

# **INTERNATIONAL ORIENTATION AND COORDINATION AMONG EUROPEAN RESEARCH FUNDERS**

- FINDINGS AND RECOMMENDATIONS  
FROM RECENT SURVEY

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## INDHOLD

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The Danish Business Research Academy (DEA) is a non-profit, non-governmental organisation formed with the aim of stimulating and strengthening the interplay between research and business.

## 1. INTRODUCTION

Much attention has been devoted in recent years to the importance of strengthening intra-European research collaboration and coordination for sustaining European competitiveness in the global economy. Coordination among research funders is particularly interesting in this respect, as research councils and other research funding organizations play an important role in shaping research priorities, implementing R&D programmes, and allocating funds for research activities.

Transnational research collaboration and coordination enable the exploitation of complementary research strengths across countries, joint policy responses to common challenges such as for example climate change, more efficient coordination of research activities, and strengthened competitiveness in the global science and technology arena.

Increased coordination and collaboration between European research funders therefore plays an important role in supporting the development of the European Research Area (ERA) and efforts to reach the Barcelona objectives of raising investment in research to three percent by 2010.

It is, however, widely recognized that European research coordination and collaboration leaves something to be desired, an issue that has, among others, been explored in studies commissioned by the European Commission in 2005 and 2008.<sup>1</sup>

The purpose of this note from the Danish Business Research Academy (DEA) is to build on these previous studies by presenting results from a recent survey among European research funding bodies on the current degree of international orientation and coordination in the European research funding system.

The survey was conducted as part of a larger study of the internationalization of Danish private sector research, published in its entirety in the DEA report "Knowledge across borders."<sup>2</sup> As such, the survey is smaller in scope than the aforementioned previous reports on international research collaboration and co-

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<sup>1</sup> See for example two 2008 reports from DG Research of the European Commission, written by two ERA Expert Groups, "Optimising research programmes and priorities" and "Opening to the world: International Cooperation in Science and Technology." See also two reports developed in 2005 for the European Commission by Optimat Ltd and VDI/VDE-IT GmbH, "Examining the Design of National Research Programmes" and "Increasing the Impact of National Research Programmes through Transnational Cooperation and Opening: Good Practice Guide".

<sup>2</sup> The study was undertaken for DEA by the Copenhagen-based research and consulting firm DAMVAD and published (in Danish) in April 2009.

ordination. However, the survey updates and lends support to key findings in these reports, notably regarding the barriers to increased intra-European research collaboration and coordination that persist.

The main conclusion emerging from this survey is that European research funders have a substantial degree of international orientation and engage in a broad range of activities towards greater transnational research collaboration and coordination. As such, considerable progress towards greater awareness and use of mechanisms for increased transnational research coordination has been made among European research funders. However, there is still a significant proportion of research funders whose funds have a non-existent or limited degree of openness towards, for example transnational research projects, contributions to common pots and non-resident research participants. The results of the survey therefore also indicate that there is still much scope for improvement, if the Barcelona objectives are to be realized.

## 2. KEY FINDINGS AND IMPLICATIONS OF THE SURVEY

The survey was conducted among 71 research funding bodies in 27 European countries, with a total yearly budget of approximately 20 billion euro. A total of 33 research funding bodies, representing 48 percent of the total funds of the 71 research funders contacted, took part in the survey.

The results of the survey indicate that there is a substantial degree of international orientation and openness in European research funding bodies. At the same time, the survey also points to significant further scope for improvement. The survey shows that a number of barriers persist, notably national and international administrative barriers, fear of losing national research funding to foreign research participants, lack of strategic focus on international cooperation, and lack of coordination of national and international research priorities and programmes.

The survey showed that a quarter of the research funders who participated would like to increase the proportion of funds that they allocate to non-domestic research. We therefore need to get better at exploiting the possibilities for international research collaboration and cooperation on funding, to open up funds in European research councils even more to foreign applicants and collaborators.

However, more than a third of the respondents indicated that they either cannot or choose not to allocate grants to non-domestic researchers and organizations, typically because of national legal or political obstacles. In total, only about 10-15 percent of all public research funds are coordinated (at the federal level) in the EU, compared to 85-90 percent in the US.

This points to a need to address some of the barriers to transnational research funding and harmonisation of funding criteria and procedures. Among other things, we need to further strengthen collaboration with research funding bodies in other countries with a view to harmonising national procedures for the treatment and assessment of applications from non-domestic researchers and transnational projects. The purpose of this is to secure the bureaucratic infrastructure, which is necessary to secure an efficient internal market for knowledge, including better and easier access to international research funds for Danish organizations.

The survey also draws attention to common pots as an important mechanism for increasing transnational research collaboration and coordination in Europe. This is because common pots require the harmonisation and standardization of procedures for applying for and granting international research projects. Moreover, they constitute an important forum for transnational collaboration and the exchange of knowledge and best practices in research funding.

The survey showed that more than half of European research funders who completed the survey can commit funds to common pots, but that a number of barriers to participation in common pots exist, particularly political and administrative barriers that create reluctance and reduce incentives to contribute to joint research programmes and research funding endeavours. Such barriers must be addressed. Moreover, strengthening the use of common pots requires increasing contributions to the administration and funding of joint international research funds that are allocated and granted by independent organizations based on jointly defined guidelines and objectives.

### **3. AIMS AND METHODS OF THE SURVEY**

The survey had three objectives. First, to characterize European research funders according to their degree of international orientation and the types of international activities they pursue. Second, to assess the current extent of collaboration between European research funders, building on previous studies of the extent of research coordination in Europe. Third, to point to key opportunities and challenges for further strengthening research coordination.

The 71 research funders to whom the survey was sent out were identified through their membership of EUROHORC (European Heads of Research Councils) or as "research funders" in ERAWATCH's Research Inventory. The survey was administered in February and March 2009.

A total of 43 responses were received, of which 10 were incomplete and therefore excluded. The remaining 33 responses (for a response rate of 46 percent) stem from research funding bodies in the following 18 European countries:

- Austria
- Belgium
- The Czech Republic
- Denmark
- Estonia
- Finland
- Germany
- Great Britain
- Holland
- Hungary
- Ireland
- Latvia
- Lithuania
- Luxembourg
- Norway
- Romania
- Slovenia
- Sweden

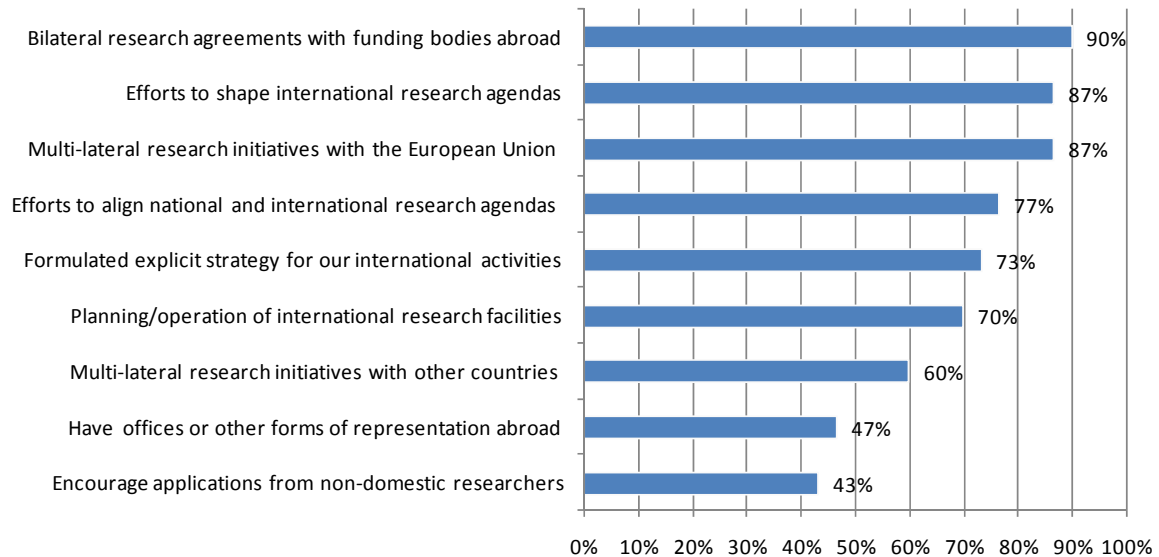
Moreover, these 33 research funding bodies represent 48 percent of the total funds of the 71 research funders contacted.

#### 4. INTERNATIONAL ORIENTATION AMONG RESEARCH FUNDERS

The participating research funding organizations were asked to indicate in what types of international activities they engage. The results are presented in Figure 1, which shows that the research funders are involved in a broad range of international activities. The vast majority (90 percent) of the research councils participate in bilateral research agreements with funding bodies in other countries. In addition, 87 percent of the respondents participate in multilateral research initiatives within the EU, and 60 percent in multilateral activities with other countries.

The survey also showed that most research councils seek to actively influence international research priorities and agendas (87 percent) and to align national research priorities and programmes with international research agendas (77 percent).

Figure 1: International activities in European research funding organizations



N = 32. Source: DEA (2009), "Knowledge across borders."

Figure 1 also shows that 73 percent of the respondents have formulated an explicit strategy for their international activities. One respondent explained that their organization is about to formulate a more explicit internationalization strategy, as their international activities have mostly been opportunity-driven in the past.

In addition, 47 percent have established representation abroad, and 43 percent actively encourage non-national research participants to apply to their research programmes. Finally, 70 percent of respondents participate in the planning and operations of international research infrastructures and facilities.

The survey also examined which geographical regions were of most importance to the research councils. Respondents were therefore asked to rate a series of geographical regions according to the degree of strategic importance that they attached to the region.

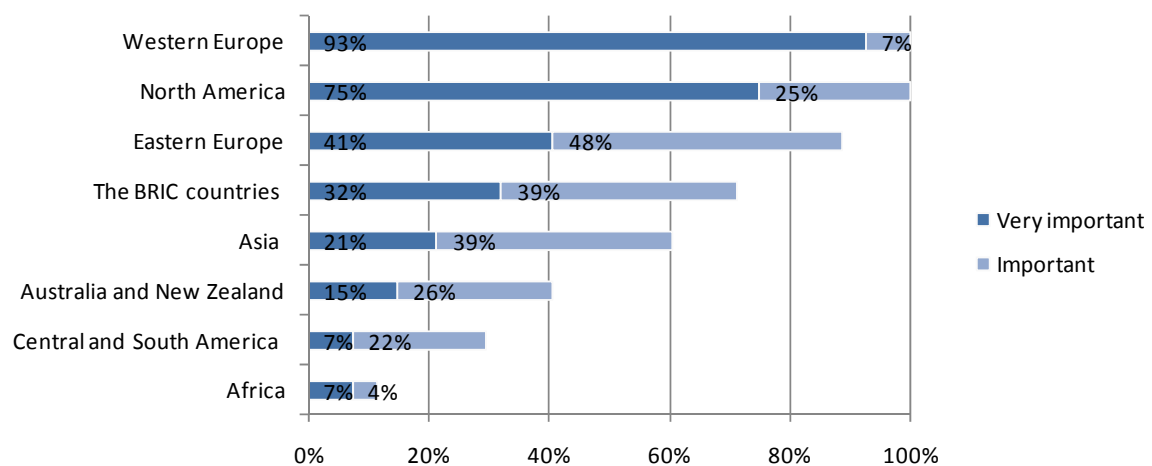
The results are presented in Figure 2. Not surprisingly, 93 percent of the research councils answered that Western Europe was "very important" to them. The second most important region, as perceived by the respondents, is North America with 75 percent of research funders indicating that this region is "very important."

Almost 90 percent of the respondents also view Eastern Europe to be a strategically important region for their activities. However, only 41 percent deemed this region to be "very important."

The rapidly-growing BRIC countries (Brazil, Russia, India and China) and Asia (except India, Russia and China) are also on the radar of European research funders, among which 71 percent consider the BRIC countries to have strategic importance, and 60 percent describe Asia as an “important” or “very important” region.

Less importance is attached to Australia and New Zealand, and to Central and South America. Africa is only considered to be of strategic importance by a small proportion of the respondents.

Figure 2: Worldwide geographical regions according to the strategic importance to European research funders



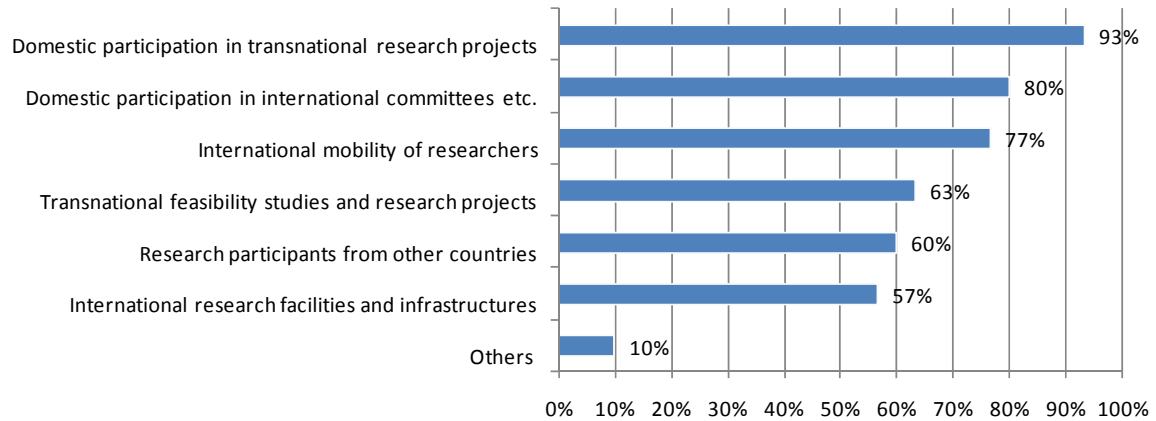
N = 28. Source: DEA (2009), “Knowledge across borders.”

Figure 3 summarizes what types of international activities are supported by the research funders who participated in the survey. It shows that research councils primarily support international research efforts by supporting domestic participation in international projects. Nearly all councils (93 percent) fund domestic participation in transnational research projects, and 80 percent fund domestic participation in international committees and networks. Moreover, 77 percent of the funding bodies that participated in the survey provide funding to encourage and enable the international mobility of researchers.

Just under two thirds of the respondents in the survey provide support for transnational feasibility studies and research projects (63 percent) and grants for non-resident research participants (57 percent). These findings point to a potential for further strengthening incentives and possibilities for allocating funds directly to transnational research ventures and non-resident researchers.



Figure 3: Types of international research activities supported by European research funding organizations



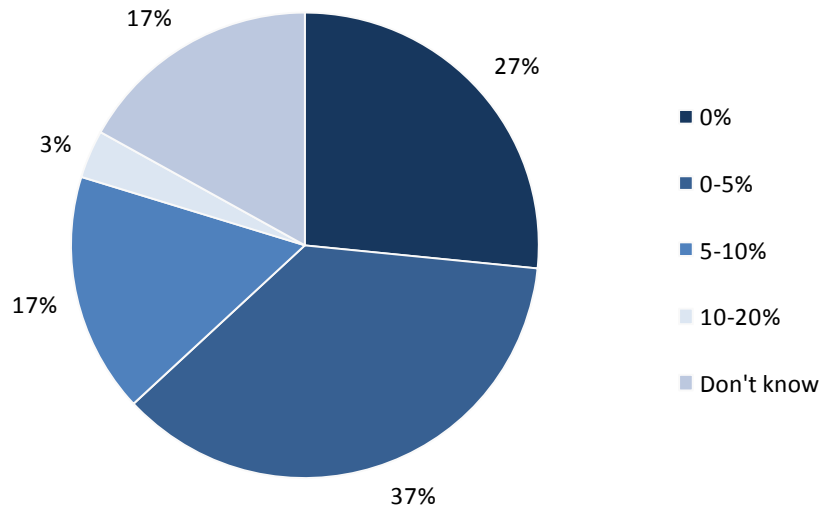
N = 32. Source: DEA (2009), "Knowledge across borders."

Respondents were also asked explicitly about their perspectives on the funding of non-resident research participants. First, respondents were asked to indicate what proportion of their annual budget is distributed to non-resident researchers.

As can be seen from Figure 4, around one quarter of the research councils (27 percent) have no distribution of funds to researchers from other countries. 37 percent distribute up to 5 percent of their annual budget to non-domestic researchers. Only 17 percent of the councils distribute 5-10 percent of the annual budget, and just one respondent indicated that they distribute more than 10 percent.

The remaining 17 percent of respondents indicated that they did not know how much of their organization's annual budget is distributed to researchers from other countries.

Figure 4: Proportion of research funders' annual budgets which is distributed to non-resident researchers

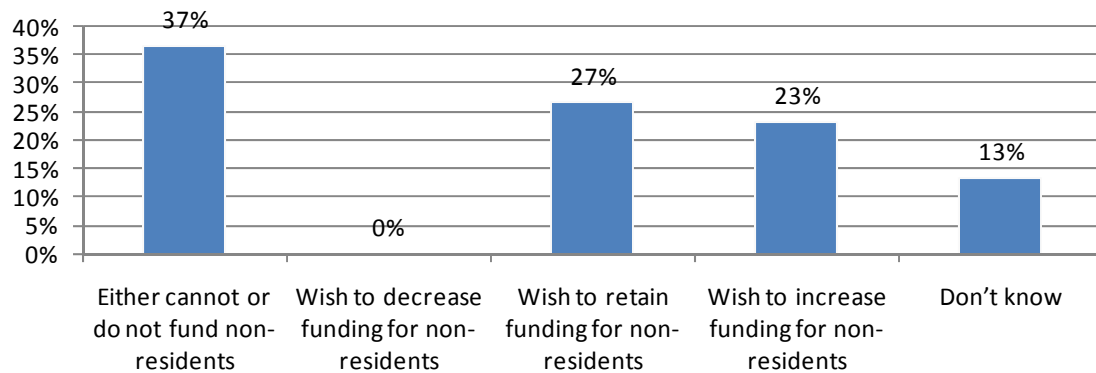


N = 29. Source: DEA (2009), "Knowledge across borders."

Respondents were then asked about their perspectives on the funding of non-national research. The results of this question are presented in Figure 5.

As shown, 37 percent indicated that they cannot or do not fund non-resident researchers and research participants. Among the remaining respondents, none wish to decrease the proportion of funds that they distribute to non-residents, and 13 percent did not express an opinion. However, a quarter of the respondents (27 percent) wish to retain the current proportion of funding for non-resident researchers, and an additional quarter (23 percent) wish to increase it.

Figure 5: Perspectives on funding non-resident research participants



N = 30. Source: DEA (2009), "Knowledge across borders."

These findings indicate that there is scope for augmenting the amount of funds in European research councils, which is used to support transnational research, for example through investments in common pots, which are the subject of the next section.

## 5. ON COMMON POTS IN EUROPEAN RESEARCH FUNDING

In this section, we focus on a particular mechanism for transnational research collaboration and coordination, namely joint international funds. Joint funds, also known as “common pots”, involve a pooling of funds from two or more participating countries and are used to promote and support specific research areas, and to align or harmonise research priorities and funding procedures. They typically involve some degree of coordinated or centralized assessment, evaluation and administration procedures.

Some common pots require all participating national systems to delegate decision-making to an appointed, independent board without any claims for *juste retour*. These are the so-called “real” or “genuine common pots,” because they involve the pooling of funds for distribution based on common research priorities and irrespective of the national origins of funded research participants. Other pots do not require transnational transfers of funds; instead, each participating country funds those components of transnational research proposals that take place domestically, and thus retains the possibility of employing distinct mechanisms to fund selected projects or participants.

These are known as “virtual common pots”, and are also referred to as the “national contributions model.”

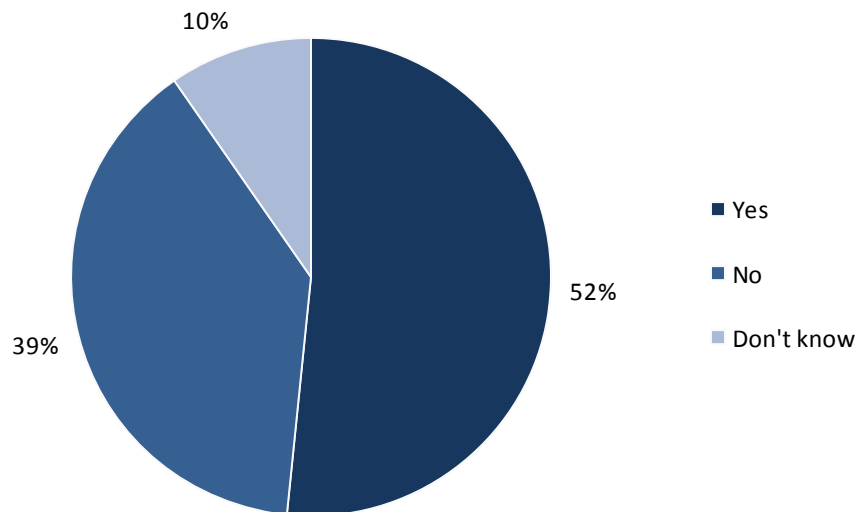
Common pots are particularly interesting because they by their very nature involve the coordination of priorities and procedures among research funders in multiple countries and – in the case of genuine common pots – the use of national funds to support non-domestic research.

Some countries and funding bodies do not allow funds to be allocated to common pots. Respondents were therefore asked to indicate whether their organization can commit funds to common pots.

As illustrated in Figure 6, more than half (52 percent) of the respondents stated that they can indeed participate in common pots, while 39 percent stated that they cannot.

10 percent of the respondents indicated that they did not know whether they could commit funds to common pots. This means that the possibility of investing in common pots is not even addressed, and therefore obviously not exploited, in one tenth of the research bodies that participated in the survey.

Figure 6: Proportion of the research funders surveyed that can commit funds to common pots



N = 30. Source: DEA (2009), "Knowledge across borders."

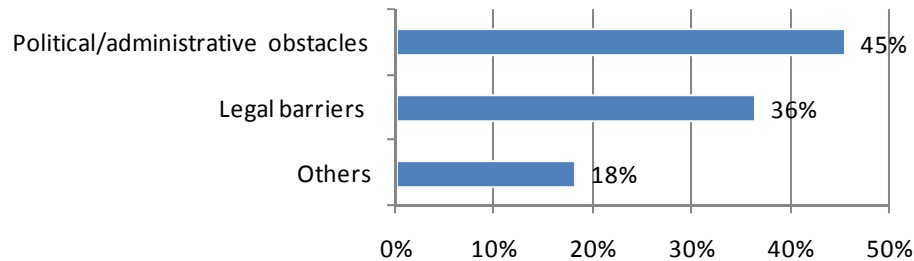
The 39 percent of respondents who indicated that they cannot commit funding to common pots were also asked to indicate why.

As can be seen in Figure 7, 45 percent of these respondents point to political and administrative barriers, while just over a third (36 percent) point to legal barriers. Moreover, the "other" barriers cited by respondents could also be classified as political and administrative barriers.<sup>3</sup>

These findings point a potential scope for reducing political resistance and administrative barriers to common pots in European research funding bodies.

<sup>3</sup> For example, one respondent explains that: "the criteria of the programmes don't allow non-project based funding or funding for non-national applicants."

Figure 7: Reasons why funding cannot be committed to common pots

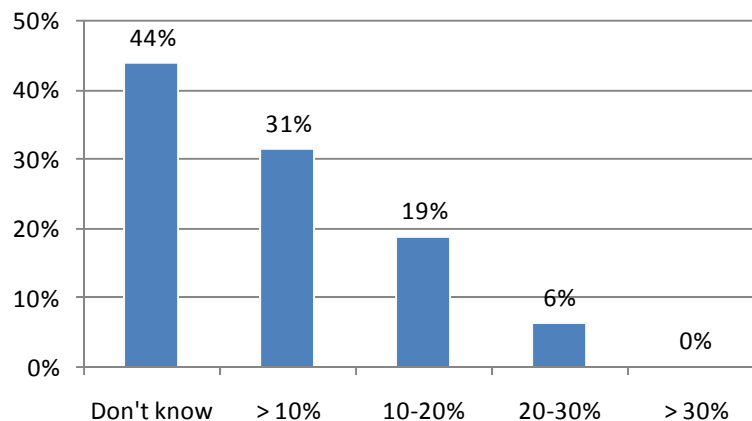


N = 12. Source: DEA (2009), "Knowledge across borders."

Respondents who stated that they could commit funds to common pots were asked to indicate whether they invested in virtual or genuine common pots, or both. In response, 13 percent of the research councils explained that they have only committed funds to virtual pots, and 6 percent responded that they have only invested funds in real common pots. Most research councils (81 percent) state that they have committed funds to both "virtual" and "real" common pots.

These respondents were also asked about the maximum proportion of their annual budget that can be committed to common pots. As apparent from Figure 8, 44 percent of the research funders do not know the maximum proportion of their annual budget that can be allocated to common pots, if there is one. However, 31 percent state that they can commit up to 10 percent of their annual budget to common pots and 19 percent that they can commit 10-20 percent. Only one respondent indicated that they can commit 20-30 percent of their budget. No respondents indicated that they could commit more than 30 percent of their annual budget to common pots, though one specified in a note that their organization had no maximum ceiling.

Figure 8: Maximum proportion of the annual budget that can be committed to common pots



N = 16. Source: DEA (2009), "Knowledge across borders."

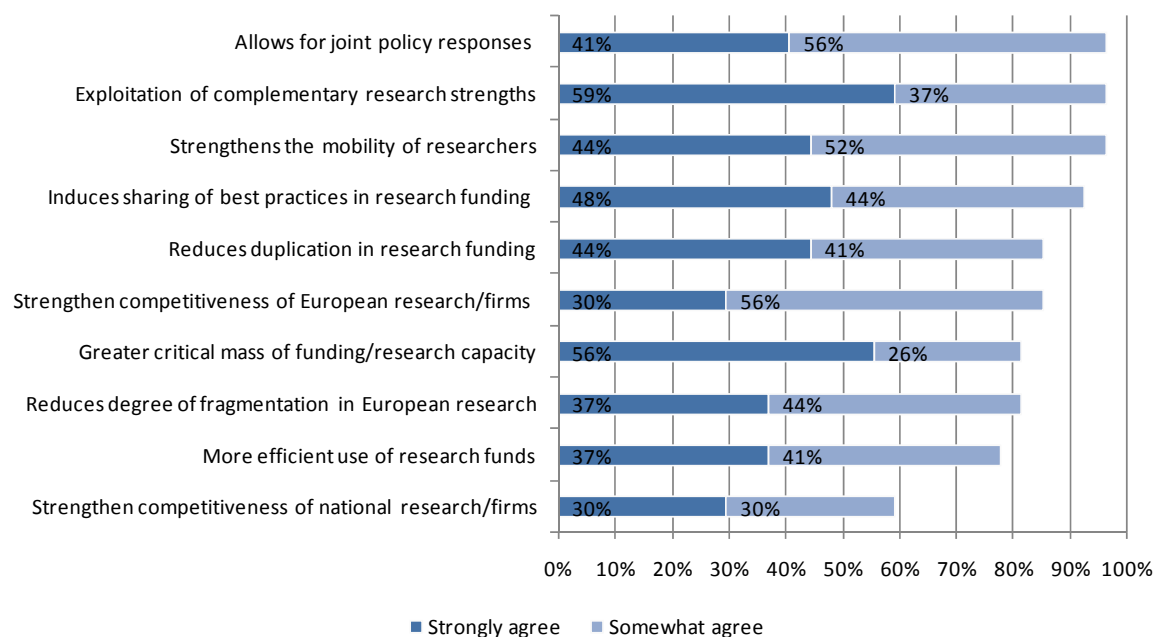
Overall, the survey shows that a substantial proportion of European research funders are able and willing to commit funds to common pots, virtual as well as real. However, there is also significant potential to strengthen the use of common pots, for example by increasing awareness of the benefits of common pots and reducing political and administrative barriers to joint funding mechanisms, particularly in the case of genuine common pots that involve funding of non-national research participants.

## 6. SCOPE AND CHALLENGES FOR INCREASED RESEARCH COORDINATION IN EUROPE

Respondents were asked to assess a range of espoused advantages of transnational research collaboration and coordination. As illustrated in Figure 9, almost all respondents “somewhat” or “strongly” agreed that international research coordination and collaboration allow for joint policy responses to common challenges such as climate change (96 percent), exploitation of complementary research strengths (96 percent), increased mobility of researchers (96 percent) and sharing of knowledge and best practices in research funding (93 percent).

Other benefits, according to research funding bodies, include reduced duplication in research and research funding (85 percent), strengthened international competitiveness of national (59 percent) and European (85 percent) research and firms, greater critical mass in research capacity and funding (81 percent), a reduced degree of fragmentation in European research (81 percent) and more efficient use of research funds (78 percent).

Figure 9: Benefits of transnational research collaboration and coordination

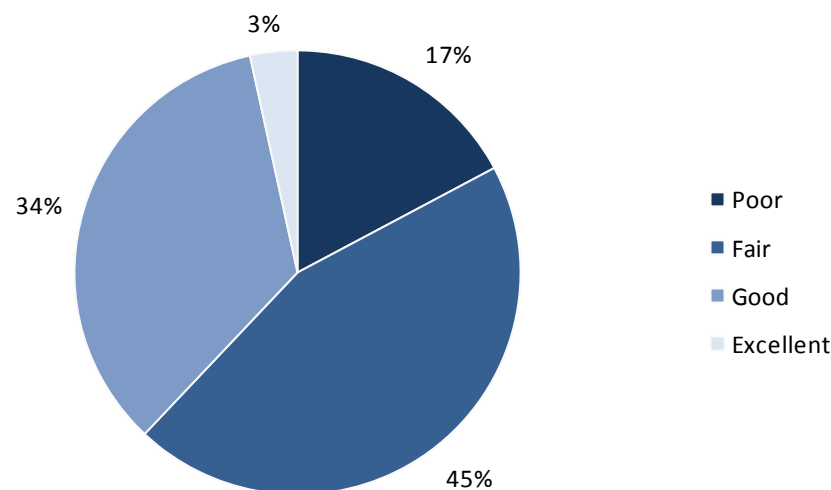


N = 27. Source: DEA (2009), “Knowledge across borders.”

Respondents were then asked to present their views on the state of transnational research cooperation in Europe. Figure 10 presents research councils' perception of the current degree of collaboration and coordination between research bodies in Europe. As indicated by the figure, about a third of respondents (34 percent) find the level of collaboration to be "good" and just three percent believe it to be "excellent." In contrast, just under half the respondents (45 percent) deem the degree of collaboration to be "fair" and an additional 17 percent describe it as "poor."

This indicates that research funders see substantial scope for improvement in the degree of collaboration and coordination between research funding bodies in Europe.

*Figure 10: The degree of transnational research collaboration and coordination in Europe*



N = 29. Source: DEA (2009), "Knowledge across borders."

The survey then asked respondents to indicate what they believe to be the main barriers for collaboration and coordination of research priorities, programmes and funding.

Figure 11 summarizes research funders' perspectives on these barriers. As shown, 85 percent of the councils "somewhat agree" or "strongly agree" that national legal, political and administrative barriers hinder collaboration and coordination. On a related note, 82 percent of respondents agreed that international barriers also constitute an obstacle.

Other important barriers are fears of losing national research funds to non-domestic researchers and research participants (cited by 81 percent of respon-

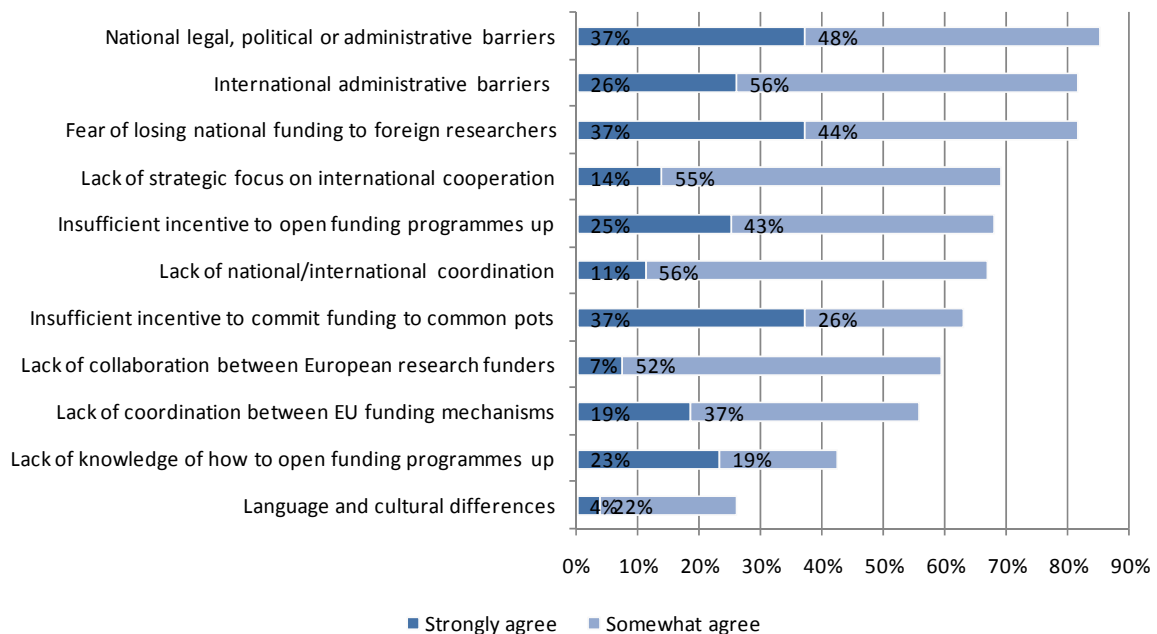
dents) and a lack of strategic focus on international cooperation (cited by 69 percent of respondents).

A substantial proportion of research funders also agree that transnational research collaboration and coordination is hampered by issues regarding the opening of national funding programmes to non-domestic participants, whether these issues are related to insufficient incentives to open programmes up (68 percent) or to a lack of knowledge regarding how to do this (42 percent).

Moreover, many respondents cite the following as barriers to international collaboration and coordination among research funders: lack of coordination between national and international research programmes (67 percent), insufficient incentives to commit funding to common pots (63 percent), and a lack of collaboration between European research funding bodies (59 percent) and between existing joint funding and collaboration mechanisms in the EU (56 percent).

Only about a quarter of the respondents (26 percent) agree that language and cultural differences constitute a barrier to international collaboration and coordination of research.

Figure 11: Barriers to transnational research collaboration and coordination



N = 27. Source: DEA (2009), "Knowledge across borders."