in the future. Regarding the participation of the Brazilian institutions, public research institutions feature the highest participation rate under the framework of FP7 and Horizon 2020, (44%) followed by universities (22%).

According to the respondents, there is a substantial lack of information among the Brazilian organisations concerning the funding opportunities within the framework of FP7 and Horizon 2020. Enterprises, regardless their size, are most affected by this lack of information. Universities and public research institutions seemed to be less affected.

All in all, there is a high percentage of Brazilian organisations that do not know anything about EU programmes and funding opportunities. It seems that Brazilian organisations are not aware of where to find the information, and there is little knowledge or information sharing at the national or institutional level. Additionally, those who have had access to information find it difficult to understand the technical jargon. In this regard, enterprises and private research institutes seemed to be the most affected by the absence of information.

Other than the lack of information, a lack of support mechanisms to explain the programmes among the Brazilians organisations and the lack of clarity of technical language used in the calls, were identified as additional barriers. The competitiveness of European programmes, the difficulty of finding partners, and the lack of time to prepare a proposal, were pointed out as being hampering factors for many Brazilian institutions

The analysis confirms that it was difficult for the Brazilian organisations to engage financially when it comes to co-financing that it is requested by the EU programmes. Brazilian participants faced difficulties in convincing their own organisation to bring funding to the projects.

Moreover, the lack of funding opportunities was the second most cited barrier to the participation in Horizon 2020. Regarding the funding opportunities, surprisingly or not, especially the Brazilian business organisations seem to prefer the national funding schemes over other potential sources of funding. In general, the various types of funding, e.g, national, bilateral, European, or international were considered of similar importance.

The most important outcomes of international research collaboration, as specified by the respondents, were the business opportunities, followed by collaborative projects, access to infrastructures, international trained staff, and, finally publications. Again, Brazilian businesses, regardless their size, prefer all aspects related to business opportunities at the expense of other outcomes such as publications. On the other side, universities and public research centres give more importance to publications.

Finally, the study suggests that the accessibility and ease of access to the funding made available to Brazilian organisations would boost the Brazilian participation in Horizon 2020. It seems indeed that improving the national framework conditions by putting more public financial support would contribute to enhance the participation of Brazilian organisations within Horizon 2020. As innovation players (both universities and companies) are forced to seek external forces of income, the availability of funding is crucial.

Even if Brazil's STI policy governance has recently undergone significant changes[27], Brazilian organizations should put more emphasis on assessing the different framework conditions[28] (regulations, institutions, promotion measures, and incentives schemes) that could contribute for the enhancement of Brazilian participation within the EU programs on Science, Technology and Innovation in a long term perspective.

Additionally, output main incentive for participating in such programmes is the funding opportunities, by far the most frequent answer, followed by the development of new products and the improvement of scientific and technical knowledge. Again, universities tend to seek for the opportunity to raise and enhance their international visibility, mobility opportunities and financial resources whereas the Brazilian business sector representatives select financial resources; gaining competitive advantage and the development of new products and services.

Lastly, as support activities, the study results suggest that technical and financial support is deemed essential to enhance the participation of Brazilian organisations in Horizon 2020. It was suggested to organise events, and further share the knowledge related to the

[27] https://www.oecd.org/sti/outlook/e-outlook/stipolicyprofiles/stipolicygovernance/
[28] https://www.oecd.org/sti/outlook/e-outlook/sticountryprofiles/brazil.htm

preparation and implementation of the proposals to reinforce the network of National Contact Points in Brazil. Their assistance and steering was considered relevant, firstly, for spreading information about Horizon 2020 and all related opportunities, and secondly, to support the Brazilian applicants when it comes to the submission of proposals. Moreover, a network to facilitate the interaction and further contact with international partners was selected as one of the support activities that could enhance participation.

The study suggests that it is necessary to improve the framework conditions of access to the funding within the Brazilian national system as well as to better promote the funding opportunities of Horizon 2020 totally open to Brazilian organisations.

Additionally, it seems promising to create further synergies between the national entities and universities, research centres and business sector representatives to spread more information about EU opportunities. It seems that a well-coordinated and effectively communicated strategy will enable Brazil to develop a stronger participation in Horizon 2020.

Lastly, some key findings coming out the study will be taken up by INCOBRA project and its activities. As a matter of fact, INCOBRA will play a crucial role in scaling up the Research & Innovation between EU and Brazil. As suggested by the Brazilian respondents, it is deemed essential to support and foster connection from the Brazilian organisations with the European networks in the field of Science, Technology and Innovation. Moreover, INCOBRA intends to support the development of selected networks, fostering interaction and accompanying their initial steps. Again, INCOBRA will support the policy dialogue between funding agencies, stimulating the connections within Horizon 2020 and beyond, particularly, supporting existing thematic and regional joint funding schemes for their outreach activities towards Brazil and the European Union. As a result of this study, the consortium of INCOBRA is particularly well placed to identify key bottlenecks within the STI collaboration between EU and Brazil.

The analyses targeted here are meant to inform decision-makers and programme-owners involved in S&T cooperation and policy development between Brazil and the European Union, as well as, provide useful background information destined for the broader scientific community engaged in collaborative research. Furthermore, the analyses offer a clear input for upcoming Brazilian-European Foresight workshop.

6 | Key highlights for S&T policy makers

- Barriers related to the lack of information are clearly perceived as being hindering factors that are limiting cooperation between the EU and Brazil within the framework of FP7 and Horizon 2020. Thus, it is recommended to put special emphasis on dissemination of information and fostering awareness regarding funding opportunities between EU and Brazil;
- It was highlighted by respondents that the invested efforts in project preparation are substantial considering the low acceptance rates. It is important to consider, in the long term, the implementation of technical and financial assistance for the preparation of projects proposal; As searching for partners has proven to be a great difficulty for Brazilian organisations, particular attention should be given to procedures and instruments which should enable and facilitate the search for appropriate partners in building consortiums for future cooperation activities. Further, it is strongly recommended to strengthen capacities, knowledge and competence in project management issues;
- Barriers related to institutional support at Brazilian national level are perceived as being the most obstructive among the respondents. Thus, it is advisable to stimulate institutional support at policy and operational level towards S&T cooperation with the European Union in the framework of Horizon 2020;
- It is also recommended that S&T policy makers promote S&T cooperation in order to increase motivation and interest. Clear information about the advantages of international cooperation should be highlighted by Brazilian national science policy;
- It is strongly recommended that S&T policy makers increase investments in science and technology for the benefit of international cooperation as Brazilian organisations are very interested in collaborating with Europe within the framework of Horizon 2020;
- Brazilian organisations tend to seek different benefits of the international collaboration: in contrast to universities and research institutes, companies show very little interest in publications. The most significant benefits for companies are acquiring projects with an economic impact and improving methods and techniques. However, the development and reinforcement of human capital is perceived as a main benefit for all types of organisations. Brazilian organisations

request for a greater support and steering by the National Contact Points. There is a high demand for support actions, eg; through seminars, workshops and training.

- Brazilian organisations seek for more interaction with the EU and international partners; this is of great importance in order to enhance Brazilian participation within Horizon 2020. The findings of this study emphasize the desire for Brazilian institutions to expand the international outlook of their organisation;
- This aligns perfectly with the foundational proposal of the INCOBRA project as it seeks to further develop all manners of professional development, exchanges alongside its facilitation of new partnerships and collaborations. Working side-by-side, Brazilian and European partners will develop an intercultural literacy and skill, which will benefit well beyond current projects and will further the capacities for fruitful partnerships across the industrial, academic, and public sectors;
- The INCOBRA initiative provides a suitable forum in which complementary knowledge bases can be combined in productive working relationships. As many of the participants have clearly stated, jointly advancing knowledge through research publications and patent development is a top priority for actors across all sectors.

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| Annex I – Online Survey Questionnaire

Questionário INCOBRA

O presente questionário foi desenvolvido pelo projeto INCOBRA, tendo como alvo as organizações brasileiras que apresentaram propostas para os programas nacionais / regionais brasileiros de apoio à Ciência, Tecnologia e às actividades de Inovação entre os 2007-2016.

Este estudo tem dois objetivos: (a) identificar as barreiras e dificuldades que impedem uma participação mais ativa das organizações brasileiras nos programas da União Europeia (UE), nomedamente, no FP7 e Horizonte 2020 e; (b) explorar os incentivos e motivações que podem potencialmente incrementar a participação das mais diversas organizações brasileiras no atual programa da União Europeia - o Horizonte 2020.

Horizonte 2020 é o principal programa de Pesquisa e Inovação atualmente em curso financiado pela Comissão Europeia, com cerca de 80 bilhões €, de financiamento disponível ao longo de 7 anos de implementação do programa (de 2014 a 2020). O programa está aberto à colaboração internacional com países como o Brasil, mediante a certas condições. Este programa oferece, nesse sentido, oportunidades de financiamento muito siginificativas para as organizações brasileiras no campo da Ciência, Inovação e Tecnologia.

Mais informações sobre o programa Horizonte 2020

A sua opinião é muito importante para nós, e desde já, agradecemos pela sua participação.

O consórcio do Projeto INCOBRA.

Há 29 perguntas neste questionário

ZSI Limesurvey - Questionário INCOBRA

Participation in FP7 and Horizon 2020

() Você já participou em chamadas bilaterais, que apoiam a colaboração entre o Brasil e um país europeu, em particular (por exemplo, Brasil & França; Brasil & Alemanha)?

Favor escolher apenas uma das opções a seguir:

- Sim

- Não

() Já alguma vez apresentou um projeto no âmbito do FP7* ou no atual Horizonte 2020?

Favor escolher apenas uma das opções a seguir:

- Sim

- Não

() O seu projeto foi aprovado?

Só responder essa pergunta sob as seguintes condições:

A resposta foi 'Sim' na questão '2 [ParticipationEU]' (Já alguma vez apresentou um projeto no âmbito do FP7* ou no atual Horizonte 2020**?)

Favor escolher apenas uma das opções a seguir:

Sim

Não

() Quais foram ou são dificuldades que você encontrou durante o processo de preparação e de submissão da proposta?

Por favor, escolha as opções que se aplicam:

Houve dificuldade de encontrar os parceiros mais adequados.

Houve dificuldade de convercer a minha instituição para fazer parte do consórcio porque nos foi pedido um compromisso financeiro.

Foi difícil combinar e unir as diferentes competências dos parceiros no projeto.

A preparação da proposta foi uma tarefa muito longa e demorada.

Eu tive que fazer todo o trabalho da proposta sozinho porque a minha instituição não estava preparada para me ajudar.

Outros:

() Levando em consideração a sua experiência bem sucedida, você tem alguma recomendação a fazer aos futuros candidatos brasileiros quando submeterem as propostas?

Por favor, coloque sua resposta aqui:

() Você tem interesse em participar em evento(s) para partilhar sua experiência com os futuros candidatos brasileiros?

Sim

Não

() Por favor, preencha seus dados de contato:

Por favor, coloque sua(s) resposta(s) aqui:

Nome:

Email:

() Por que a sua proposta não foi aceita?

A proposta não abordava adequadamente os objetivos da chamada.

A avaliação apontou para uma falta de boa execução da proposta.

A avaliação salientou a falta de complementaridade do consórcio.

A avaliação apontou que os impactos do projeto não foram adequadamente considerados.

Falta de tempo para preparar uma proposta competitiva, porque o consórcio foi tardiamente estabelecido.

Outros:

() Por que você nunca apresentou uma proposta no âmbito do FP7 ou Horizonte 2020?

Eu não tinha informações sobre os programas da União Europeia de Pesquisa e de Inovação.

Eu não tinha informações das condições de financiamento da União Europeia em matéria de Pesquisa e de Inovação.

Não houve uma linha de financiamento das instuitições brasileiras que permitisse a participação da minha organização.

Os processos de candidatura eram muito longos e complicados e foi considerado que o trabalho não valia o investimento.

O tema prioritário do FP7. / ou HORIZON 2020 não coincide com a minha área de pesquisa.

Na minha instituição está faltando a capacidade de gestão para lidar com esses programas e projetos.

Os programas são muito competitivos e orientados principalmente para organizações com capacidade crítica e já familiarizadas com os projetos de Pesquisa e Inovação da União Europeia.

Eu não consegui encontrar os parceiros mais adequados, quer seja do campo acadêmico, quer seja do campo industrial.

Devido às experiências negativas de vários dos meus colegas, eu estou desanimado a apresentar qualquer proposta para o Horizonte 2020.

Outros:

() Você pretende apresentar uma proposta no âmbito do Horizonte 2020*?

Favor escolher apenas uma das opções a seguir:

Sim

Não

() Por que você não apresentou uma proposta no âmbito Horizonte 2020*?

Eu não tenho conhecimento sobre os programas da União Europeia de Pesquisa e de Inovação.

Os procedimentos são muito longos e complicados.

O tema prioritário de Horizonte 2020 não coincide com a minha área de trabalho atual.

Na minha instituição está faltando a capacidade de gestão para lidar com esses programas ou projetos deste âmbito.

Os programas são muito competitivos e orientados principalmente para organizações maiores que já tiveram experiências com projetos da União Europeia.

Eu acredito que vai ser dificil encontrar os parceiros adequados, tanto do campo acadêmico e como do campo industrial.

A falta de recursos financeiros das organização brasileiras desmotiva a minha organização de apresentar propostas.

Nós preferimos focar em propostas apresentadas para chamadas bilaterais entre o Brasil e determinados países membros da União Europeia.

Outros:

How well informed?

() Qual é o seu nível de informação sobre as chamadas lançadas no âmbito do FP7* publicadas no período 2007-2013? Escolha apenas uma das seguintes opções?

Não informado

Pouco informado

Moderadamente informado

Bem informado

Muito bem informado

() Qual é o seu nível de informação sobre as chamadas lançadas da União Europeia no âmbito do Horizonte 2020*, o atual Programa de Pesquisa e de Inovação (2014-2020)?

Não informado

Pouco informado

Moderadamente informado

Bem informado

Muito bem informado

() Por que que você não está informado?

Eu não conheçco os sites na internet onde eu posso encontrar tais informações.

Ninguém nunca me explicou o que são os programas FP7 e Horizonte 2020.

A minha organização nunca obteve informações atualizadas sobre tais programas.

Eu sou novo neste área de projetos europeus de Pesquisa e de Inovação.

Outros:

() Por que você não está bem informado?

Recebi informações, mas é difícil compreender o jargão técnico das chamadas europeias.

Eu sou novo nesta área e, portanto, todas as informações relacionadas aos programas da União Europeia não estão no meu centro de interesse.

A minha organização nunca recebeu informações sobre esses programas.

A colaboração na área da Pesquisa Internacional não tem sido, até ao momento, uma prioridade da minha organização.

Outros:

Interest in international STI collaboration

() Qual é o objetivo mais importante de cooperação de Pesquisa e Inovação internacional,

na perspectiva da sua organização?

1=Sem importância 10=Muito importante

Por favor, escolha a resposta adequada para cada item:

1 2 3 4 5 6 7 8 9 10

Pessoal: Intercâmbio de pessoal de (acolhimento e envio de pessoal)

Projetos: colaborativos em Pesquisa e Inovação (trabalhando com parceiros europeus)

Publicações: Colaboração conjunta em publicações científicas

Negócios: cooperação tecnológica com potencial comercial com parceiros no exterior

Infraestruturas e equipamentos: acesso a infraestruturas de Pesquisa internacional

() Por favor, indique o interesse da sua organização nas seguintes oportunidades de financiamento:

1=Sem importância 10=Muito importante

Por favor, escolha a resposta adequada para cada item:

1 2 3 4 5 6 7 8 9 10

Chamadas do Estado Brasileiro em Pesquisa, Tecnologia e Inovação (Finep, BNDES, Fapesp, Fape´s, Embrapii, etc..)

Chamadas bilaterais entre o Brasil e países membros da União Europeia com foco em Pesquisa e Inovação;

Programas de Pesquisa e Inovação (como o Horizonte 2020 ou projetos colaborativos);

As chamadas internacionais entre o Brasil e outros países, fora da Europa (por exemplo, Brasil e EUA, etc).

() O que poderia ser um incentivo para garantir a participação da sua organização no âmbito do programa europeu de Pesquisa e Inovação - Horizonte 2020?

Por favor, escolha as opções que se aplicam:

Aumento da visibilidade internacional e reconhecimento do nosso trabalho.

Inclusão nas redes internacionais em nossos campos de trabalho.

Obtenção de vantagem competitiva no âmbito empresarial, pelo acesso a novos mercados.

Desenvolvimento de novos produtos ou serviços com potencial para a exploração de negócios.

Desenvolvimento de parcerias relevantes com diversos organismos em nossos campos de trabalho.

Acesso a recursos financeiros importantespara a execução dos projetos.

Aumento do conhecimento científico-tecnológico no nosso campo de atuação e contribuição para a resposta aos desafios societais e industriais.

Outros:

() Qual dos seguintes aspectos poderia potencialmente aumentar a sua participação noprograma Horizonte 2020* dentro da sua organização?

Por favor, escolha as opções que se aplicam:

Ter informações claras e precisas sobre chamadas da União Europeia no quadro do Horizonte 2020, diretamente ligadas ao meu setor.

Ter acesso às informações de organizações da UE e suas áreas específicas e interesses na implantação de cooperação com as organizações brasileiras.

Ter informações claras sobre os critérios de elegibilidade, seleção e financiamento para as organizações brasileiras.

Ter apoio técnico durante a preparação da proposta.

Ter apoio financeiro dentro da minha organização para a preparação da proposta.

Ter mais encontros para formação e informações sobre as oportunidades de financiamento no quadro das propostas da União Europeia.

Ter um banco de dados on-line onde eu poderia identificar parceiros de países da UE na nosso área de trabalho.

Eu gostaria que as oportunidades de financiamento fossem mais abrangentes (por exemplo, provisão para pagamento de pessoal de pesquisa)

Outros:

() Quais seriam as atividades de apoio que poderiam potencialmente aumentar a sua participação em projetos no âmbito do Horizonte 2020*?

Participação em conferências científicas entre os parceiros da União Europeia.

Participação em reuniões de networking.

Criação de redes para facilitar o contato com os parceiros internacionais mais relevantes possibilitando assim uma partilha de competências em interesses centrais entre Brasil e União Europeia.

Serviços de orientação e treinamento a serem disponibilizado para os futuros participantes no Horizonte 2020.

Sessões de informação regulares sobre chamadas lançadas no âmbito do Horizonte 2020, tanto para as universidades quanto para as empresas.

Maior assistência e orientação dadas pelo(s) Ponto(s) de Contato Nacionais brasileiros.

Atividades de formação para a preparação da proposta e execução do projecto.

Outros:

() O que você espera ganhar com a participação bem sucedida no Horizonte 2020*?

Por favor, escolha as opções que se aplicam:

Publicações em revistas e livros internacionalmente revisados

Pessoal capacitado internacionalmente / (por exemplo, Mestrado, Doutoramento, Pós-doc)

Prémios

Participação em conferências científicas, seminários ou workshops

Patentes concedidas

Acordos de licenciamento

Métodos e técnicas significativamente melhorados

Impactos econômicos

Impactos sociais

Outros:

Information about participant

() Qual das seguintes alternativas melhor descreve a sua organização?

Por favor, escolha as opções que se aplicam:

Universidade / Faculdade

Instituto Público de Pesquisa / Centro de Pesquisa Público

Instituto Privado de Pesquisa / Centro de Pesquisa Privado

Micro empresa (renda anual de até R $ 360,000);

Empresa de pequeno porte (renda anual de R $ 360,001 até R $ 3.600.000);

Autoridade pública / Agência

Outros:

() Qual das seguintes alternativas melhor descreve o seu papel na sua organização?

Por favor, escolha as opções que se aplicam:

Pesquisador

Pesquisador-líder / coordenador de pesquisa

Diretor

() Por favor indique o Estado da organização:

Favor escolher apenas uma das opções a seguir:

Acre

Alagoas

Amapá

Amazonas

Bahia

Ceara

Distrito Federal

Espírito Santo

Goiás

Maranhão

Mato Grosso

Mato Grosso do Sul

Minas Gerais

Pará

Paraíba

Paraná

Pernambuco

Piauí

Rio de Janeiro

Rio Grande do Norte

Rio Grande do Sul

Rondônia

Roraima

Santa Catarina

São Paulo

Sergipe

Tocantins

Outros

() Qual das seguintes alternativas melhor descreve o setor de atuação de sua organização?

Por favor, escolha as opções que se aplicam:

Ciências Marinhas

Bio-Economia

Segurança alimentar

Agricultura sustentável

Energia

Nanotecnologia

Tecnologia da Informação

Outros:

() Você estaria disposto a fornecer mais informações em um grupo de discussão / entrevista (por telefone ou skype)?

Favor escolher apenas uma das opções a seguir:

Sim

Não

() O seu contato de correio electrónico é:

Só responder essa pergunta sob as seguintes condições:

() Você gostaria de receber a newsletter do projeto INCOBRA?

Favor escolher apenas uma das opções a seguir:

Sim

Não

Obrigado por sua participação no inquérito!

Se você tem dúvidas sobre a pesquisa entre em contato com os responsáveis brasileiros por meio dos seguintes e-mails: :

Financiadora de Estudos e Projetos - Finep

Julio Cesar imenes – jcimenes@finep.gov.br

Vívian Pires - vcpires@finep.gov.br

FAPESP

Sergio Queiroz - squeiroz@ige.unicamp.br

Adicioalmente, se você está interessado em ter mais informaçõs sobre a pesquisa, entre em contato com os líderes de tarefa

responsáveis do Centro de Inovação Social, Viena, Áustria (Teresa de Oliveira, deoliveira@zsi.at)

Clique aqui se você quiser receber a Incobra Boletim informativo:

Para outras dúvidas sobre o projeto Incobra não hesite em entrar em contato com o coordenador do projeto:

André Barbosa na Sociedade Portuguesa de Inovação - Porto, Portugalandrebarbosa@spi.pt

Atenciosamente

O consórcio do projeto INCOBRA

| Annex II – Additional data

Figure 30: Participant's level of knowledge about FP7 and Horizon 2020

	Universities	Public research institutes	Private Research Institutes	Micro Entreprises	Small Entreprises	Medium & Large Entreprises	Agencies	Total (%)
Informed about FP7								
Not informed	17	5	12	15	29	64	1	56,3
Slightly informed	17	7	12	5	12	22	1	29,92
Somewhat informed	4	5	3	1	5	9	0	10,63
Very informed	2	1	2	0	2	1	0	3,15
Extremely informed	0	0	0	0	0	0	0	0
Informed about H2020								
Not informed	12	4	15	14	21	61	1	50,39
Slightly informed	20	7	5	6	22	26	1	34,25
Somewhat informed	5	5	6	1	3	7	0	10,63
Very informed	3	1	3	0	1	1	0	3,54
Extremely informed	0	1	0	0	1	1	0	1,18

Figure 31: Distribution of reasons for the lack of information per organisation type[29]

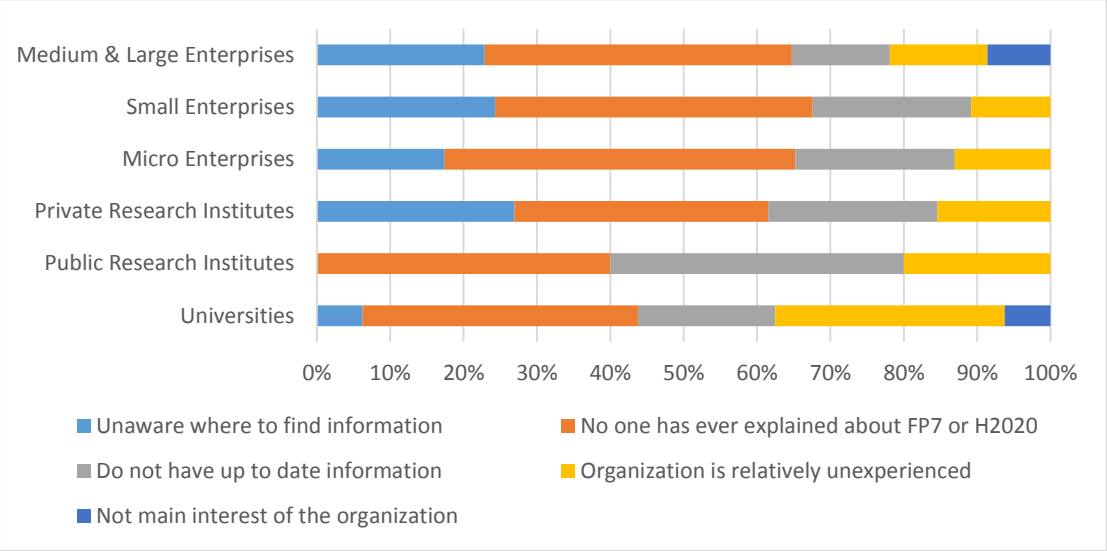
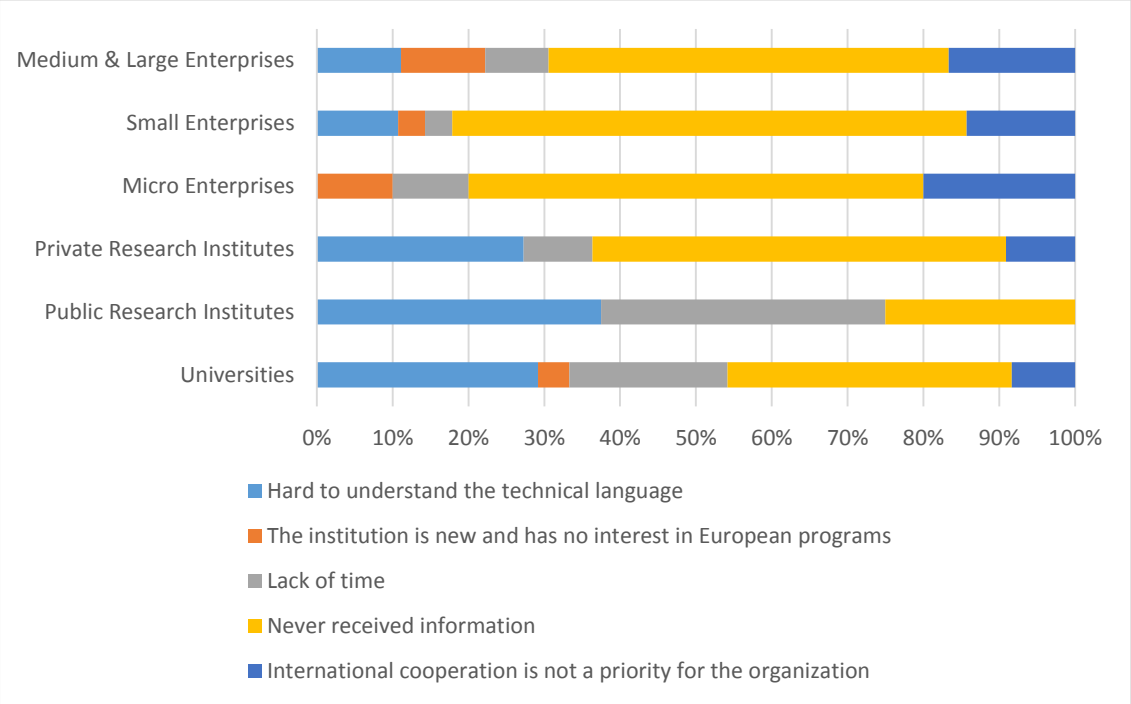


Figure 32: Distribution of the reasons for being slightly informed per organisation[30]



[29] The sum of percentages here is more than 100% for the reason that the respondents have answered more than one answer.

[30] The sum of percentages here is more than 100% for the reason that the respondents have answered more than one answer.

Figure 33: Distribution of the reasons for not intending to submit a proposal under Horizon 2020 per organisation type

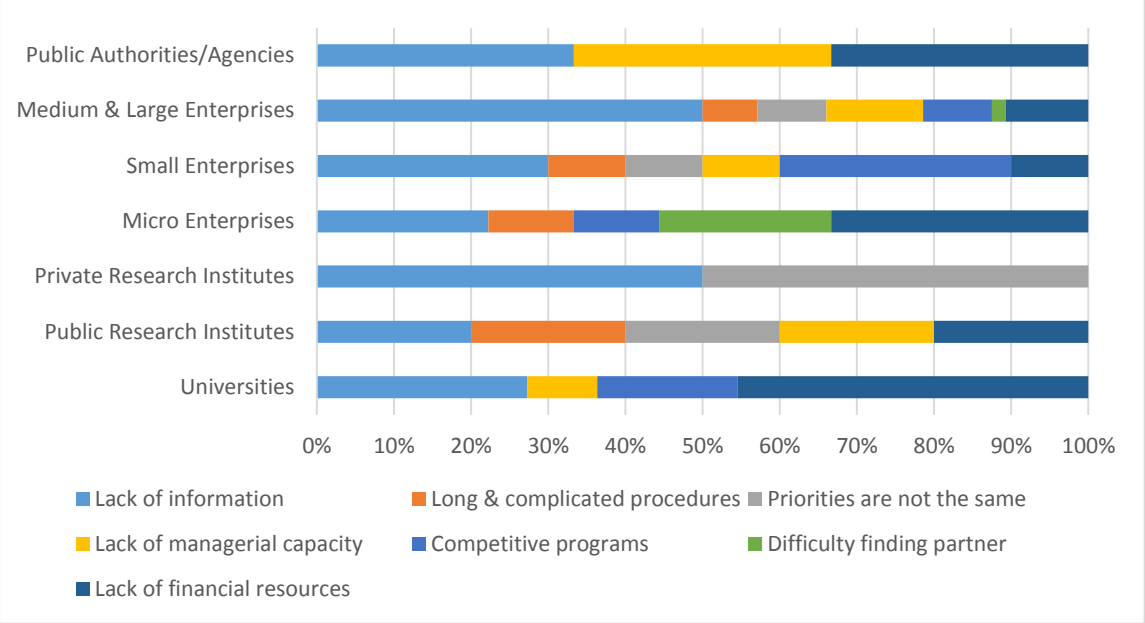


Figure 34: Benefits and outputs expected from participating in Horizon 2020 per organization type, in absolute numbers

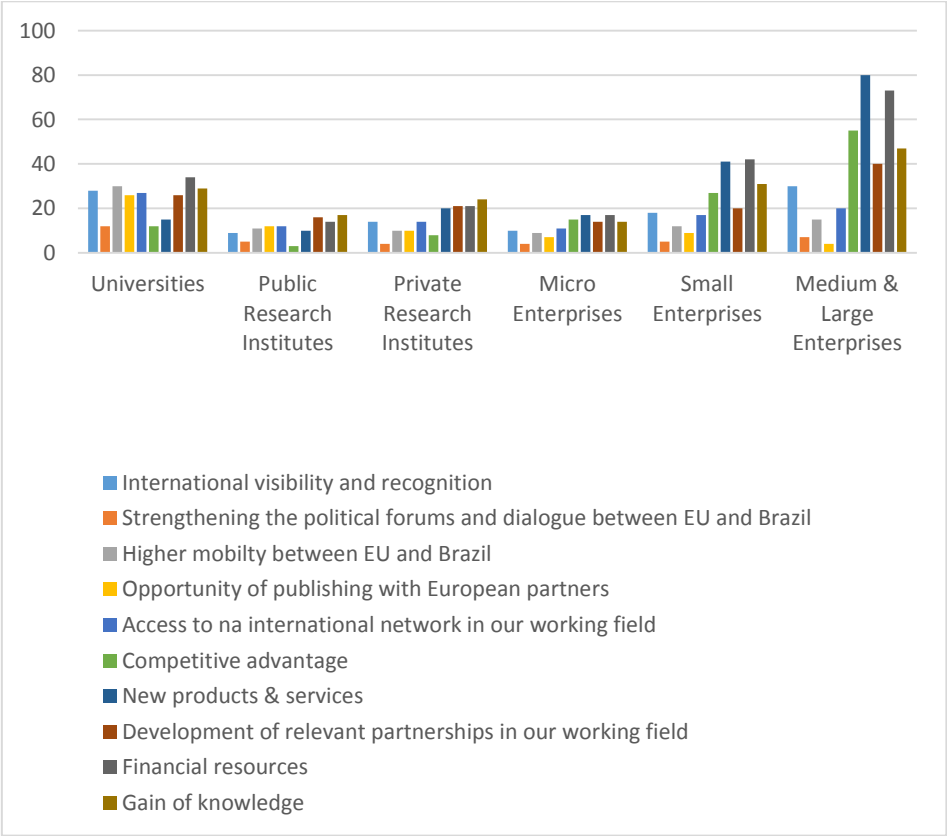


Figure 35: Distribution of criteria that could potentially increase the Brazilian participation in Horizon 2020 per organisation type, in relative numbers

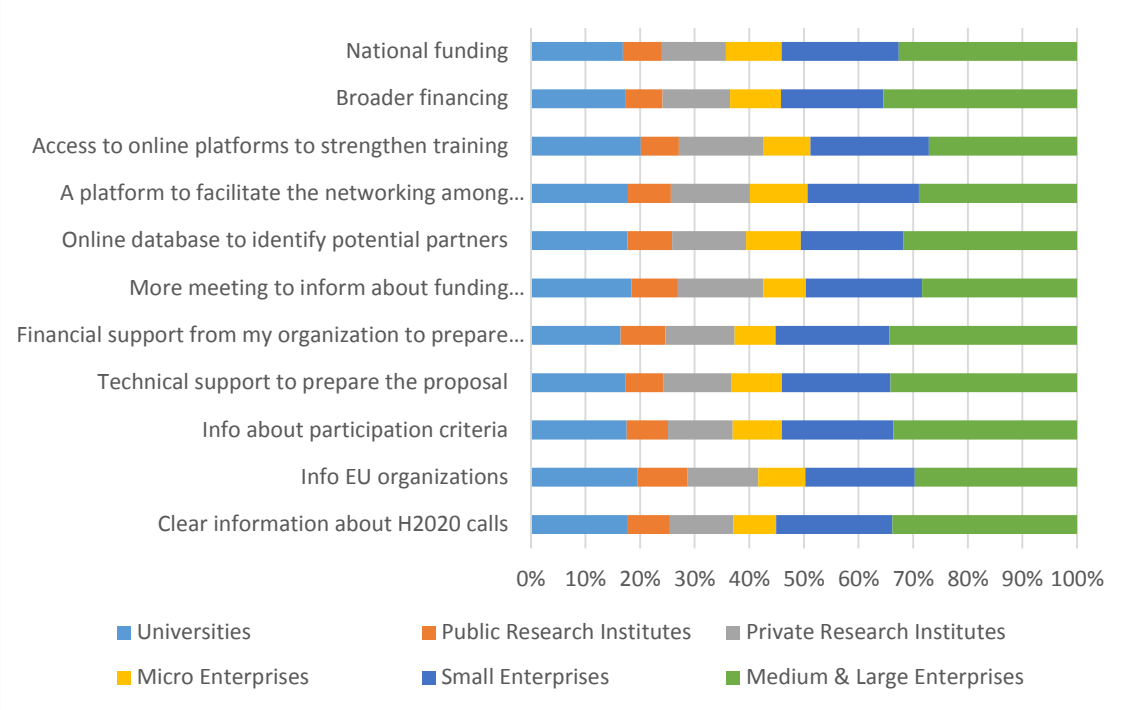


Figure 36: Distribution of the importance of support activities to enhance the Brazilian participation in Horizon 2020, per organisation type, in relative numbers

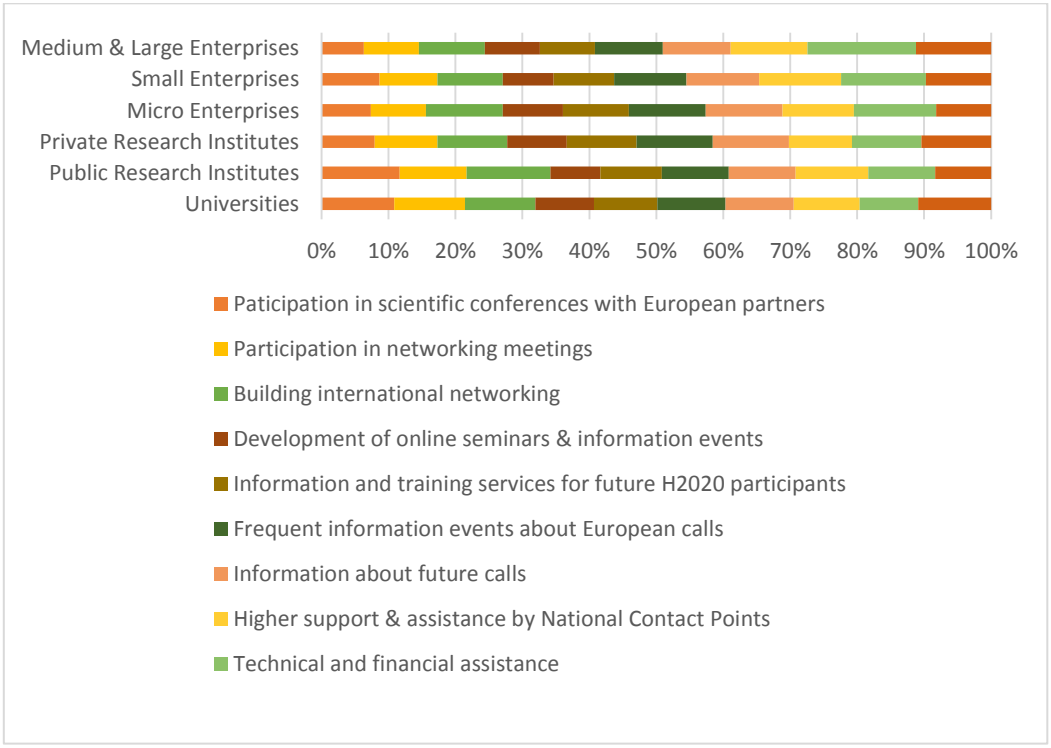


Figure 37: Distribution of personal motivations for participating in Horizon 2020, per organisation type, in relative numbers