Programme on Innovation, Higher Education and Research for Development (IHERD)

Background document

The evolving path for strengthening research and innovation policy for development

Draft Report
Prepared by Åsa Olsson and Natalie Cooke

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This report is prepared by Åsa Olsson and Natalie Cooke within the framework of the OECD Project on Innovation, Higher Education and Research for Development (IHERD). The analysis of this report is based on information gathered through a questionnaire survey, and desk research and on case studies that are included in the Annex of this report.

It includes extracts and analysis from a number of IHERD reports, including the Report on funding mechanisms and modalities (Jacob, 2013), The report on Centre of Excellence as a tool for capacity building (Hellström, 2013), the report on Effectiveness of research and innovation management at policy and institutional levels in Cambodia, Malaysia, Thailand and Vietnam, (Olsson and Meek eds.,2013), the report on Governance of higher education, research and innovation in Ghana, Kenya and Uganda (Jowi ed.,2013) and the Issues Papers prepared for OECD/IHERD, notably Innovation and research policy for development (Merle, 2011) and on Higher education governance and institutional management (Meek, 2011).
### Acronyms and abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AfDB</td>
<td>African Development Bank</td>
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<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>BRICS</td>
<td>Brazil, Russia, India, China and South Africa</td>
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<td>CoE</td>
<td>Centre of excellence</td>
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<td>DAC</td>
<td>Development Assistance Committee</td>
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<td>EC</td>
<td>European Commission</td>
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<td>ERA-NET</td>
<td>European Union instrument for coordinating and structuring the European</td>
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<td></td>
<td>Research Area</td>
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<td>EU</td>
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<td>GBAORD</td>
<td>Governmental budgetary allocations or outlays to research and development</td>
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<td>GOVERD</td>
<td>Government intramural expenditure on R&amp;D</td>
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<td>GCF</td>
<td>Green Climate Fund</td>
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<td>IFIs</td>
<td>International Financial Institutions</td>
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<td>IHERD</td>
<td>Higher Education and Research for Development</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IPCC</td>
<td>Panel on Climate Change</td>
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<td>IRD</td>
<td>Institute for Research and Development</td>
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<td>Meta instruments</td>
<td>Funding instrument instruments used for the purpose of coordinating</td>
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<td></td>
<td>research and innovation investments transnationally</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MAVC</td>
<td>Making All Voices Count</td>
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<tr>
<td>NESTA</td>
<td>National Endowment for Science Technology and the Arts</td>
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<td>ODA</td>
<td>Official Development Assistance</td>
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<td>PAU</td>
<td>Pan-African University</td>
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<tr>
<td>PhD</td>
<td>Doctor of Philosophy</td>
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<td>PRSP</td>
<td>Poverty Reduction Strategy Papers</td>
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<tr>
<td>R&amp;D</td>
<td>Research and development</td>
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<td>S&amp;T</td>
<td>Science and technology</td>
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<td>STI</td>
<td>Science Technology and Innovation</td>
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<td>R&amp;I</td>
<td>Research and Innovation</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>DFID</td>
<td>Department for International Development</td>
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<td>Sida</td>
<td>Swedish International Development Assistance Agency</td>
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<td>IDRC</td>
<td>International Development Research Centre</td>
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<td>UK</td>
<td>United Kingdom</td>
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<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
</tbody>
</table>
## Contents

Executive summary................................................................................................................. 6

1. Introduction......................................................................................................................... 7

2. Research and innovation policy as means for realising the knowledge economy? .......... 9
   2.1. Implications of the knowledge economy on research and innovation policy ......................... 9
   2.2. Capacity-building in higher education and research- what does that include? ...................... 10
   2.3. Potential areas for improvement in research and innovation policy in developing countries ...... 11

3. Types of funding mechanisms in developing countries to support research ................. 12
   3.1. Competitive and non-competitive funding mechanisms for research ................................. 13
   3.2. Centre of excellence as a strategic funding mechanism for research and innovation? .............. 14
   3.3. The importance of meta instruments for developing countries ............................................ 16

4. Development of research universities in developing countries ....................................... 18
   4.1. A global outlook ............................................................................................................. 18
   4.2. Leadership and management of public research institutions in developing countries .......... 19

5. Potential roles for development assistance in research and innovation policy ............. 21
   5.1. Overview of development assistance to research ............................................................. 22
       Historical overview ........................................................................................................... 22
       What are the development assistance agencies .................................................................... 23
   5.2. Objectives and governance of development assistance and its implications on higher education and research ................................................................. 26
       Overall objectives and governance framework of development assistance ....................... 26
   5.3. Objectives, funding and evaluation mechanisms in development assistance to research ...... 29

6. Opportunities and challenges for support to research and innovation policy in developing countries ............................................................................................................ 34
   6.1. Conclusions .................................................................................................................. 34
   6.2. Further reflections on an action agenda ........................................................................... 35

References ............................................................................................................................. 37

Annex 1. Study on foreign assistance for research ................................................................. 40
   Scholarships ......................................................................................................................... 47
   Funding mechanisms ........................................................................................................... 51

Annex 2. Case study on African Union Grant Programme ...................................................... 60

Annex 3.1. Minutes African Union .......................................................................................... 80

Addis Ababa, 30 May 2012 ...................................................................................................... 80

Organisation and MoU: ......................................................................................................... 80

Awareness creation ................................................................................................................. 82
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>82</td>
</tr>
<tr>
<td>Call for candidates and scholarships</td>
<td>82</td>
</tr>
<tr>
<td>Multilingualism</td>
<td>84</td>
</tr>
<tr>
<td>Recognition of the degree</td>
<td>84</td>
</tr>
<tr>
<td>Communication between PAU institutes</td>
<td>84</td>
</tr>
</tbody>
</table>
The OECD has carried out a study on The evolving path for strengthening research and innovation policy for development, as a part of the OECD project on Higher Education and Research for Development (IHERD), which is financed by the Swedish International Development Cooperation Agency (Sida).

This report identifies the implications that the knowledge economy has had on research and innovation policy in developing countries. This resulted in the attempt to integrate higher education and research systems into macroeconomic policies to stimulate technological renewal (research and innovation policy). While the connection between higher education and innovation is a critical one for social and economic development, there is little knowledge on organisational practices and conditions under which research is produced.

Furthermore, it examines the issues of capacity building in higher education and research and presents strategic areas for capacity building in research and innovation policy, drawing on the findings of a number of IHERD studies (Jacob, 2011, 2013, Hellström, 2013 and Olsson and Meek eds., 2013).

The following chapter provides an overview of the different types of funding mechanisms that are applied in developing countries. The most commonly used funding mechanisms are block grants predominantly concentrated on agriculture and health in a few public research institutions. There are, however, other emerging funding instruments that have the potential to strengthen developing countries capacity to implement research and innovation policies (Jacob 2013). These include centre of excellence on the national level and access to global research through the participation in meta instruments, that is funding instruments that coordinate research funders across national borders (Hellström, 2013, Jacob 2013).

The report then gives an overview of key opportunities and challenges that developing countries are facing in the development of research universities. This part provides an overview of key areas requiring attention in the area of leadership and management of research and innovation policies, including institutional leadership and management of research and innovation (Olsson and Meek eds., 2013).

The key focus of the report is to explore the current role that development assistance in addressing capacity-building needs for designing and implementing research and innovation policy is then provided.

This is done by providing an overview of the history of development assistance to research, identifying the development assistance agencies, reviewing the objectives and the governance of development assistance and its implications for higher education and research. This part shows that development assistance can be broadly grouped into four categories:
- Funding that supports countries’ ability to design and implement research policy
- Funding that supports research as a component of addressing specific socio-economic objectives
- Funding to basic research relevant for development
- Commissioned research to inform development assistance policies and programmes

Based on the results of a questionnaire survey on development assistance to research carried out for this report during 2012, and other IHERD studies (Jowi ed. 2013 and Jacob 2011), this report finds that there is a great variety and mix across funders with some placing a greater priority on research than others. Overall, it is difficult to get a full picture of the research funding landscape in development assistance because of the lack of definition of what research encapsulates.

Finally opportunities and challenges of providing development assistance for research are identified and suggestions of possible future action points are provided for developing countries and for development assistance organisations to build research and innovation capacities.

1. Introduction

This synthesis report aims to situate development assistance for research in the broader political and funding context and suggests strategic options that developing countries and donors in development assistance can apply if aiming to strengthen developing countries’ ability to design and implement research and innovation policy.

This report draws on the results from OECD/IHERD reports that have been commissioned as a part of the OECD project on Innovation, Higher Education and Research for Development (IHERD), financed by the Swedish International Development Cooperation Agency (Sida). These are:

- The Report on funding mechanisms and modalities (Jacob, 2013),
- Centre of Excellence as a tool for capacity building (Hellström, 2013),
- Effectiveness of research and innovation management at policy and institutional levels in Cambodia, Malaysia, Thailand and Vietnam, (Olsson and Meek eds.,2013)
- Governance of higher education and research policy: Comparative Analysis of Ghana, Kenya, Uganda (James Jowi ed. 2013)
- Issues Papers prepared for OECD/IHERD, notably Innovation and research policy (Merle 2011) and Higher education governance and institutional management (Meek 2011)

In addition, the result of cooperation with the Society for Research into Higher Education, which resulted in a special issue in Studies in Higher Education on the theme “Research Universities: Networking the knowledge economy” has also contributed to this report.

This synthesis report is structured in the following way:
• Identifies the implications that the knowledge economy has had on research and innovation policy in developing countries
• Provides an overview of the different types of funding mechanisms that are applied in developing countries and shows the potential of emerging funding instruments in developing countries
• Presents an overview of key policy imperatives for building research universities in developing countries
• Gives an overview of the current role that development assistance plays in addressing capacity-building needs for designing and implementing research and innovation policy.
• Provides conclusions and recommends strategic options for developing countries and donors in providing development assistance for research and innovation policy.

The first part of this report provides insights on the implications that the knowledge economy has had on research and innovation policy in developing countries. Furthermore, it gives our definition of capacity building in higher education and research and present strategic areas for capacity building in research and innovation policy. This part draws on the following reports: *Issues Paper on Research and innovation Policy* (Jacob, 2011), the *report on research funding instruments and modalities* (Jacob, 2013), the report on *Centre of Excellence as a tool for capacity-building* (Hellström, 2013) and *Effectiveness of research and innovation management at policy and institutional levels in Cambodia, Malaysia, Thailand and Vietnam* (Olsson and Meek eds., 2013).

The second part of this report provides an overview of the different types of funding mechanisms that are applied in developing countries and shows the potential of emerging funding instruments in developing countries. It reviews the most common funding mechanisms and shows the potential of centre of excellence as a funding mechanism for developing countries. Moreover, it provides an overview of the potential policy implications derived from the increased application of meta-instruments for developing countries. This part draws on the *Report on research funding instruments and modalities* (Jacob, 2013) and the report on *Centre of Excellence as a tool for capacity-building* (Hellström, 2013).

The third part of this report gives insights on how globalisation has influenced universities in developing countries and provides an overview of key challenges with regard to institutional leadership and management in universities. This part draws on the report on *Effectiveness of research and innovation management at policy and institutional levels in Cambodia, Malaysia, Thailand and Vietnam* (Olsson and Meek eds., 2013), the *Special Issue: Research universities: Networking the knowledge economy, Studies in Higher Education* and the *Issues paper on Higher education governance and institutional management* (Meek 2011).

Thereafter, the report gives an overview of the current and potential role that development assistance can play to address capacity-building needs for designing and implementing research and innovation policy at policy and institutional levels. This is done by providing an overview of the history of development assistance to research, identifying the development assistance agencies, reviewing the objectives and the governance of development assistance and its implications for
higher education. This part draws on the report on Higher education and research policy: Comparative Analysis of Ghana, Kenya, Uganda (Jowi ed. 2013) and the Special Issues paper on Research and innovation Policy (Merle 2011) and a survey that the OECD/IHERD carried out during 2012 called the Landscape of development assistance to research.

Finally, opportunities and challenges of providing development assistance for research are identified and recommendations are provided for a possible way for developing countries and development assistance organisations to build research and innovation capacities.

2. Research and innovation policy as means for realising the knowledge economy?

2.1. Implications of the knowledge economy on research and innovation policy

The introduction of the knowledge economy has had qualitative implications for the way in which countries pursue economic development planning. One of the more significant consequences has been the attempt to integrate higher education and research systems into macroeconomic policies to stimulate technological renewal (research and innovation policy). During the past 20 years, the general trend is to combine research and innovation in the same policy package. Research and innovation policy now differs radically from previous generations of science and technology policy in three key respects that resonate well with the needs of low and middle-income countries. These are that it:

- emphasises the need for universities and other public research providers to pursue research agendas that are anchored in the needs of the society which they inhabit
- promotes public-private partnerships as a key mechanism for achieving linkages between the economy and higher education and research
- embraces a system perspective.

The systems approach has resulted in a switch from policy instruments geared to support particular firms and technologies towards policies designed to foster ‘the conditions necessary for innovation’, an approach that has to some extent been accentuated by the financial crisis. Some of the concrete policy measures that arise from this approach include: building and maintaining infrastructures of innovation; agglomeration and network economies; the mobilisation of social as well as economic sources of flexibility and entrepreneurialism (Hay, 2004; Hirsch, 1991).

The system approach has been fruitful for both policy and sciences but it has also proven challenging for policymakers since they need to understand the prerequisites and context in which policies for innovation are being implemented. The connection between higher education and innovation is a critical linkage on which there is little knowledge and understanding as it has traditionally been a “black box” where it was thought that funders needed to know little of the
details of the organisational practices and conditions under which research was produced. The shift from a linear to a system perspective and the corollary interest in increased steering has meant that research funding principals need to know more about agent organisations in order to design effective funding mechanisms.

For low income countries in the very early development stages, the focus on innovation systems has been exacerbated by the fact that many lack the necessary institutional apparatus for the model to be a relevant point of departure for planning and designing policies. The result has been a somewhat strange situation in which systems metaphors and models are employed to describe settings where the ambition to develop a system is only now emerging.

2.2. Capacity-building in higher education and research- what does that include?

There is no single definition of capacity building in both research and higher education. Over the years however a general understanding has developed whereby “capacity is [the] ability of individuals, organisations and systems to perform appropriate functions efficiently, effectively and sustainably” (UNESCO, 2005). In the development context this has come to define the way individuals, groups, institutions and societies strengthen their ability to perform core functions, solve problems and formulate and achieve objectives on the one hand, and to understand and deal with their development needs in a broad context and in a sustainable manner on the other hand (UNESCO, 2005; UNDP, 1997).

Capacity building in the research and higher education sector is crucial to all other sectors in that society (Bloom and Canning, 2005, Meek et al., 2009). This is an important point in the context of developing countries since public investments in research is often torn between (at least) two main goals; scientific goals, usually expressed as a desire to achieve international recognition and academic standing in branches of science, and social goals, which denote the aspiration to strengthen industrial capacity, educate the national workforce, including its leaders and decision makers, and address national challenges (Meek et al., 2009). This simple duality however is confounded by the argument that scientific capacity is a social goal and a key component of sustainable development and general social and institutional capacity building in developing countries. For example, Kearney (2009) outlines seven values that stem from research investments that may lead to social and economic capacity benefits:

- Contacts with international research.
- Provision of local analysis and advice.
- Identification of relevant research agendas.
- Critical thinking in higher education.
- Evidence-based criticism and debate for policy making.
- Capacity to train future generations of researchers.
- Stimulation of national innovation systems.
The typical situation of developing countries is that research capacity is centralised at the larger higher education institutions, which are often the engines of local knowledge development and natural leaders of their own evolving academic systems. They then assume responsibility for fostering the national commitment to research, promoting a culture of inquiry, developing the capacity to utilise international research results, and assuring the acquisition of research skills. The business sector, especially in low-income countries, plays an insignificant role in these processes.

National and international research institutes and laboratories are other important research performers in developing countries. They typically conduct research in sectors that are considered priorities such as agriculture and health. The missions vary but they usually include applied research in specific niches, technology transfer, and technology commercialisation, competence development of industry and policy makers. Other research performers include both governmental and non-governmental organisations.

2.3. Potential areas for improvement in research and innovation policy in developing countries

The content of research and innovation policy varies across countries but it always includes at least three components:

- A set of measures for stimulating and funding capacity development in science and technology
- Instruments for funding and steering research and development as well as promoting linkages between R&D and strategic needs of the nation state
- Mechanisms for improving the effectiveness of the innovation environment at the sectoral and firm level.

Many low-income countries have not prioritised investments in research and higher education. As a consequence they have weak research infrastructure, few academic researchers and performers and a heavy reliance on foreign funding for research. Governance is often centralised and evaluations are not tied to research performance.

Many developing countries have legacies of political and social instability. These legacies often mean that there are “sensitive topics” on which research is not generally encouraged. This implies that the identification of knowledge and skills gaps for research and innovation policies by universities, funding agencies and policy makers in developing countries cannot be completely de-contextualised from the political and social reality of the developing countries concerned.

A review of the literature reveals that the two strongest areas of research activity and funding in developing countries are agriculture and health, with transport and energy forming close seconds. These are also the areas with the most publicly available data. All four areas have high concentration of development cooperation funding. Digging deeper behind this general picture reveals a world of differences among developing countries, in particular in countries that have come a bit further in the development of their research capacities. Brazil for instance devotes 1.08% of its GDP to research of which 0.59 is governmental budgetary allocations or outlays to research and development (GBAORD), South Africa spends less than 1%, of which 0.39 is GBAORD and India
provides 0.71% of which 0.47% is GBAORD.¹ The variation in the level of public funding of R&D among the aforementioned countries is in no way a predictor of the capacity of the individual country to use R&D to achieve economic growth. Further, high public investment in R&D is not a goal in itself but it is best regarded as an investment in infrastructure for the knowledge base of the economy. There are however other qualitative aspects related to the governance of the R&D that may lead to improving the performance of developing countries, including:

- Strengthening of the linkages between policy formulations and ambitions expressed in strategic documents and national development planning. There is thus the potential to encourage governments and leaders of research and innovation to translate policy ambitions into focused plans of action.
- Addressing the defragmentation and the imbalance of the governance structure of research and innovation, including improved coordination between governmental agencies providing support for research and innovation. There is great potential to improve the effectiveness of national funding, budgeting and accountability mechanisms as these relate to research and innovation.
- Increasing the commitment and understanding amongst policy-makers about the critical linkages between national development and research and innovation. There is great potential to invest more heavily in capacity building and expand opportunities for research in public research institutions, in particular in research universities.
- Strengthening the knowledge and skills of policy-makers so they can adopt an evidence-based approach to research and innovation policy that is guided by strategic considerations.
- Strengthening the knowledge amongst policy makers and institutions about global research trends, policy settings and funding arrangements affecting research and innovation management and performance.
- Strengthening the knowledge amongst policy makers so that they appreciate the importance of institutional autonomy thus allowing universities to make a significant contribution to research and innovation;
- The commitment to the importance of a national research ethics framework varies in developing countries and should be attended to when countries develop their research capacities.

3. Types of funding mechanisms in developing countries to support research

The following is a discussion on funding instruments that can be implemented by governments in developing countries to encourage research systems within their country. This is differentiated from the discussion further in this paper on the types of funding mechanisms that donor countries

utilise to encourage the development of research systems in developing countries. Similar mechanisms can be used, however there is a broader range of mechanisms at the donors’ disposal.

3.1. Competitive and non-competitive funding mechanisms for research

Most middle and low income countries use block grants (i.e. direct institutional allocations), although there are indications that this is changing. Block grants are the cheapest form of allocation and they have the advantage of allowing better institutional planning. They also allow institutional autonomy to research performers and may function as a necessary corrective to steering. This corrective is functional as it is difficult for planners to foresee all kinds of research competences that may be required in the future. The block grant is also a good instrument for promoting bottom-up input. The initial logic underlying science policy dictated that competitively allocated funding would focus on strategic priorities, collaboration and so on, while block grant funding would be used to promote capacity building and basic research (Weinberg, 1963, 1964; Rahm et al., 2000; Stokes, 1997; Guston and Kenniston, 1994; Jacob and Hellström, 2012). This logic also fitted with the linear model of innovation that was the dominant orthodoxy. Many industrially developed countries have, however, reduced the portion of R&D funding allocated in this fashion for a number of reasons. Chief among these is the desire to increase the capacity to steer research funding more directly and to couple public research to specific societal objectives. Some countries have chosen to retain direct institutional allocations, but to make some portions of this funding performance sensitive. Thus far, most of these seem directed at increasing publication output as, despite the prevalence of rhetoric about relevance and social impact, bibliometric measures still dominate impact evaluations of research (Bozeman and Sarewitz, 2011;).

For countries with little or no publishing tradition this may prove an important investment, as increasing publication counts is a necessary prerequisite for accessing international networks. Issues such as access to large research infrastructures are also in part determined by scientific performance, thus some focus on scientific performance is necessary (OECD, 2001, 2010b). This should not, however, be confused with increasing the social accountability of science. In fact, there is reason to believe that integration into international markets for science may be best pursued selectively and not promoted as a country-wide strategy. One rationale for this is that, in many instances, the focus on publication in international journals and excellence comes at the expense of research on local issues. This trade-off may be observed in all countries, but resource constraints may imply that it is more intensely felt in middle and low income countries (Chataway et al., 2007; Leach and Waldman, 2009).

Allocation of research funding in a competitive based approach has several advantages for the principal (research agency, ministry, etc.). The chief among these is that it allows the funding allocations for research to be targeted at specific objectives in a way that direct institutional allocations cannot always achieve. Another is that since the peer review system is the usual mode of evaluation, the focus on competitive allocation, other things being equal, should lead to improved performance. The reasoning is that scientists need to compete with each other to attract funding. Two good examples of this are Russia and South Africa, both of whom are using competitive based funding to revitalise their respective scientific base. In both cases large grants targeted to excellent individuals and open to nationals and

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2 India has been very successful in leveraging access to scientific infrastructure in other countries as a means to building national capacity. This success was in part based on a combination of investments in local capacity development and the use of bilateral and internationalisation schemes (see Ramamurthy, 2011).
foreign scientists are used. The European Union has a similar approach which is run by the European Research Council. Although this grant is focused on basic science, it is not exclusively designed for this type of research.

These awards are necessarily large because they are aimed at top performers globally and need to include the possibility of relocating key team members, equipment, etc. While this is becoming an increasingly popular instrument as it offers several possibilities for fast forwarding capacity development, it may very well be beyond the reach of the poorest countries unless they are willing to restrict themselves to a few key areas of investment. Furthermore, many countries may fear that even if they invest in such a scheme, they may risk losing such personnel to a higher bidder in the next round. This is always a risk and there are no magic solutions to this problem. However, this type of investment is simultaneously strategic and pragmatic; the funding agency invests in a top researcher who will create a team which includes locals, this team must be provided with the conditions which would make all or some of them willing to stay. The more investments one makes, the less vulnerable future investments will be as capacity increases. In other words, the traditional prerequisites for capacity building remain even at this level of investment. Finally, here as with other areas of competitive funding, one needs to have fairly well developed local competence to be able to identify and evaluate potential candidates.

Research funding is becoming more globalised and with this has come an increasing degree of isomorphism at the level of practices and institutions. Centres of excellence are a good example of this and are undoubtedly the preferred instrument at the present time. While the centre of excellence instrument is unmatched for building capacity in a specific area, not all competences can or should be fostered in this fashion. For some types of infrastructural competences, such as research to support evidence-based policymaking, it may be both cheaper and wiser to build some of these competences regionally rather than nationally.

3.2. Centre of excellence as a strategic funding mechanism for research and innovation?

Centre of excellence (CoEs) is for the purpose of this report described as funding mechanism supporting organisational environments that strive for and succeed in developing high standards of conduct in a field of research, innovation or learning on national level. They are often highly attractive of R&D investments and talent in their field. Therefore they also possess a high degree of absorptive and generative capacity in terms of new knowledge, which they ideally distribute and utilise in the form of new capacity in their field, be it research results, innovations or talent.

CoE funding instrument has been adopted by governments in many parts of the world, including some emerging economies such as India and South Africa. Since the objectives of CoEs converge with many of the objectives that less resourced developing countries have set up to achieve, OECD has carried out a study as a part of IHERD to review the extent to which they have the potential to

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3 The South African Research Chair scheme and the Russian mega grants. The Russian award is about 360 000 EUR for a period of two years with the possibility of extension for another two years.

4 European Research Council Advanced and Junior investigator awards.
build research capacity in strategic areas in developing countries that are currently building up their R&D capacity.

This study indicates that CoEs are typically geographically concentrated and focused on high potential/growth areas in science and industry, but they may also be virtual/distributed and consist of a network of cooperative partners with a coordinating centre. In terms of size, the operational definitions employed by some funders locate CoEs in the spectrum from the local R&D group up to semi-cohesive triple-helix networks on the regional level consisting of hundreds of researchers (Hellström, 2010).

Most CoE schemes converge on a number of academic and socio-economic goals, a common division being between Centre schemes that are largely intended to generate scientific excellence, those whose purpose it is to stimulate technological innovation in a sector, and those with more general social objectives, including policy support or regional development (Aksnes et al., 2012). In addition some CoEs are geared towards educational or learning goals. These are normally dealt with separately, but are increasingly part of the CoE framework, and should in any event be considered relevant to the developing country context. Common for all CoEs, regardless of strategic orientation, is the notion of excellence, and the particular requirements that come with that label. We will refer to some of these dimensions as objectives in this context since they are often also used to evaluate centre progress, high research quality and productivity, resource attraction and concentration, international visibility and attractiveness (including staff recruitment), and organisational robustness (good governance) (Orr et al., 2011; Aksnes et al, 2012). These are higher order criteria, and the strategic goals, be they in innovation or other social impacts, are expected to be furthered by these more general forms of excellence.

Based on case studies from six different countries, including Australia, Canada, India, New Zealand, South Africa and Sweden, there are clear indications that, across the schemes and types, there is an emphasis on human resource development for the science and HEI system, as opposed to the traditional publication-output oriented emphasis of project funding. There is also a clear indication that these schemes require the professionalization of the research organisation (including funders) that may ultimately stimulate the research system as a whole away from piecemeal non-directed funding towards capacity for priority setting and more systematic evaluations of the research effort. All these are key research development capacities.

The results from the case studies indicate that CoEs may be an instrument for capacity building in so far as they have the potential to realise capacity for human resource development, enhance organisational capacity and create institutional and legal frameworks in the research and higher education field and also contribute to socio-economic objectives. It was also reasoned that the consolidation of resources does not necessarily imply a choice between a scientific and a social agenda, but could instead act to bridge these.

Finally, and perhaps most importantly for a national system that lacks critical mass in any one field of inquiry, the CoE approach, with its emphasis on resource concentration and inter-disciplinarity,
addresses the three main challenges including dilution and redirection of possible resourcing for research; challenges posed by the rapid expansion of higher education to meet increasing demand, and fragmentation of research oriented action. The schemes reviewed here indeed suggest, both in terms of their strategic ambitions and impacts, that creating critical mass in research in a smaller number of carefully selected areas, can be done through the CoE approach.

### 3.3. The importance of meta instruments for developing countries

The term 'meta instruments' refers to instruments used for the purpose of coordinating research and innovation investments transnationally, thus in this report use of the term indicates that they are instruments for coordinating instruments. This differs from instruments that form the main focus of this report in two ways. The first is that the target group for meta instruments are research funders as opposed to research performing organisations. Secondly, meta instruments typically include a portfolio of research funding instruments. Some examples of meta instruments are:

- **Canadian Networks of Centres of Excellence**, an instrument for coordinating CoEs
- **International Opportunities Fund**, a Belmont Forum Initiative intended to promote multi lateral collaboration and funding of research on global environmental change, this initiative is open to developing countries
- **ERA-NETs**, the European Union instrument for coordinating and structuring the European Research Area
- **Joint Programming**, the EU initiative for coordinating research calls in specific areas across national member states. This initiative is similar to the International Opportunities Fund but includes several different types of research areas.

Meta instruments are worth the attention of developing countries for a number of reasons, the most significant of which shall be briefly outlined here. The first is that meta instruments represent the state of the art in research funding. They are indicative of a trend in national research funding towards facilitating global collaboration and promoting the conduct of research and innovation in open global networks. This trend does not provide a route past structural obstacles such as intellectual property, incommensurability at the level of national regulation etc. but it does increase collaboration and facilitate the transfer of knowledge across research systems. The high level of participation of the emerging economies such as Brazil, India and South Africa in these types of arrangements is one way in which the research funding landscapes in these countries differ from those of developing economies.

A second characteristic of meta instruments which makes them interesting for developing countries is that they represent a learning opportunity through the exchange of knowledge between research councils *qua* collaborators rather than as aid recipient and donor. Thirdly, meta instruments provide a networking mechanism for research funders that is closely coupled with the science system. This opens up possibilities for research funders to share databases on review committees, calls, etc. This in turn increases the capacity of the funder on a national level.

Lastly, the collaboration embedded in meta instruments may constitute an important strategic step in accessing and/or widening extant research networks and networks of research funders. Access

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to research networks provides benefits which are well outlined elsewhere and so are not covered here however it is the potential for policy learning that meta-instruments provide for middle and low income countries that is significant in this respect. In some cases, developing countries may want to create similar constellations at the regional level as a complement to their participation in more global networks. Many of the existing regional platforms in Latin America, Asia and Africa may be used to replicate these types of exercises.

Two important examples of meta-instruments are ERA-Nets and joint programming. Both of these examples are taken from the European Union programmes and are open for third party and candidate country participation. ERA-Nets and Joint Programming Initiatives are intended to promote the development of transnational and joint strategies and/or programmes. This includes among other things, common calls for proposals and transnational evaluation, dissemination and funding of research activities.

ERA-Nets include at least four dimensions:

- Systematic exchange of information & best practices
- Strategic activities
- Implementation of joint activities
- Transnational research activities

ERA-Nets are open to member states, associated states and candidate countries. Each ERA-Net must have at least 3 member or associated states of which at least two are member or candidate associate states. ERA-Nets are open to developing countries if they partner with EU member countries. Additionally, the applicants must be:

- public bodies responsible for financing or managing research activities carried out at the national or regional level;
- other national or regional organisations that finance or manage such research activities;
- bodies operating at the European level that include as part of their mission the pan-European coordination of nationally-funded research.

Thus a key requirement for participation is that there is some type of research funding agency structure in the participant country. Most, but not all, middle and low-income countries have some type of basic research funding agency structure. A perusal of the currently ongoing ERA-Nets reveals that there is already some emerging country participation notably Taiwan, Brazil and India. More importantly, some emerging economies have developed their own versions of ERA-Nets which are South-South in their orientation. These collaborations are interesting developments and should be monitored by both developing and developed countries as they represent enormous opportunities for innovation and creativity.

The objective of joint programming is to increase the value of relevant national and EU R&D funding by concerted and joint planning, implementation and evaluation of national research programmes”.

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Extant joint programming initiatives focus on issues such as agriculture and land use, urban development, water and anti-microbial resistance among others. The strategic importance of these themes for middle and low income countries cannot be over-emphasised. Moreover, these areas have long been identified as prerequisites for innovation (Hall et al., 2001).

## 4. Development of research universities in developing countries

### 4.1. A global outlook

Tertiary education has developed to become a major industry worldwide through a dramatic expansion, with more than 200 million students, 40 000 post-secondary institutions, and billions spent on the higher education enterprise. Today most countries have a range of academic institutions with different missions and the presence of the private sector within the higher education landscape has become an established reality. Expansion has brought diversity of purpose. Certain higher education institutions address the growing demand for access, both from national populations as well as from international students. Others, notably research universities, align academic research to national economic growth and social development, thereby linking up to the national and global knowledge economy.

Research universities stand at the pinnacle of academic systems everywhere. They are central to a nation’s capacity both for research and for advanced education. Furthermore, depending on their quality and resources, they are part of the new global knowledge economy and can attain “world-class” status. Top research universities in industrialised countries (often referred to as the Super RUs) usually dominate the global ranking tables. In contrast, their counterparts in middle and low-income countries have, if anything, more important missions because they are the engines of local knowledge development and natural leaders of their own evolving academic systems. As these systems become increasingly complex and the need to nurture knowledge networks for research grows ever more essential, the success of these institutions becomes even more crucial for national development policy.

Since many universities now operate with multi-billion dollar budgets, their sheer scale requires highly competent leaders and managers. For research universities which aspire to be world-class in their performance, leadership presents special challenges in the present context of the knowledge economy. This role requires persons of exceptional talent whose responsibilities are multi-faceted, inter alia: defining a mission for the institution and its creative strategy for change in an evolving social context, responding to policy opportunities, protecting scholarship for quality research, encouraging bold experimentation in teaching and learning, forging alliances with stakeholders, spearheading fund-raising efforts and communicating the institution’s activities to concerned partners. This leadership agenda is realised through efficient and effective management strategies which clearly demonstrate the institution’s contribution to local and international development (Kearney and Yelland:2010). However, although excellence in leadership and management assure the aspect of good governance, two other components are also necessary namely gifted faculty and students and solid resources. When all three conditions are present, an institution is equipped to perform at the best possible level so to enjoy “world-class” status (Salmi:2009).

Globalisation, increasing international mobility and rapid technological change, while creating significant social benefits on a worldwide scale, also present significant challenges for developing countries. For
example, the cost of commercialisation of research products can be prohibitive in situations where an expensive bureaucracy is required to protect patents and to fend off counter-claims of ownership by well-funded global rivals; ‘brain drain’ can quickly whittle away many of the immediate benefits of years of public investment in building a reserve of highly trained researchers; and rapid technological change means that even keeping up with contemporary research in laboratory-based and technological fields requires ongoing and ever-increasing expenditure on new items of equipment. These costs are difficult to sustain for developing economies.

Against the backdrop of these changes, management of R&D and innovation has emerged as a specialised area within both funding agencies and higher education institutions, creating two critical target groups for capacity-building for developing countries. Key areas include; managing funds, liaising with funding bodies, project planning, implementation, monitoring and evaluation, as well as publications, research dissemination and, in some cases, commercialisation.

The professionalization of higher education administrations has affected finance, student admission, building and grounds management - particularly in countries where there have already been substantial increases in institutional autonomy and changes to the governance arrangements within institutions (OECD, 2008). Moreover, higher education institutions are becoming increasingly dependent on research regarding the higher education system as a whole, (e.g. to help them better understand the external environment) in order to construct relevant strategic plans (stay in the game).

Today, leaders of research do not only have the responsibility for developing and implementing research policy at the institutional level, they also play a key role in ensuring that the researchers themselves have adequate skills in areas such as research grant writing, grant management, project planning, research team leadership, research student supervision, writing for publication, ethics, research dissemination and, in some cases commercialisation.

In a strong institution, governance and management roles and boundaries will be clearly defined and respected and processes will be transparent. This ensures clear lines of accountability. The most important structural issue concerns where overall responsibility for the institution lies. In more devolved systems, responsibility lies with the Board or Council, which sets the broad parameters for the managers and ensures there is a good management structure. In centralised state-controlled systems, the Board or Council will be weak if it exists at all. Shifting to a more devolved system is likely to be a staged process, involving building the capacity of the institution’s managers.

The challenge for development is to build the skills and expertise of the research and innovation leaders and managers to help them ensure that the scarce research resources available to institutions are effectively deployed and managed, that is, adapted to the local policy context.

4.2. Leadership and management of public research institutions in developing countries

There are three levels in the overall coordination structures of higher education systems and institutions: ‘the overall system, the institution and the academic community’. The characteristics of these levels combine in different ways including three distinct or ‘ideal types’ of coordination based on state, market or academic authority. These broad coordination structures ‘define the role of institutional leaders, academic senates, individual faculty, central administration, and external stakeholders’. Over
the last couple of decades, the global trend is a shift away from state or academic authority towards that of the market. However, public research institutions cannot be successfully managed like other organisations. They remain professional bureaucracies, and managers and leaders violate basic academic norms and values at their peril.

In terms of leadership and management of higher education institutions in the context of developing countries some key features need attention:

- **Management of R&I**: There are differences between developing countries’ commitment to research. Some countries have adopted strategies of designating particular public universities to be research-intensive, which have also been given access to significantly larger amounts of public funding to support their research-intensiveness. For example in Malaysia and Thailand, increased resource allocation to research has had the effect that they have developed internal management structures to drive and support a research agenda.

- **Leadership’s awareness of R&I settings**: In more developed research environments in developing countries, policy makers and institutional leaders tend to engage collaboratively with the task of assessing trends, reviewing policies and determining funding allocations. There is an emphasis on the use of committees through which multiple stakeholders can contribute to the discussion of R&I settings. A similar level of collaboration is not evident in countries with weaker research environments such as Vietnam and Cambodia. This also means that decisions are more often based on assumptions, values and personal experiences, than on systematically collected data.

- **Institutional governance of R&I**: With greater institutional autonomy and more research funding, research-intensive universities are in a better position to establish institutional governance and management systems that enable them to engage meaningfully in long-term planning, to make staffing appointments that support a research culture, to reward research achievements, and to implement policies and processes in support of a research culture and ethos. In countries that do not provide autonomy and appropriate resource allocations, these progresses are much more slow.

- **Establishing a research culture and ethos**: Universities in developing countries that have higher levels of commitment to research are surprisingly not better equipped to support the development of a research culture and ethos. One challenge that remains is to boost this culture in all public universities. In contrast, in other developing countries, with weaker research universities, it is harder to develop a research culture, not least because university lecturers receive low levels of salaries. To supplement their income, academic staff members from public universities often take second jobs teaching at private universities, teach in in-service and other non-regular programs, or undertake paid after-hours tutoring for students. There is little or no time for research, which is much less financially rewarding.

- **Organisational structure**: Public universities in developing countries usually have organisational structures to support the leadership of research. Typically, these involve the appointment of a member of the institution’s executive team to provide leadership of the research agenda. This position is supported structurally by other appointments across faculties and schools, and administratively by functional departments. In less research intensive universities, effects of these arrangements are however significantly constrained by limited funds.
• **Research management and administration**: Research-intensive universities in developing countries are not much better resourced for establishing research management and administration systems than less resourced universities, such as in Vietnam or Cambodia.

• **Commercialisation of R&I**: There is increasing pressure on public universities and research institutes to commercialise research. Offices for the commercialisation of research products are being established in many universities, and the commercialisation of research products and processes has become a mainstream activity. However, in research-intensive universities in particular, there is the need for more up-skilling of academic staff members so that they become aware of the possibilities for commercialisation and are better able to master the relevant procedures.

• **Management of research personnel**: Structures and processes for the management of research personnel are becoming well established in some of the more research-intensive universities in developing countries. Models being developed in these universities are impacting on other universities in the same country. A distinctive characteristic of these models is the emphasis placed on research publications and success in obtaining research grants as foundations for career progression. In some less research intensive universities, a research culture is slowly becoming established, and management processes are placing more emphasis on research productivity. However, in countries like Cambodia, the research culture in universities is not yet strong enough for these developments.

• **Management of research students**: The mechanisms for supporting research students often exist and many universities have research student support offices that, to varying degrees, provide administrative, mentoring and training support. The level of support varies across universities and countries.

• **Development of research leadership**: Differences across countries are evident. The pathway to research leadership in Malaysia and Thailand are similar to those in most developed countries – the accumulation of research experience, publishing success and success in obtaining research funds. The pathway to senior research leadership in countries with weaker research culture is different. For example, in Vietnam, the requirements for institutional leadership are the same across all areas of university life: nomination by the institutional Communist Party Committee to attend an advanced political theory program conducted by the Party, successful completion of a public administration program conducted by a National Institute of Politics and Public Administration, followed by success in obtaining a passing grade in a Senior Staff Testing Program. Vietnam’s Confucian legacy is evident in its attachment to the importance of an examination to attain high office, but so too is the extent of political control exercised by the Party. As noted in the country report, there may, therefore, be research managers in Vietnam who have never undertaken any formal research management training, and who may not have even been screened for personal qualities and behaviours that research managers usually require to be effective.

5. Potential roles for development assistance in research and innovation policy
5.1. Overview of development assistance to research

Against the background of the current funding landscape of research and innovation and the current gaps in research and innovation policy implementation, what is the potential role that development assistance can play?

**Historical overview**

Development assistance to higher education and research was first initiated in the 1950s and 1960s under the lead of the U.S and European countries. The European countries focused initially on Latin America but support was subsequently also provided to Africa and Asia partly due to their colonial history. The U.S provided support to research and higher education as a mechanism to counter communist influence whereas the Nordic countries that did not have a colonial past provided support to higher education as a part of national building projects with a specific focus on the newly independent African countries. (Hydén, 2010)

In the early years of development assistance to higher education and research support was provided to three main areas:

- Research infrastructure (such as university buildings, laboratories and other necessary equipment)
- Technical assistance (provision of academic staff with the largest contingents from America and UK)
- Scholarships for students to study at American and European universities, including the Soviet Union.

In the 1980s funders of development assistance did not prioritise support to higher education and research because they were seen as expensive investment paths providing benefits to a small privileged group of people. At the same time, many developing countries were led by military administrations, which did not favour academic freedom and autonomy and subsequently governments cut funding to higher education and research. In parallel, the World Bank, followed by the international donor community, took the view that only primary education could serve as a driver of broad social development. This view was expressed at the Jomtien World Conference on Education for All (1990) and the 2000 World Education Forum on Basic Education in Dakar. This resulted in sharp cuts to higher education and research, with the World Bank's investment in higher education dropping to its lowest level in 2001 (Jowi, 2013).

Under the leadership of James Wolfensohn, the World Bank started to change its approach by launching itself as the "knowledge bank" in response to the emergence of the knowledge economy which is characterised by increased investments in knowledge industries across the world, including higher education and advanced training. The 1998 World Development Report was titled Knowledge and Development and in 2000 the World Bank published a report together with UNESCO arguing that higher education in developing countries needed more attention, because even if
investments would not guarantee rapid development, sustained progress was impossible without it. Even if the effects of this new direction were not immediate, the foundations for increased funding to higher education and research were provided for in the context of the emerging knowledge economy (ibid).

Last year the World Bank launched itself as a “Solutions bank” under the leadership of Jim Yong Kim, indicating its intention to move away from banking and loans to the provision of advice and technical assistance to donors and developing countries. This should be viewed against the changing nature of the capital market, which has had the long-term effect of decreasing the demand for loans from the World Bank. 7

In addition to this overall landscape, new actors are emerging in the support to research and higher education in developing counties which has previously been a concern of Western funders. The shift in the global economy and the increased wealth creation in Asia and the Gulf countries opens up the possibilities of investment from new sources. At this stage it appears that the new funders predominantly focus on research infrastructure, which has to a large extent been ignored by traditional donors, but is of high importance especially in Africa where the research infrastructure is under-developed. China is also becoming increasingly active by offering fellowships for scientists to come to Chinese universities for a specific time. The Republic of Korea is also an emerging donor in this area (Hydén, 2010).

What are the development assistance agencies

Overall picture
It is possible to distinguish between two different types of development assistance (ODA) actors:

- **Bilateral agencies**, including governmental agencies that have the mandate to channel funds to developing countries.
- **Multilateral organisations** that provide development assistance. These organisations have specific mandates directed by international treaties or conventions that member governments have signed

The largest bilateral agencies are situated in North America, Europe and Japan, including for example USAID and DFID. The European Commission’s ODA agencies are also considered bilateral because they support countries that are not members of the European Union. The biggest share of development assistance is directed towards governments in developing countries.

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The term multilateral organisation includes those institutions that are a part of the United Nations the governance of which follows the principal of one vote per country. It is important to note that the World Bank and the regional development banks, including the Inter-American Development Bank, African Development Bank, and Asian Development Bank are technically a part of the UN system but are governed by weighted shares held by member states. They offer loans and technical assistance for development purposes. These are called International Financial Institutions (IFIs). The World Bank and the International Monetary Fund (IMF) are also referred to as Bretton Woods institutions. However, the IMF is not directly involved in development; rather its purpose is to promote international monetary cooperation.

**Who is supporting research in development assistance?**

An overall picture of development assistance for research is missing. Research often does not figure as one specific sector in development assistance. Instead, research is predominantly located in aid budgets under education, or in the case where the organisation has little focus on research, it is categorised according to the sector that the research is conducted in, for example agriculture. For this reason, it is not possible to retrieve data on the major donors of research in the OECD DAC statistics.

However, attempts have been made to rank donor’s support to research. A study conducted by the Overseas Development Institute in 2007 indicates that the Bill and Melinda Gates Foundation was the largest funder to development research in 2006, followed by USAID, European Union, IRD, DFID, Wellcome Trust, Sida, Medical Research Council UK, IDRC and World Bank. This highlights the variety in funders for research, with all foundations, countries, multilateral organisations and research councils present in the top ten funders.

The volume of development assistance for research is however not a sufficient indicator for drawing a full picture of the landscape of development assistance. The first obvious obstacle is that a general definition on what is considered to be support to research is missing. The consequence of this approach is that the classification of projects as research can vary across organisations. For example some donors include research-like activities that are commissioned by the donor, and others do not. Expenditure is also likely to be a poor indicator of the volume and quality of “research” produced given the huge variation in the costs of employing researchers in different countries, and the extent to which researcher’s overhead and other costs are covered by other sources of funds.

Based on a review of foreign assistance for research (Annex 1) we have differentiated donors of research from a qualitative perspective. Development assistance providers could largely be split into four different groups; those who predominantly support countries’ ability to design and implement research and innovation policy, those who predominantly support research as a component of addressing specific socio-economic objectives, those who predominantly provide aid for basic research that is relevant for development, and those who commission research to inform development assistance policies and programmes. Although a research funder may target a range of...
these objectives, as they are not mutually exclusive, they have been grouped according to the objective that is most predominant.

This first group applies to funders that undertake a more holistic approach often including a variety of funding instruments targeting the governmental level, research institutions, non-governmental organisations and individuals. Example of these countries includes Sweden, Norway and Canada. The second group involves an integrated approach in which research makes up one component of a larger development programme aiming to address specific development goals such as the MDGs. The World Bank is an example of this group. However, more and more initiatives are applying an integrated approach of which research is one component. One example of this is the Grand Challenges for Development managed by USAID. ⁸

The third group, funders of basic research relevant for development, often applies competitive funding mechanisms to support individual researchers or research groups located in research organisations. Development assistance actors frequently cooperate with national funding organisations, including research councils, or support specific research organisations. Examples include; Finland, France, Portugal, UK. Finally, research commissioned to inform development assistance policies and programmes is a commonly applied mechanism amongst many development assistance organisations. Common funding mechanisms are competitive grants for specific time-bound assignments, technical assistance and country reviews. Examples of organisations applying this approach are UN organisations, regional development banks and Ireland.

Over the years the World Bank has had a specific interest in promoting science and technology for development but several analyses during 1990s and early 2000 criticised the World Bank for lacking a systemic policy framework and organisational capacity for promoting science and technology (Dahlman, 1995). Between 1980 and 2004, the World Bank lent USD 8.6 billion to support science and technology through 647 projects. ¹ of the Bank’s lending projects in approximately 50 was principally concerned with improving capacities in science and technology (Crawford et al., 2006). Furthermore, World Bank support to science and technology in the higher education sectors has been limited for decades and predominantly targeted at middle-income countries (Watson et al., 2003). However, the global landscape has shifted and the World Bank has gradually changed its approach, now recognising the importance of capacity building in science, technology and innovation for achieving the MDGs and reducing poverty (World Bank, 2007).

Likewise, the International Development Banks have for the most part supported research as one component of larger projects or as technical assistance. However, there are signs that this approach is also shifting. For example, in 2008 the African Development Bank issued a Strategy for Higher

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Education and Technology that was aimed at accelerating sustainable economic growth through capacity development and strengthening science and technology in African countries (AfDB, 2008).

Another important donor that also shapes the agenda for development assistance to research is the European Commission. The European Development Fund (EDF) is one of the core European instruments for providing technical and financial assistance to developing countries and the 10th EDF (2008-2013) has increased the importance of science and research. The total indicative budget for science and research of the 10th EDF intra-ACP programme (2008-2013) is € 130 million which represents a large increase compared with the 9th EDF intra-ACP programme which allocated € 76,350 million for science and research. (EC 2008-2013)

5.2. Objectives and governance of development assistance and its implications on higher education and research

Overall objectives and governance framework of development assistance

Over the last decade two global policy frameworks have been important for shaping development assistance, including:

- Millennium Development Goals (MDGs)
- Paris Declaration on Aid Effectiveness

The Millennium Development Goals (MDGs) were officially adopted at the Millennium Summit of the United Nations in 2000 with the target date set at 2015. The MDGs have directed aid priorities during the past decade which range from eradicating extreme poverty and hunger, to ensuring environmental sustainability, to developing a global partnership for development. After 2015, the Millennium Development Goals (MDGs) will be replaced by Sustainable development goals, which will build upon the MDGs. ¹⁰

Prior to the adoption of the MDGs, development assistant actors had commenced a process to decide upon ways that both donors of development assistance and recipients could become more effective. In 2005 the Paris Declaration on Aid Effectiveness was adopted marking the first coordinated approach between donors and recipients to agree on a set of measurable and time-bound commitments for making aid more effective. All OECD Development Assistance Committee (DAC) members are committed to implementing these principles, having reiterated their commitments in 2008 at the Third High Level Forum in Accra. At the Fourth High Level Forum on Aid Effectiveness in Busan in 2011 all new comers to development assistance are also encouraged to follow the same principles outlined in Paris and Accra. ¹¹

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Implications on policies and resources allocation

It is difficult to assess the extent to which the existence of the MDGs has affected resource allocation by donors. It is clear however, that the proportion of aid directed at the productive sector (not directly covered by the MDGs) has fallen, and the proportion to social sectors (well-covered by the MDGs) has risen. The relative emphasis on universal basic education may have been stimulated by the MDGs at the expense of tertiary education and vocational training (Manning, 2010).

The Paris Agenda has influenced the policy agenda in that countries have agreed to principles that are aimed at delivering better development assistance. The level of implementation depends however on a number of factors. Chief amongst these are the policy objectives of development assistance which also influence the way in which the responsibilities for policy and implementation are constructed. For instance, the responsibility for policy and implementation varies considerably across countries, ranging from concentrated systems where a single ministry or agency is responsible for both policy and implementation, to fragmented systems, with many institutions and ministries. Countries that have relatively concentrated systems are; Australia, Ireland, Luxembourg, the UK and Nordic countries. In contrast France, Germany, Greece, Japan, Portugal and the US have fairly fragmented systems. In the US for example, 27 public institutions are involved in development cooperation, 11 in Japan; and in Portugal 16 central government ministries and various municipalities (OECD 2011b).

Principles and actions agreed upon in the Paris Agenda are:

- concentrating efforts to priority countries, sectors and programmes,
- decentralisation of development assistance administration to recipient countries
- increased focus on result orientation and
- increased predictability of aid flows

However, all these principles have to be viewed against the policy and implementation structure of development in the donor country. This results in the level of implementation varying greatly across agencies.

The overall trend in development assistance is to support fewer but bigger projects to reduce transaction costs. This helps development assistance agencies align with country priorities and improve co-ordination with other donors. DAC members are also starting to avoid stand-alone projects, ensuring that projects are closely linked to larger programmes. At the same time some DAC members argue that the commitment of increasing aid volumes to meet international commitments makes it difficult to focus on a few low-income countries and specific sectors and programmes due to their limited capacity to absorb large volumes of aid (ibid).

Another trend that can be observed in DAC donors, in particular the UK and US is that they are placing greater emphasis on grassroots initiatives and civil society organisations in addition to the support provided to governments. However, the overall tendency seems not to be to re-establish a strong focus on the role of higher education institutions and public research organisations (ibid).
Implications of the overall framework on higher education and research

Although the MDGs and the Paris Agenda have not paid specific attention to the importance of higher education, research and innovation there are a number of indirect factors that can potentially have implications on the relative importance of higher education and research for the future.

First, it is increasingly being recognised that there is a need to strengthen the quality of basic education. This requires by necessity that teachers are well educated which is in turn dependent on the ability of the higher education system to deliver high quality education for teachers. This also requires sufficiently skilled staff at the higher education institutions.

Second, the increased push towards evidence-based policy making and the call for demonstrating results, has, in some cases, had the effect of creating the requirement that programmes in development assistance be underpinned by scientific evidence. This is the case in DFID who has integrated assessment into all funding mechanisms. This approach requires that research has already been carried out on key policy issues in different local contexts, in turn requiring that resources are provided to research relevant to development.

Third, against the backdrop of the increasing effects of climate change, the academic community has been called upon to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts. The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for this work. Because of its scientific and intergovernmental nature, the IPCC provides rigorous and balanced scientific information to decision makers and by endorsing the IPCC reports, governments acknowledge the authority of their scientific content. In 2010 the Green Climate Fund (GCF) was established as an operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change. The GCF is founded as a mechanism to transfer money from the developed to the developing world in order to assist developing countries with adaptation and mitigation practises to counter climate change, which will require the involvement of the scientific community, not least from developing countries. The objective is to raise $100 billion a year by 2020. To kick-start environmental projects, a Fast Start Funding of the GCF was agreed, encompassing $30 billion for the period 2010-2012.12

Fourth, most developing countries have started to integrate research and innovation policies into their economic development planning in addition to key elements addressed in the MDGs. The effect of this dual track of priorities on development assistance is yet to be seen. There is the potential to integrate efforts to strengthen countries’ higher education, research and innovation capacities in the Poverty Reduction Strategy Papers (PRSP), which constitutes the key strategic documents for setting the priorities for funders in development assistance, including the World Bank and bilateral and multilateral development assistance agencies. (Meek et. al 2009, p 29).

12 http://gcfund.net/home.html
5.3. Objectives, funding and evaluation mechanisms in development assistance to research

Objectives of funding research in development assistance

The support in development assistance can be broadly grouped into four categories:

- Funding that supports countries’ ability to design and implement research policy
- Funding that supports research as a component of addressing specific socio-economic objectives
- Funding to basic research relevant for development
- Commissioned research to inform development assistance policies and programmes

The following examples delve into what could be included in these broad funding objectives.

Support to strengthening countries’ ability to design and implement research policy: One of the key challenges for higher education institutions in developing countries is to increase the number of qualified academic staff with PhDs at the speed required to meet the demands of expanding a higher education system that delivers quality education at the same time as developing a critical mass of academic researchers that can reproduce research capacity. Many developing countries have weak research institutions and are not able to build the necessary capacity on their own, thus requiring support from outside. However, it has proven to be increasingly difficult to recruit and attract academic researchers for assignments which require them to support local capacity building in developing countries. There are many reasons for this but most importantly, scientists are increasingly assessed on the basis of their scientific performance and are thus reluctant to commit to engagements that may impede their own performance. Engaging in unequal partnerships with the aim of building local research capacity in a developing county may not be a preferred career choice for many scientists, however there is no magic solution to this challenge.

In addition to increasing the number of people with PhDs there are a number of other objectives that donors in development assistance aim to address in the support to countries that are building up their research capacity. Some examples include:

- Expanding the opportunities to conduct research for established researchers
- Accessing scientific journals at reduced price
- Reforming administrative systems within universities and public research institutions
- Strengthening research infrastructure such as libraries and laboratories
- Supporting Ministries, including research funding organisations to strengthen their capacity to administer and manage research funding
- Strengthening the leadership and management of public research organisations
- The provision of technical assistance for reforming governmental agencies and research organisations
- Initiatives directed at supporting the dissemination and use of research
- Improving countries capacity to gather data relevant for STI
Typically, the support measures strengthening governance and research infrastructure are underpinned by the objectives and strategies set up by governments and research institutions.

**Funding to research as a component of addressing specific socio-economic objectives:** Research that is integrated as one component in a wider programme aiming to achieve specific socio-economic objectives that does not consider scientific achievements or achievements related to institutional capacity building as justifiable results in them self, is not likely to contribute to strengthening recipient countries’ ability to design and implement research policy. Nevertheless, these funding mechanisms could be important for individual academic researchers that need to supplement their income with consultancy work because the remuneration is too low in their universities. In some cases, participation in projects and programmes of this nature could also provide access to the international community, depending on how the assignments are constructed. One example of this approach is the Grand Challenge for Development initiative set up by the US. One of the grand challenges identified is called “Making All Voices Count (MAVC)”, with an initial funding of USD 45 million over four years to support innovative ideas that improve citizens’ engagement with governments. One of the support windows is directed at promoting research to build an evidence base around available applications.

Policymakers’ increased focus on linking investments in higher education and research to economic development and innovation opens up possibilities for new approaches and funding mechanisms supporting development. The African Union has recently, with the support of the World Bank, launched two initiatives; the Centre of Excellence Initiative in Central and West Africa and the Pan-African University. In addition, the African Union has initiated the African Research Grant, which should be seen as the first step towards the establishment of an African Research Framework Programme. More details on the Pan-African University initiative and the African Research Grant can be found in annex 2 and 3.

Common to all these initiatives is that they support applied research of relevance to development and that they should link closely to regional economic development. To link research to innovation is however a demanding task and the fact that many developing countries’ research capacity is weak has implications on the effectiveness of this approach, at least at the country or regional levels. It may be worthwhile to study some of the policy lessons that OECD countries have gained from the last thirty years of experimentation and implementation of innovation policies. One of the lessons in this regard is that the road from the laboratory to the market or the intended beneficiary is one that has to be populated with several support points to ensure that the result arrives at the intended destination. Furthermore, practise in developed countries shows that moving results from the laboratory to the market is best done at the national rather than regional level. This suggests that regional funding instruments addressing the link between research and innovation need to be accompanied by national commitments to have the intended effect (Woods et. al 2013).

**Funding to basic research relevant for development:** Funders in development assistance apply different approaches to support basic research relevant for development. Some issues open calls in cooperation jointly with other research funding organisations such as the Medical Research Council
UK and Australian Centre for International Agricultural Research. Others establish institutes or laboratories such as IRD in France. Common for all however is that funding is directed to well established research organisations and scholars. One challenge of this funding objective is to decide what is relevant to development. This is not clearly established and since many of the world’s challenges are global in nature, more and more research funded by other sources is relevant for development. This is particularly demonstrated by the increased application of Meta instruments referred to earlier in this report.

**Commissioned research to inform development assistance policies and programmes:** This funding mechanism is frequently applied for bilateral and multilateral organisations. Usually, the purpose is to inform key policy challenges in specific sectors and find ways to address these with the view to design and implement more effective development assistance programmes.

**Funding mechanisms for research as a part of development assistance**

Financing science and research has traditionally been treated as a rather uncomplicated matter amongst R&D funders and partners in development assistance alike. Against the increased call for efficiency and transparency, it is likely that competitive funding mechanisms in development assistance will be applied to support research. A number of countries are already in the process of increasing the portion of competitive funding within their funding mechanisms. This in turn requires a better understanding of the advantages and disadvantages of different types of funding instruments and modalities and the relationship between them.

The type of funding instrument used is also an important aspect of research assistance for a number of reasons including that a great deal of extra costs can be incurred if the instrument and purpose are mismatched. The degree of freedom for steering research funding and for coupling public research to specific societal goals is also affected.

There are a number of funding instruments that are applied in development assistance to support research the most commonly used are:

**Scholarships** (stipends): Funding to support the completion of a university level qualification (Bachelors, Master, PhD or post Doctorate).

**Programme/project based:** Projects have well defined target groups and usually require that the recipient give a detailed account of objectives, potential results and beneficiaries as well as time frame. It also refers to what is typically referred to as a programme; a portfolio of projects grouped together under one theme and conducted by a collaborating group of actors. Research funders may use the term to describe either a group of projects that they are administering under one heading or to describe a group of projects from the recipient perspective.

**Core/block funding:** funding provided to an organisation that supports their own strategic plans and objectives without very few prior agreements.

**Technical Assistance:** the provision of expertise and training (OECD, DAC 2012).
**Loans and guarantees:** transfers for which repayment is required. Only loans with maturities of over one year are included in DAC statistics. To be qualified as ODA, loans must be concessional in character and have a grant element of at least 25 per cent (OECD). Guarantees are when an organisation guarantees a minimum purchase price for an innovation or supports access to loans by reducing risk.

**Centre of excellence:** Larger and longer term funding to support excellence within an established entity (see section 3.2)

The target groups for development assistance include:

**Individuals:** incorporates funding to students, researchers operating independently and in some cases lecturers. It can also refer to students from the donor country receiving a scholarship to study development in their home country.

**Consortia:** the pooling of funds and management amongst a group of researchers or funders

**Organisational support:** incorporates universities, public, independent and private institutes and foundations. The organisational level can refer to anything from institutional management on the systems level to research grants being offered by the institution. Further work breaking down this category would be beneficial.

**Support to governmental agencies:** refers to programmes targeting the ministerial level. These generally aim to build capacity within the ministry, rather than the institutional management level.

**Multilateral/International Level:** any funding directed to an organisation, institute or consortium that crosses over national boundaries

It appears that donors that aim at supporting recipient countries’ ability to design and implement research and innovation policy often apply a mix of all types of funding instruments and they typically support a mixed group of actors.

On the other hand, donors in development assistance that predominantly support research as an integrated component typically apply project, programme support or/and technical assistance. The target group varies but could include governments, multilaterals, civil society organisations, and consortia of a mixed set of actors.

Donors that predominantly support the advancement of basic research relevant for development provide support through competitive scholarships, project and programme support. Often support is targeting individual researchers located at research institutions.

**Assessment processes of research in development assistance and its implication on relevance and excellence**

Research landscapes in developing countries vary considerably in terms of the organisational set up for research. There is reason to believe that it is important to cultivate a mix of two traits with respect to research performing organisations; that there is some degree of co-location of research
tasks and that there is at least some diversity in the types of research organisations. The co-location issue is critical in that the best available evidence suggests that excellent basic research capacity is dependent on a variety of stimuli and problems. Thus, facilitating contact between basic and applied science, commissioned corporate research and publicly funded basic research is necessary to maintain excellence. Alternatively, applied research quickly runs into quality problems if kept distinct from basic research (Nedeva 2012).

The implementation of funding instruments for research by development assistance donors varies greatly across countries. This is partly dependent on the overall aid infrastructure of research and the research landscape in the recipient country.

In countries where development assistance is integrated in a centralised development agency, it is more likely that the assessment process follows the general assessment criteria of the organisation. Typically, these will focus on aspects such as expected outcomes, relevance, effectiveness, feasibility and sustainability (See annex 2). In contrast, in cases where research is delegated to a national research council or a research implementing organisation, it is more likely that the emphasis is on scientific quality, including key features such as the definition of the scientific problem, the significance of the project for the research field, the research design, the composition of the research groups and research results. Naturally, a hybrid of these various approaches exists and is deployed differently across countries and institutions.

While different assessment criteria is not a problem in itself, it does create the risk that in cases where the relative emphasis is directed towards general development goals, scientists may get the impression that relevance is more important than scientific quality. As a funder, it may be useful to try to maintain the link between relevance and scientific quality as much as possible in order to reduce the risk that funding is seen as creating two-track research capacity: relevance and excellence. In Sweden a recent change has been to move towards strengthening the scientific quality of Swedish development research by delegating the responsibility of management and implementation to the Swedish Research Council.

**Evaluation of the support to research**

Evaluation of research has always been a contested area. Peer review is the oldest and most well respected form of review for research. However, it is not unproblematic and newcomers to the process of funding research should note that there are several complex issues with direct implications for practice. Additionally, evaluation methods, like instruments have a range of modalities for implementation, such as design of review committees.

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13 [http://vrdirect.vr.se/](http://vrdirect.vr.se/) (Criteria from the VR application system)

14 [http://www.sidaresearch.se/media/8266/guidelines%20for%20applying%20organisations.pdf](http://www.sidaresearch.se/media/8266/guidelines%20for%20applying%20organisations.pdf)

A commonly used approach for assessing, monitoring and evaluating projects and programmes in development assistance is the application of a method called result based management. This method is practiced across the different areas of development assistance and includes key concepts such as objectives, indicators to measure outcomes/impact and outputs/activities. While this is likely to be a useful instrument in many cases, the question is to what extent it is an appropriate instrument for assessing and monitoring all types of support instruments for research. For example funding mechanisms supporting basic research and those supporting research infrastructure are very different in character and might need different assessment processes.

6. Opportunities and challenges for support to research and innovation policy in developing countries

6.1. Conclusions

The governance of public R&D has become more difficult because while research financing remains for the most part national, research is being conducted in increasingly transnational and global networks. There are indications that cutting edge research is best conceptualised not in terms of national research systems but in terms of research spaces which are transnational and virtual in character (Nedeva, 2010). This insight only heightens the importance and urgency of the need for national investments as the most robust research result available from research and innovation policy studies tells us that a strong and well performing national system is: (i) a prerequisite for entry and participation in these newly emerging transnational research spaces and (ii) the most reliable means of promoting economic growth and innovation.

In the context of low income countries, being situated at the early stage of building research capacity necessitates a primary focus on acquiring the critical mass of S&T personnel necessary to meet the most immediate local needs such as the production of students, etc. Given the paucity of resources available in these settings, many capacity building efforts will have to depend on donor input to some extent, however it should be emphasised that this is an unsustainable route.

It is important that low income countries take ownership of capacity building efforts through defining goals and investing their own resources. This report shows clearly that it is risky to rely too heavily on development assistance. Some of the main reasons for this are that priorities set in development assistance are dependent on donor country political priorities and these can change over time or misalign with individual country priorities. From this overview it is also clear that there are very few holistic funders that apply funding mechanisms that support countries’ own abilities to design and implement research and innovation policy. Furthermore, research funding in development assistance is fragmented and has a strong bias towards scholarships. While scholarships are an important funding mechanism they are not enough to build national research capacity. Moreover, in times of weak financial recovery and increased pressure to demonstrate tangible results, support to research, a long-term commitment, might be perceived as being too high risk as results are not immediate and the effect on poverty reduction is difficult to derive.

On the other hand, many developing countries now recognise the importance of innovation, higher education and research for development. Most countries have policies and strategies and have
integrated those into their economic development plans. However, there seems to be a gap between policy intentions and the capacity to implement them. This presents an opportunity for developing countries and donors to address these gaps through bilateral and multilateral cooperation.

Moreover, it is evident that in many developing countries there is an urgent need to raise the quality of basic education. To do this countries need strong higher education institutions, an area that both developing countries and donors in development assistance can address. Lastly, the effects of climate change are affecting many developing countries. World leaders have called upon the academic research community find ways to address these. If developing countries are expected to contribute nationally and internationally, they need to strengthen their own scientific base. This provides an opportunity for joint actions and collaborations across borders.

### 6.2. Further reflections on an action agenda

Developing a critical mass of researchers is a long-term commitment for nations and requires investments over a considerable period of time.

An overview of literature and the case studies commissioned as a part of the OECD/IHERD programme shows that most developing countries have committed to strengthening their research and innovation capacities.

Despite great variations across different developing countries and the differences in political undertakings, it appears that in general a large number of developing countries are committed to developing their R&I capacity.

This synthesis report points to a number of strategies that developing countries can adopt to increase their capacity to design and implement research and innovation policies, including:

- Policy makers in general need to become better informed about the national importance of making a stronger commitment to research and innovation (R&I) by investing more heavily in capacity building and the expansion of opportunities for research in universities.
- Governments in developing countries need to increase the resource allocation to research and/or strengthen the coherence of public research funding to improve the efficiency across the system.
- Policy makers and institutional leaders need to become much better informed about global research trends, policy settings and funding arrangements affecting R&I management.
- Policy makers need to be assisted to develop skills in creating R&I policies that are evidence-based and informed by strategic considerations.
- Research funding organisations should consider applying a mix of funding instruments and modalities that are both competitive and non-competitive.
- Exploring the possibility of applying a funding mechanism supporting centres of excellence as an instrument for pooling resources at the national level.
- Encouraging national funding organisations to participate in transnational funding initiatives (Meta instruments), as one possible strategy to build national capacity of designing and implementing research and innovation policy.
• Policy makers need to develop an appreciation of the training needs of researchers in universities and research institutes, particularly when it comes to the process of commercialisation.

• Policy makers need to develop a better appreciation of how important institutional autonomy is to universities if universities are to be expected to make a significant contribution to R&I.

• Research managers and administrators within universities and research institutes need more support for the development of knowledge and skills related to their responsibilities.

It seems that there is a need to strengthen the skills and knowledge across countries on how to design and implement research and innovation policy. This is an absolute requirement if governments and institutional leaders are required to take ownership and reform this highly complex policy area. Different approaches can be applied to achieve this objective. One way forward could, for example, be to develop knowledge and skills both for developing countries and donors on evidence-based approaches for implementing research and innovation policies. Because of the relatively small community of leaders and managers in research at the policy and institutional level it might be fruitful to initiate collaboration across regions.

A practical example on how to operate these efforts could be to develop certified executive training courses that have the objective of providing a structured overview of STI policy (theory and practice) and a structured forum for policy learning and exchange of ideas. These would target professionals in charge of research funding at the policy level and research leaders and managers at institutional levels. The courses would be comprised of a mix of lectures and exercises designed to put the course participants’ experiences, challenges and interests at the centre of the learning experience. So as to enhance accessibility and flexibility, a mixed mode of online and face-to-face delivery should be explored. In this fashion countries and donors would develop their own expertise and it would give the research leaders and managers access to a regional network of professionals in similar positions.
References

http://www.igfagcr.org/index.php/about-us
http://www.un.org/millenniumgoals/
http://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm
http://www.gcfund.net/home.html

http://www.usaid.gov/grandchallenges
http://www.vr.se/inenglish/researchfunding/fundinggranted/programmefordevelopmentresearchuforsk.4.725718313b2995b0f283c9.html
http://vrdirect.vr.se/ (Criteria from the VR application system)
http://www.sidaresearch.se/media/8266/guidelines%20for%20applying%20organisations.pdf
http://www.vr.se/inenglish/researchfunding/fundinggranted/programmefordevelopmentresearchuforsk.4.725718313b2995b0f283c9.html


EC, Intra-ACP Cooperation, 10th EDF, Strategy Paper and Multiannual Indicative Programme, 2008-2013, p48-51, 55-56, Appendix 9 p 2


Leach and Waldman, 2009

Manning Richard 2010 "The Impact and Design of the MDGs: Some Reflections” IDS Bulletin Volume 41, Issue 1, Article first published online: 13 Jan 2010


OECD (2011b) *Has donor’s behaviour changed since the Paris Declaration? Insights from DAC peer reviews*, DCD/DAC(2011)29


Annex 1. Study on foreign assistance for research

Author: Natalie Cooke

This study aims to map the landscape of foreign assistance for research by assessing the objectives of research funding, the targets and the funding mechanisms utilised. Research is not a predominant aid funding sector, receiving only small portions of ODA funding. This is in part due to the fact that the higher education, research and innovation have not been prioritised in Poverty reduction strategy papers.

This paper proceeds as follows:

- What is development assistance for research?
- An explanation on the methodology used in the survey on bilateral donors and review of multilateral organisations.
- The objectives of aid donors for research
- Analysis of bilateral assistance for research, this section is split according to target groups of funding
- Discussion on multilateral organisations and their support for research
- Trends and gaps in development assistance to research
- Conclusion

1. What is Development assistance for research?

Classifying aid to research is not an easy task. There is no generally accepted definition of development research and what it encapsulates. This makes it difficult to study research and to draw comparisons across funders, but also makes it difficult for countries to draw guidance from each other. Many organisations do not include research as an independent sector or budget line. Research is often located in aid budgets under education, or in cases where the organisation has little focus on research it is categorised according to the sector that the research is conducted in, for example agriculture. This makes the task of determining the amount of funding spent on research difficult. This is particularly the case where assistance is decentralised across a number of government departments or public research institutes.

This problem is reiterated on the international level where research is not included in the World Bank, Asian Development Bank, the African Development Bank or the OECD DAC statistics as a defined sector or thematic area. In addition, if, as seen in some countries, the policies of multi-lateral organisations influence those of countries, the absence of a strong focus on research at the multilateral level, evidenced by the absence of a specific sector, can influence the decisions on the national level to incorporate research as a sector of aid assistance.

Capacity building in the research and higher education sector is crucial for all other sectors in that society (Bloom and Canning, 2005, Meek et al., 2009). This is an important point in the context of developing countries since public investment in research is often torn between (at least) two main goals; scientific goals, usually expressed as a desire to achieve international recognition and academic standing.
in branches of science, and social goals, which denote the aspiration to strengthen industrial capacity, educate the national workforce, including its leaders and decision makers, and address national challenges (Meek et al., 2009). This simple duality however is confounded by the argument that scientific capacity is a social goal and a key component of sustainable development and general social and institutional capacity building in developing countries.

There are three levels in the overall coordination structures of higher education systems and institutions: ‘the overall system, the institution and the academic community’. The characteristics of these levels combine in different ways including three distinct or ‘ideal types’ of coordination based on state, market or academic authority. These broad coordination structures ‘define the role of institutional leaders, academic senates, individual faculty, central administration, and external stakeholders’. Over the last couple of decades, the global trend is a shift away from state or academic authority towards that of the market. However, public research institutions cannot be successfully managed like other organisations. They remain professional bureaucracies, and managers and leaders violate basic academic norms and values at their peril.

Development agencies have different approaches for supporting research. Some are focused on supporting a countries’ ability to design and implement research policy while others support basic and applied research that is relevant for development or commission research to inform development assistance policies. However, overall very few donors in development assistance apply a systemic approach. One recent example of a donor that has moved towards this approach is the Australian Agency for International development (AusAID). They have recently implemented a programme that targets the three levels in the Indonesian research system with the goal that Indonesia has the capacity to develop effective and socially accountable policies that meet priority development needs. The modelling of this programme is unique and acts as a good example of a programme that targets all actors within the research system in a systemic way to build the system as a whole, rather than relying on capacity building on one level to impact on the others.
Box 1: Australia’s Knowledge Sector Programme

The Knowledge Sector Programme aims at using a whole-of-system approach to build the capacity of the Indonesian research system. It will work at both the national and sub-national levels in sequence, with a time frame of approximately 15 years. The programme is structured as follows:

<table>
<thead>
<tr>
<th>Components</th>
<th>Supply</th>
<th>Demand</th>
<th>Intermediary</th>
<th>Enabling Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selected organisations generate and communicate high-quality evidence to relevant policy makers</td>
<td>Selected government policy makers effectively demand and utilise high-quality evidence to inform social development policy</td>
<td>Selected organisations effectively translate the findings from research into policy options and policy options feed back into research</td>
<td>Important systemic and regulatory barriers to an effective knowledge sector are identified and mitigated</td>
<td></td>
</tr>
</tbody>
</table>

A variety of funding mechanisms are utilised for the programme including core funding, programme assistance, linkages to the Australian Scholarship Programme and the possibility of the use of technical assistance.

Source: AusAID, 2012b

2. Methodology

2.1 Study of Bilateral Donors

OECD member countries were requested to complete a survey entitled ‘The landscape of development assistance in support of research and development in developing countries’. This survey looked at two key areas; the broader funding landscape of development assistance to research and development, which incorporated questions on the amount of overall funding, support for capacity development and the key objectives, and the target group and funding modality of support to research and development which listed a range of target groups for which countries were required to select those receiving assistance and the funding mechanism used for each.

This survey was sent to members of Ministries, Delegations and Higher Education specialists in 22 OECD countries. 8 completed surveys were received (Austria, Finland, France, Greece, Ireland, Japan, Portugal, Switzerland) and in-depth case studies were conducted on Sweden and Canada. Of the remaining countries, research has been undertaken on the research assistance strategies of 4 countries (Australia, Norway, United Kingdom, United States). These countries were selected due to their size and the fact that they are implementing innovative research programmes. Thus results of
Categorisation of countries according to target groups and funding mechanisms is based on section B of the survey. Where the country in question did not complete the survey, or responses were not clear, the OECD determined such groupings according to information on the country's foreign assistance website and/or evaluations or program documents. In the case where funding incorporated two of the above groups, both were considered targets, for example where a programme had aspects aimed at targeting both individuals and universities.

Due to the short time span of this study countries have not been consulted to clarify the results shown, thus they do not purport to be definitive. However the study does give an indication of the types of research assistance provided and the funding instruments utilised. Furthermore, this survey is mainly concerned with development agencies. Some countries provided detailed information about activities funded by other ministries. This information was included in the results, however as answers were not provided by all there is the possibility that results could be significantly altered if full information of the programs was collected.

2.2 Study of Multilateral Donors

A review of the Multilateral Organisations has also been undertaken with the aim of establishing the target groups and funding instruments. As none of the organisations studied have a designated sector or theme for research key words were used to determine whether a project should be classified as falling under the category foreign assistance for research. Four Multilateral organisations have been studied using their online database of projects; World Bank, Asian Development Bank, African Development Bank and the Inter-American Development Bank. In each of these cases the search query 'research' was used. These results were further refined by selecting projects according to whether key terms are found in the title or objective (World Bank) or Project Outcome where the objectives are not listed (Asian Development Bank) as a proxy to determine whether research is a key priority of the project. The key terms are:

- Research
- Higher education/tertiary education
- Innovation policy
- Science and Technology policy
- Knowledge
- Laboratory
- Centre of Excellence
- Post-graduate
- Graduates
- University

Only programmes that were operational as at May 2013 and which started after January 2005 were considered. Relevant projects were placed in a database to study in greater depth. Projects were then studied to assess the final aim of the project- whether aims at improving research capacity or policy in the developing country, or whether it involved conducting an independent study on a separate societal goal.
2.3 Assessing donors

As two different methods were used to assess countries and multilaterals the results should not be compared too closely. The aim is not to determine the ‘best’ organisation; rather it is to get an understanding of the landscape of assistance for research.

Research assistance by bilateral and multilateral donors was categorised according to a number of factors. These factors were chosen to allow a study of the qualitative dimensions of the support for research. Firstly, all funding is split according to its location, whether it was located in an OECD country or developing country. In all cases the location of the lead institution is used to indicate its location. In the case of individuals, if a person from a developing country receives a scholarship to study in an OECD country this is classified as being located in the OECD country.

For both bilateral and multilateral donors funding was categorised as belonging to one of the following targeted groups;

**Individuals**: incorporates funding to students, researchers operating individually and in some cases teachers. It also refers to students from the donor countries receiving a scholarship to study development if considered to be ODA funding by the donor.

**Consortia**: the pooling of funds and management amongst a group of researchers or funders

**Organisational level**: incorporates universities, public, independent and private institutes, centres of excellence and foundations. The organisational level can refer to anything from institutional management on the systems level to research grants being offered by the institution. Further work breaking down this category would be beneficial.

**Policy level**: refers to programmes targeting the ministerial level. These generally aim to build capacity within the ministry, rather than the institutional management level.

**Multilateral/International Level**: any funding directed to an organisation, institute or consortium that crosses over national boundaries

The type of funding instrument used is also an important aspect of research assistance for a number of reasons including that a great deal of extra costs can be incurred if the instrument and purpose are mismatched. The degree of freedom for steering research funding and the ability to couple public research with specific societal goals are also affected (Jacobs, 2013). The funding mechanisms have been categorised as follows:

**Scholarships** (stipends): Funding to support the completion of a university level qualification (Bachelors, Master, PhD or post Doctorate).

**Programme/project based**: Projects have well defined target groups and usually require that the recipient give a detailed account of objectives, potential results and beneficiaries as well as time frame. It also refers to what is typically referred to as a programme; a portfolio of projects grouped together under one theme and conducted by a collaborating group of actors. Research funders may use the term to describe either a group of projects that they are administering under one heading or to describe a group of projects from the recipient perspective.
Core/block funding: funding provided to an organisation that supports their own strategic plans and objectives without very few prior agreements

Technical Assistance: the provision of expertise and training (OECD, DAC 2012).

Loans and guarantees: transfers for which repayment is required. Only loans with maturities of over one year are included in DAC statistics. To be qualified as ODA, loans must be concessional in character and have a grant element of at least 25 per cent (OECD). Guarantees are when an organisation guarantees a minimum purchase price for an innovation or supports access to loans by reducing risk.

Centre of excellence: Larger and longer term funding to support excellence within an institution

If joint planning has been listed it has also been allocated as programme funding. Competitive calls and commissioned studies are split according to the type of funding used in the specific case, if unknown it has been allocated as programme funding. In the case of loans provided by multilateral organisations the conditions placed on such funding have not been considered. It is possible that these conditions have an impact on the outcome of the programme thus it is an area that could be further investigated in future studies.

There are a number of potential problems with the data collected, particularly in relation to the amount of spending on research. Some donors include research-like activities that are commissioned by the donor, and others do not. Some donors account for building research capacity, while others exclude this category. In addition, some donors included activities targeted at the university level in general while others have not. Expenditure is also likely to be a poor indicator of the volume and quality of “research” produced given the huge variation in the costs of employing researchers in different countries, and the extent to which researcher’s overhead and other costs are covered by other sources of funds. Despite these issues an effort has still been made to map the assistance to research to act as a guide to aid agencies that deliver assistance for research. Further in-depth studies of research assistance would be beneficial to increase the understanding of country and multilateral research strategies.

4. Objectives of development assistance for research

The support in development assistance can be broadly grouped into four categories:

- Funding that supports countries’ ability to design and implement research policy
- Funding that supports research as a component of addressing specific socio-economic objectives
- Funding to basic research relevant for development
- Commissioned research to inform development assistance policies and programmes

Based on the survey we have differentiated donors of research from a qualitative perspective according to the above objectives. Development assistance providers were split according to the objective predominantly targeted in their respective programmes.

This first group applies to funders that undertake a more holistic approach often including a variety of funding instruments targeting the governmental level, research institutions, non-governmental
organisations and individuals. Examples of these countries include Sweden, Norway and Canada. The second group involves an integrated approach in which research makes up one component of a larger development programme aiming to address specific development goals such as the MDGs. The World Bank is an example of this group. However, more and more initiatives are applying an integrated approach where research is one component. One example of this is the Grand Challenges for Development managed by USAID.\textsuperscript{16}

The third group, funders of basic research relevant for development, often applies competitive funding mechanisms to support individual researchers or research groups located in research organisations. Development assistance actors frequently cooperate with national funding organisations, including research councils, or support specific research organisations. Examples include; Finland, France, Portugal, UK. Finally, research commissioned to inform development assistance policies and programmes is a commonly applied mechanism amongst many development assistance organisations. Common funding mechanisms are competitive grants for specific time-bound assignments, technical assistance and country reviews. Examples of organisations applying this approach are UN organisations, regional development banks and Ireland.

It is important to note that these categories are not mutually exclusive and many funders cross a range of categories but often one of their objectives are their priority.

5. Bilateral assistance for research

Results in the survey on funding amount showed particular variety across countries. The largest spender on research was France. The annual IRD budget is approximately €230 million, without considering the funding for research that comes from AFD or MAE. Canada also has a significant budget for research, with the annual revenue of IDRC amounting to CAD 287.8m in 2011-2012. Across all countries a slight increase in funding to research was evident over the period 2006-2011.

5.1 Individual Level

Despite a strong focus on the individual level by many countries, the focus on this level has decreased. Few countries now have individuals as the target of specific research funding, with the exception of students receiving scholarships. It has also been difficult to assess this level due to the fact that even if funding is aimed at one specific researcher conducting a study, the agreement will often be between the individual's employee organisation and the donor, thus causing it to be included in the organisational level.

\textsuperscript{16} http://www.usaid.gov/grandchallenges
In many cases the decrease in focus on the individual level is the result of a shift in country strategies from the individual level to the organisational level with the view that this will be more efficient at building national research capacity. Norway has merged two programmes to move capacity building beyond individual students and researchers to address the broader institutional environment. Norway argues that strategic investments in higher education and research in low and middle income countries pay off in the form of strong academic institutions and their societal engagement. This in turn contributes to development of country intellectual resources, competent workforces, visionary leaders, gender equality and human rights and in the long run to evidence based policies and decisions that enhance sustainable economic, social and environmental development (Norad, 2012).

**Scholarships**

Where individuals are targeted it is frequently through the use of scholarships, with almost all aid programmes implementing this form of aid. Few countries target the Bachelor level, more common is the use of scholarships to target Masters and PhD students. A number of countries also target their own nationals through scholarship programmes for the study of development at the tertiary level. Sweden implements a number of programmes for Swedish students to complete an internship, undertake field work or an exchange programme in a developing country.  

Individuals receive a large portion of funding from some providers through the form of scholarships. PhD students received on average 60% of France's IRD budget between 2006 and 2011. More significantly, an average of 90% of Greece’s ODA has been allocated to scholarships on the Masters, PhD and Post-doctorate level, while in 2011 this figure was 99%. Large funds have been spent on scholarship programs in Australia. For example the Australian Aid programme plans to spend AUD 425 million on scholarships and multi-sector training in 2013-14, approximately 36% of its funding for education.  

However, the shift away from individuals has also occurred in relation to scholarships. Many countries have reformed, downsized or abolished their scholarship programmes in recent years after reviewing their impact (OECD, 2012). In the review of the Austrian Scholarship program conducted in 2007, it was stated that:

*‘Though the scholarship programs are generally well and efficiently managed and can be further improved, the overall justification of scholarship programmes implemented in Austria as key instrument and backbone for the implementation of sector policy education and for pursuing international goals (MDGs etc), strategies or national priorities remains highly questionable’*

The Austrian Aid Agency heeded this advice and modified its assistance to have a greater focus on the institutional capacity building than on individuals.

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17 [http://www.sida.se/English/Partners/Universities-and-research/Applying-for-research-support-do-you-qualify/Sida-sponsored-scholarships-for-students-and-teachers/](http://www.sida.se/English/Partners/Universities-and-research/Applying-for-research-support-do-you-qualify/Sida-sponsored-scholarships-for-students-and-teachers/)

Where scholarship programmes are still operated the majority take place within the donor country with a requirement that the student return to their home country for a certain time at the end of their degree. Some countries are moving away from such a model however, and placing a greater priority on scholarships for studies in the student’s country or region. Norway has been particularly focussed on this, with studies taking place in Norway now a 'last resort'.

An additional mechanism being used to target individuals is joint degree programmes. Austria and the Netherlands are together implementing a joint degree programme with Kenya in Limnology and Wetland Management. This Masters programme is aimed at mid-career professionals and involves them studying at Egerton University, the University of Natural Resources and Life Sciences, Vienna and UNESCO-IHE, Institute for Water Education, The Netherlands each for a period of four months, followed by 6 months of writing a thesis in one of the above countries or the student's home country. The aim of the joint studies is to utilise the comparative advantage of each respective university and with regards to studies in Kenya, to study this in a tropical, developing country context. Students from a number of countries in Africa are eligible for fellowships to complete the course, however it appears that these cannot be applied for prior to admission. It is unclear whether there is a quota system in place for the number of students from developing countries to be admitted to the course. If not, studies should be conducted to establish whether people from developing countries have equal access to the programme despite the limited opportunities available when compared to applicants from Europe.

5.2 Consortia

Groups of individuals are very rarely targeted by aid agencies. This is likely due to the fact that most groups of individuals operate out of a university or institute, thus the organisation appears to be the target, rather than the individuals.

Consortia are however frequently used to group organisations and funders on the international level. This will be discussed in the relevant target level.

5.3 Organisational Level

The organisational level is frequently targeted by aid agencies, particularly since the recent shift towards programmes to build capacity on this level. Universities and public institutes are the most common recipients; with only a few countries appearing to not be engaged with these organisations. In particular, aid agencies target organisations in their respective countries, engaging them in development research or in leading partnerships with developing countries.

When assessing funding to organisations located in developing countries the most common target groups are again universities and public research institutes. Organisations in developing countries are as frequently targeted by donors as those organisations in OECD countries. However the value of funding and number of programmes appears to be much more significant in the OECD countries, reinforcing the bias towards OECD country institutions in the development context.
Of the universities in developing countries receiving foreign assistance, there are some that receive funding from a number of countries (Makerere University in Uganda, Egerton University in Kenya and Eduardo Mondlane University in Mozambique). Makerere University receives aid from many donors including Austria, Norway, Sweden and the United States. The United States supports Makerere University through the Development Lab: ResilientAfrica. Makerere will lead ResilientAfrica, an international partnership that will apply science and technology to improve the resilience of African communities against natural and political stresses. The programme involves uniting 20 African universities to form a network to empower African communities.\textsuperscript{19} The focus on these universities is with the aim of making certain universities leading universities in the region. Public funding is very low to some of these universities, lower per student than for other universities in the respective country. This suggests that the strong donor presence may be crowding out public investment in the universities. Despite this, without the presence of aid funding these universities would not be able to reach the standards of excellence that they are aiming to achieve.

Most countries target organisations through the establishment of joint funding partnerships between organisations in the donor country and an organisation in the recipient country. These are often on a competitive basis, with funding applications required. In most cases the organisation in the provider country is the lead organisation. That is, they are in charge of the funding and take a lead role in the development of research structures etc. In some cases the purpose behind this is to ensure that the provider country plays a lead role in finding solutions to global problems and to provide assistance in capacity building while monitoring the funds and increasing the publication rate of recipient universities.

A limited number of organisations have adjusted their strategies and have shifted the planning and funding of joint partnerships to the developing country partner organisation. In Norway's NORHED programme, partnerships coordinated by the Norwegian institution are considered to be a last resort. Agreements are signed with and managed by a South-based institution on behalf of the partnership. Prior to this an assessment of the institutional capacity of the South-based institution is undertaken to ensure that the partner is capable of undertaking the responsibilities required of a lead partner. This method of instituting partnerships is seen to be an efficient way of building local ownership and capacity development in South-based institutions.

Non-profit and independent research organisations receive less funding than universities and public research institutes, particularly in the developing country context. This appears to be changing however with a move towards the funding of think tanks by many countries as seen in Box 1.

Private organisations are not frequently listed as recipients of donor money for research. If they are listed, it is often Foundations being referred to. Major foundations that receive funding are the Gates Foundation and Wellcome Trust. These foundations also operate many programmes in developing countries to build research capacity, with the Gates foundation being the largest research funder in 2006. Canada has been instrumental in creating the Think Tank Initiative to fund research in cooperation with a range of Foundations as discussed in Box 1.

It appears that there is no focus on centres of excellence as a funding instrument from country level aid programmes. Australia provides some funding to the Institute for Health Policy, which is stated

\textsuperscript{19} \url{http://www.usaid.gov/hesn/makerere-university}
as being a centre of excellence in Sri Lanka. However in this case funding is in the form of a grant rather than a centre of excellence

**Box 2: Think Tank Initiative**

_The overarching objective:_
To strengthen the capacity of independent policy research organisations in the developing world

A partnership of five organisations that have committed $CA 113 million funding for the first phase and that share in the governance of the initiative:
- $42 million - William and Flora Hewlett Foundation
- $42 million - Bill and Melinda Gates Foundation
- $14 million - IDRC (Canada)
- $9 million - DFID (UK)
- $6 million DGIS (Netherlands)

Funding, in the shape of core grants, is combined with dedicated technical support in three broad areas:
- Research methods and skills
- Policy engagement and communication
- General organisational development

Among other activities the Initiative supports peer-to-peer review, learning and exchange by bringing together the funded institutions and outside experts.

Current recipients - 51 think tanks in 23 countries that meet specific criteria such as a degree of both political openness and policy research capacity.
- East Africa: Ethiopia, Kenya, Rwanda, Tanzania, Uganda
- West Africa: Benin, Burkina Faso, Ghana, Mali, Nigeria, Senegal
- Latin America: Bolivia, Ecuador, el Salvador, Guatemala, Honduras, Paraguay, Peru
- South Asia: Bangladesh, India, Nepal, Pakistan, Sri Lanka

A diverse set of research themes are being pursued in these think tanks:
- Development
- Economics
- Environment and Natural Resources
- Evaluation
- Food and agriculture
- Governance
- Health
- Information and Communication
- Science and Technology
- Social Policy

*Source: Halliwell 2012*
**Funding mechanisms**

Funding on the organisational level is generally in the form of programme funding, however some countries also use a mix of technical assistance, core funding and grants. Some countries only use core funding to target organisations in OECD countries and use programme funding or competitive grants for developing country counterparts. However, in some instances core contributions make up a large portion of funding for developing countries, a greater portion than that aimed at donor country organisations. Finland states that it provides programme funding to domestic organisations and core funding to organisations in developing countries. Switzerland also has a similar policy, with 42.5% of funding to nationally based organisations in the South or East being unearmarked, compared to 18.4% of funding for Swiss-based organisations. AusAID, in its implementation of the Knowledge Sector Program in Indonesia has used core funding for research organisations. AusAID argues that the scarcity of core funding limits the organisations' opportunities to develop an independent research agenda and retain and develop top-quality research staff.

Technical assistance is a popular funding instrument for a number of organisations. This is France's main funding instrument (with the exception of scholarships). In most cases French researchers are embedded in partner institutions such as universities, institutes, international organisations for a period of 3-6 years to impart knowledge on local staff and to undertake research with the aim of advancing cutting edge research, supporting capacity building and increasing linkages and cooperation between the research community and industry.

**5.4 Policy level**

The policy level is not often targeted by countries. Only five countries that were reviewed target this level through the support of ministries in developing countries. These programmes appear to be small in scope as compared to programmes targeting organisations and when a country does target this level there is often only a limited number of recipient countries. The countries that do target this level tend to fit into the third group of funders; those that have a holistic approach to research funding. Thus targeting the ministry normally links with programmes targeting other levels of the research system as seen in the case of Australia in Box 1.

Programme funding is the instrument normally utilised to target the policy level, allowing the donor to have control over the outcomes of such assistance. There are some countries also using technical assistance, however it appears that this is not very frequent in the case of research.

**5.5 International Level**

Countries provide the largest amount of funding for research to the international level. 46.8% of funding from the Swiss Development Agency on research in 2007-08 went to multilateral organisations and other organisations with international membership (Swiss evaluation). Funding to international organisations is most often provided to the World Bank, the World Health Organisation (WHO) and various organisations within the United Nations, with an emphasis on...
UNESCO and UNDP. The support that the World Bank in turn provides to developing countries will be discussed below.

International Public research organisations also receive a large amount of funding. The largest recipient is CGIAR, who receives core funding from all countries surveyed. CGIAR received 31% of Switzerland’s foreign assistance, or 12 million CHF, in 2008 making up a substantial portion of Switzerland’s funding to international organisations. As of April 2013 CGIAR had confirmed receipt of USD 152.6 million towards its 2013 budget, with the expectation that more funding will be confirmed in the near future.

CGIAR’s vision is to reduce poverty and hunger, improve human health and nutrition, and enhance ecosystem resilience through high-quality international agricultural research, partnership and leadership. This is supported by three strategic objectives:20

- Food for people: create and accelerate sustainable increases in the productivity and production of healthy food by and for the poor
- Environment for people: conserve, enhance and sustainably use natural resources and biodiversity to improve the livelihoods of the poor in response to climate change and other factors
- Policies for people: Promote policy and institutional change that will stimulate agricultural growth and equity to benefit the poor, especially rural women and other disadvantaged groups

Only a few countries provided funds to international organisations that have their headquarters in developing countries. The predominant recipient of this funding was ICDDR based in Bangladesh. Funding is also provided to CGIAR’s consortiums, some of which are located in developing countries. However, as these fall under the umbrella of CGIAR they have been categorised under organisations located in developed countries.

Some aid agencies have started collaborating to create larger and more focussed capacity building research programmes. Australia currently has government level agreements or agency level memoranda of understanding with the following countries: Canada, EU, France, Germany, Japan, New Zealand, Republic of Korea, United Kingdom and the US. This is just one example of the interconnectedness on the donor level. Furthermore there are programmes being operated by a mix of these countries. In addition, the ERA Net Programmes operated by some European Union members are also frequently used consortia. The ERA Nets, such as SPLASH, are operated as a consortium with EU member countries voluntarily contributing resources to selected Nets. The SPLASH program is supported by a number of survey respondents and is outlined in Box 3.

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20 [http://www.cgiarfund.org/node/33](http://www.cgiarfund.org/node/33)
Funding to international organisations and public research institutes is generally in the form of core funding, with pre-existing core funding agreements existing between international organisations and countries. The agreements do not always specify a contribution to research, however all international organisations are undertaking research in some form. In addition, programme funding is provided to both targets if a country has a specific programme that it would like to contribute to. Programme funding is used in the case of international non-government research institutes and some.

5.6 The European Union

The EU has a holistic approach, operating programmes that target individuals through scholarships, universities by strengthening institutional management and implementing structural changes to converge with the EU system, create centres of excellence, whilst also implementing programmes that aim at building infrastructure for research institutions. For example the Tien3 programme in EurAsia intended to bridge the digital divide of less developed countries in Asia by improving the Internet connectivity for research and education institutions. The programme provided large capacity internet connection to universities, research centres and institutions to increase the exchange of knowledge amongst them and make big international projects real. With the range and holistic nature of the EU programmes being operated it is very difficult to specify exactly who the target group is and the funding mechanisms used.

As the EU is not a bank it does not use loans, rather it uses scholarships and technical and scientific training to target individuals and normally programme funding for other target groups. The EU also uses mechanisms such as joint-funding, the creation of networks and the exchange of experiences.

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21 [http://www.tein3.net/Pages/home.aspx](http://www.tein3.net/Pages/home.aspx)
6. Multilateral Organisations’ support for research

Four multilateral organisations were studied to assess the research programmes that they undertake. All four organisations were development banks; The World Bank, Asian Development Bank, African Development Bank and the Inter-American Development Bank. Of these the World Bank is by far the largest provider of support to research.

The World Bank has implemented a number of programmes targeting research and higher education institutions. Many of these programmes are holistic in that they target a number of elements of research capacity. The majority of programmes operated by the World Bank target the institutional management of the organisational level. This involves strengthening the higher education system in the country through individual institutions by improving the quality of actors, the curricula being taught, and restructuring the university linkages and systems. The World Bank will launch an Africa Centres of Excellence Initiative in July 2013 under which it will spend US $430 million aimed at strengthening capacity in universities in West and Central Africa (Tongai, 2013).

The Asian Development Bank also has a large number of projects that fit the criteria outlined in the methodology, however a large number of these projects, particularly those on the regional level, tended to be more focused on commissioning research to achieve other societal goals through the use of a short term technical assistance, rather than building up the research capacity of a target group. For example, the Enhancing Economic Analysis and Learning programme provides technical assistance for economic research support (amongst other things) to gain a deeper understanding of immediate economic issues and concerns. The ADB and its subsidiaries are often the recipients of the aid project, that is, aid funding is used for technical assistance within an ADB branch to conduct research to support future policy decisions.

The African Development Bank had a much smaller number of programmes targeting research. These programmes were largely aimed at increasing the capacity of organisations and the number of skilled graduates graduating from higher education institutes. In addition there was a focus on establishing regional centres of excellence and networking institutions across parts of the continent. In addition the AfDB also provides funds to international institutes such as CGIAR.

The policy level receives attention from international organisations, however the focus is predominantly on the organisational level, particularly their institutional management, and the regional level. All organisations have a large focus on regional institutes and organisations. This is particularly the case for the ADB and AfDB. The World Bank also funds regional programmes, however it still has as its focus national systems.

6.1 Funding Instruments

All of the banks utilise loans to fund programmes, with the exception of the ADB. The Asian Development Bank focuses on the use of technical assistance to implement its programmes. This is predominantly the case when the ADB is targeting itself. If it is providing assistance to a member country it also uses loans and technical assistance that is on a grant basis. In the case of the World Bank funding is generally provided to the government of the recipient country and thus the implementer is stated to be the national government department for higher education or science and technology. However, as discussed above, in many cases the funding is not used to remedy problems on the policy level, but rather to improve institutional management of organisations.
7. Trends and gaps in development assistance support to research

7.1 Target groups

The shift on the country level away from targeting individuals towards organisations has had an impact on the overall landscape of foreign assistance for research. Organisations, particularly universities and public research institutes, receive significant attention from donors. These organisations are predominantly located in the donor country, however the shift towards the organisational level has coincided with a shift towards targeting organisations in the recipient country. Many donors studied still target the organisational level through the use of grants or individual research projects rather than using larger scale funding, such as core funding, to build the institutional management capacity of the target organisation. This strategy has been criticised for not strengthening the academic core, nor contributing to development in a sustainable manner (Cloete, 2012). In acknowledgement of this fact, some funders, predominantly those on the international level, do focus on building capacity within the organisational level. Rather than awarding narrow research projects to a university these donors aim to improve institutional management through activities such as increasing the relevance of curricula, improving quality assurance and improving infrastructure.

Despite the shift towards the organisational level individuals are still targeted by many aid donors through the use of scholarships thus ensuring that individual capacity is still being built. This does not however act in any way to maintain the capacities of individuals with their training nor does it impact upon the quality of researchers employment conditions. The effectiveness of scholarships as a funding mechanism for targeting individuals is discussed in the following section.

As discussed above the policy level is important for the overall research system. Strength on the policy level helps to ensure the implementation of evidence-based research policy and, together with the other target levels listed, will assist in the creation of a strong and sustainable research system. Funding on the policy level however presents a major gap in the development research landscape. Countries provide very little funding on this level, with the exception of countries with a holistic view. Multilaterals have filled this gap to some extent, despite their relative focus on institutional management, by building capacity within the ministries, however this is still an area that should be further addressed by all donors. Without a larger focus on this level it is difficult to ensure the sustainability and capacity building aspects of programmes.

The international level is a major focus for all countries, receiving the largest amount of funding from most donors. The majority of these organisations are located in developed countries, leaving a gap in funding on the developing country level. In addition, some of the international organisations, particularly the ADB, target other international actors creating what could be termed a horizontal transfer of funds. The large focus on regional and international institutes, particularly from regional banks could contribute to a gap in the research system on the national level through a shift in capacity from the national to the regional level. The gap could be further emboldened by the fact that it is very difficult to link the regional level to the national level if there is not a strong institution or policy on the national level to support the transition of knowledge.
7.2 Locations

Within assistance for research there is a clear bias towards research funding located in OECD countries on all levels. This is particularly evident on the individual level, with the priority in many donor countries being to place students from developing countries in universities in OECD countries, thus building up capacity in the individual, not the system in the developing country. At the organisational level this can be further perpetuated by the use of competitive calls for funding as these are often secured by national organisations unless a quota system or other requirement is put in place. Some countries are starting to close this gap with the introduction of joint degree programmes, the support of scholarships in the local country, support for building infrastructure, and support to the universities on the organisational level to aid them in training teachers, developing curricula and opening up further PhD positions. All of these programmes will contribute to building capacity in individuals and organisations.

The issue of funding location is related to the objectives that are trying to be achieved by the donor. For example programmes aimed at meeting the objective of commissioning research to achieve societal objectives often fund researchers in the donor country (at least as lead organisations in a joint-partnership) as there is no requirement built into the objective to conduct the research in a developing country, whilst at the same time there is the added benefit of achieving other national goals such as becoming internationally recognised for research. This is in contrast to the objective of support to strengthen countries’ ability to design and implement research policy which requires capacity in the recipient country, in turn requiring programmes that achieve this aim. When assessing countries in this manner it is clear that the objective of commissioning research to achieve societal goals is a greater priority for many countries than strengthening a countries’ ability to design and implement research policy, however it appears that there is a shift towards the latter.

7.3 Funding instruments

Programme funding is the predominantly used funding mechanism. This allows the donor to have a greater degree of control over the outputs achieved from the funding. The International level is the only group that consistently receives core funding from all donors. This funding goes into a pool of funding, providing the international organisation with the freedom to undertake the programmes of their choosing. Some countries have started to move towards the use of core funding for other actors located in developing countries, particularly organisations, arguing that it allows the recipient greater freedom and prevents the donor from steering the funding for their own benefit. There is still however room to expand the use of core funding amongst target groups other than international organisations.

Scholarships are still a widely used funding mechanism by countries and the EU to target individual students. Targeting the individual, and particularly students, is important as educated individuals are required in the research system to build its capacity, while also building up the level of knowledge within the recipient countries. There has however been criticism both from survey respondent countries and the OECD on the operation of scholarship programmes by some countries. There are a number of risks involved with poorly planned scholarship programmes including: a lack of coherence with the DAC members’ or partner’s overall development priorities, inequitable distribution of aid resources, limited development outcomes and brain drain (OECD, 2012). DAC members using international scholarships should thus review them to understand the
impact that they have on development outcomes. Where countries decide to keep their scholarship programmes, they should reduce negative effects by:

- Focusing support for study on areas that are most applicable to partner countries' development priorities and challenges
- Including incentives for beneficiaries to return and apply their knowledge and skills in key sectors in their home countries
- Supporting study at home or in the region including in key regional educational institutions, rather than study in the donor country
- Focusing scholarships for study abroad on higher level qualifications that cannot be gained in the region and that are related to development objectives and capacity needs; and
- Ensuring equity and transparency in how students are selected

Technical assistance is another funding mechanism being utilised by some countries and multilaterals and of those using it, there is a heavy reliance. Technical assistance has often been effective in supporting partners to improve their operations in the short term and to complete particular tasks, however it has not been so useful as a tool for building sustainable capacity (OECD, 2012). The supply driven approaches that have characterised the provision of technical assistance have frequently failed to build sustainable capacity and, in many cases, have actually undermined local capabilities by creating a dependency on the expensive, international expertise funded by DAC members. Thus DAC members, and multilateral organisations, should move away from the donor-driven approaches to supplying technical co-operation and instead, play the role of a supporter of partner owned, procured and managed technical assistance. This will require DAC members to ensure that their support for technical assistance:

- Is responsive to partner demands rather than directional
- Is not tied to a particular supplier or source
- Makes use of partner country systems wherever possible, including procurement, avoids imposing overly complex tendering procedures or establishing parallel implementation units
- Draws on local or regional resources, helping to ensure value for money and understanding of local context, while also assisting development of local and regional markets
- Is well linked with wider development efforts
- Is fully transparent about the costs involved

The influence of the Paris declaration can also be seen with greater coordination across donor countries evident in research funding. There is still much work to be done, however many donors are creating joint programmes and initiatives to prevent the cross-over of programmes and to increase their spread thus having a larger impact on strengthening the research system and contributing to development in a sustainable manner.
8. Conclusion

A strong research system requires capacity on the individual, organisational and policy level. There is currently a gap in funding on the policy level bringing in to question the sustainability and effectiveness of other programmes implemented. Without capacity on the policy level it is difficult to implement policies that maintain strength in the research system over the long term.

Foreign assistance for research does not play a major role in many DAC member aid programmes or in multilateral organisations. Despite this, more attention is being paid to this area due to its important role in creating the knowledge economy.

Of those contributing to research funding four dominant objectives are evident; funding that supports countries' ability to design and implement research policy, funding that supports research as a component of addressing specific socio-economic objectives, funding to basic research relevant for development and research commissioned to inform development assistance policies and programmes. Supporting research as a component of addressing specific socio-economic objectives and funding to basic research have been the dominant objectives of donor organisations resulting in the use of short-term research projects, the targeting of individuals and a focus on programme funding. This is starting to shift towards the recognition of the importance of the knowledge economy and the necessity of countries' ability to design and implement research policy. This has resulted in a shift towards the use of holistic programmes and the targeting of institutional management.

With increased attention to research funding expected in the future, it is important that donors coordinate their funding and ensure that gaps in target groups are not evident, particularly on the policy level as seen now. Donors however should maintain a balance and ensure that they are not crowding out funding from public and private local sources.
References


http://www.cgiarfund.org/node/33

http://www.sida.se/English/Partners/Universities-and-research/Applying-for-research-support-do-you-qualify/Sida-sponsored-scholarships-for-students-and-teachers/

http://www.usaid.gov/grandchallenges

http://www.splash-era.net/activities.php

http://www.tein3.net/Pages/home.aspx

http://www.usaid.gov/hasn/makerere-university


AusAID (2012a), AusAID Research Strategy 2012-16, Canberra

AusAID (2012b), Australia-Indonesia Partnership for Pro-Poor Policy: The Knowledge Sector Initiative, Design Document, Canberra

Austrian Development Cooperation (2007), Evaluation of the Education Sector of Austria’s Development Cooperation and Cooperation with South-East Europe, Austrian Development Agency, Vienna

Bloom, David, Canning, David, Chan, Kevin (2005), Higher Education and Economic Development in Africa, Harvard University


Halliwell, Janet (2013), OECD Development Case Study: Canada International Development Research Centre, OECD, Paris


Ministry for Foreign Affairs of Finland, Evaluation: Support to Development Research, Evaluation report 2009:3, Finland
Annex 2. Case study on African Union Grant Programme

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Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUC</td>
<td>African Union Council</td>
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<tr>
<td>RBM</td>
<td>Result based management</td>
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<td>LFA</td>
<td>Logical framework approach</td>
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Introduction

The overall objective of this study is to describe the policy context and the governance, operation conditions and the evaluation mechanism of the African Union Research Grant with the view to say something of the potential impacts of this funding scheme and for a possible launch of an African Framework Programme of Research.

The African Union Research Grant Programme was initiated in 2011 and aims at supporting the implementation of Africa’s Science and Technology Consolidated Plan of Action and its lighthouse projects by promoting Africa’s existing scientific excellence. Another objective is to enhance intra-regional scientific research collaboration and cooperation that contributes to Africa’s sustainable development.²²

The African Union Research Grant Programme is an important case study since this initiative is one step towards developing a future fully fledged African Framework Programme for Research and

consequently one of the objectives of this programme is to develop African Union Council capacity for managing research grants.

As a part of the capacity-building process, this report focuses on two interrelated issues:

- The construction of the funding instruments for implementing the *African Union Research Grant Programme*; and
- Identify key factors that would enable this initiative to generate excellent research for building capacity in prioritised areas.

**Policy context**

The African Union was established on 9 July 2002 and consists of 54 member countries. AU was formed as a successor to the Organisation of African Unity, which was established in May 1963.

While the Organisation of African Unity focused to a large extent on policies relating to the eradication of all forms of colonialism and securing Africa’s long-term economic and political future, the African Union has taken the political agenda further and seeks to accelerate the political and socio-economic integration of the continent. As a consequence, the African Union has introduced new policy areas, including science and technology policies.

The African Union has charged the African Union Commission to lead the work on science and technology policies and this area is administratively located in the Department of Human Resources, Science and Technology. It has together with the New Partnership for Africa's Development (NEPAD) the mandate to drive strategic programmes in this area.23

In addition, the African Union Commission established the Conference of Ministers in charge of Science and Technology as a platform for developing priorities related to Science and Technology policies. In 2005, the Conference of Ministers in charge of Science and Technology endorsed Africa’s Science and Technology Consolidated Plan of Action, which articulates Africa’s common objectives related to science and technology capacity-building, knowledge production, management, technology and innovation for development.

In 2007 the African Union Heads of State and Government adopted the theme "Science, Technology and Research for Africa’s Socio-Economic Development" and subsequently declared 2007 as the launching year for building constituencies and champions for science, technology and innovation in Africa. In December the same year the EU-Africa Summit in Lisbon, adopted a joint cooperation strategy that has a dedicated partnership on science.

The overall objectives of the Africa’s Science and Technology Consolidated Plan of Action are twofold:

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23 Africa’s Science & Technology Consolidated Plan of Action, p 5-6.
• To enable Africa to harness and apply science, technology and related innovation to eradicate poverty and achieve sustainable development
• To ensure that Africa contributes to the global pool of scientific knowledge and technological innovations.

The implementation of the plan takes place through regional, continental and international cooperation, which aims to (i) improve the quality of science, technology and innovation policies of African countries through promoting and sharing of experiences and policy learning, (ii) strengthen the capacity of regional economic bodies to mainstream science and technology into their sectoral programmes and (iii) establish projects with the view to improve the quality and intensity of regional cooperation. 24

The African Union Commission will contribute to achieving these objectives through some specific support measures that are targeted to stimulate resource sharing of R&D infrastructure, improving the quality of research, increasing the number of scientists, technicians and engineers and lastly contributing to the application of science for achieving some of the Millennium Development Goals.

The African Union Council has further recognised the need for African actors to promote innovative ways and means of financing science and technology in Africa.

**Key features of the African Union Research Grant**

The African Union Research Grant Programme is a programme lead by the Department of Human Resources, Science and Technology, which aims at ensuring that science and technology in Africa contributes to its efforts for sustainable development. This programme was formulated as one of the lighthouse projects identified among the early deliverables in the Partnership No 8 of the EU-African Joint Strategy and its Action Plan adopted at the EU-Africa Summit in Lisbon in 2007.

The African Union Commission has received financing through the Financial Agreement between the EC and African Caribbean and Pacific of States under the 10th European Development Fund (EDF), intra-African, Caribbean and Pacific envelop. 25

As compared to previous EDF programmes, the 10th EDF has increased the importance of regional cooperation and intra-ACP cooperation. Eight percent of the total 10th EDF budget has been earmarked for regional cooperation and 12.3 % for intra-ACP and interregional programmes. The total indicative budget for science and research of the intra-ACP programme is € 130 million of a total of budget of the African Union Commission of €2.7 billion, which represents a large increase

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24 Africa’s Science & Technology Consolidated Plan of Action, p 7-12.

compared to the 9th EDF intra-ACP programme which allocated € 76,350 million for science and research. 26

**Strategic orientation**

The strategic orientation of the African Union Research Grant Programme is to enhance intra-regional scientific cooperation by supporting Africa’s Science and Technology Consolidated Plan of Action Lighthouse projects focusing on post-harvest and agriculture, sustainable energy and water. The African Union Research Grant funds activities related to data-collection through desk-top research, stakeholders’ consultations and field visits, laboratory equipment and minor capacity building components if there are weaknesses that could be foreseen. 27

As mentioned earlier, another objective with this programme is to build capacity in the African Union Commission for establishing a sustainable system for managing competitive research grants at Pan-African level, with the view to developing a future fully fledged African Framework Programme for Research. The African Union Research Grant Programme is the first step towards this objective.

To address this issue a Task Force has been established by the Department of Human Resources, Science and Technology to assess the feasibility of the establishment of an African Research Council. In the Report of the Task Force it states that the establishment of the African Research Council should be established to support and deploy basic, applied and frontier research to respond to the policy needs associated with Africa’s Science and Technology Consolidated Plan of Action. It is further underlined that to ensure scientific excellence and integrity without losing it close association with the African Union system, attention needs to be paid to the crafting of the structure, procedures, processes and governance of the African Research Council. Thus it is suggested that the African Research Council should be established from the outset as an autonomous and accountable institution. The governance structure should include a Governing Council, located at the African Union headquarters, a Scientific and Advisory Committee with various sub-committees and a senior Management Team. In terms of financing, it is suggested that the bulk of the funding would come from public resources including the AU annual budget allocation and from Member States. However, the Task Force also recognize that these resources are not enough and therefore it is expected that the African Research Council will source support from bilateral and multilateral partners outside the continent. In addition, they suggest that an African Council Trust Fund would be established, to which AU member states, bilateral and multilateral donors, private foundations and philanthropic organisations could contribute resources.


27
This report is now in the hands of the Department of Human Resources, Science and Technology, which will decide on how to proceed.

**Institutional supporting and operating conditions**

**Funding and evaluation mechanisms**

The total budget allocation for the African Union Research Grant Programme was €7 million in 2011 and €14.7 million for 2012. The budget for evaluation of the project proposals was €700,000 in 2012.

The funding is split between three priority areas including post-harvest and agriculture, sustainable energy, water and sanitation. In 2011 nine projects were rewarded.

The minimum amount allocated to research proposals is €500,000 and the maximum amount is €750,000. The grants cover between 50-80% of the total costs. The proposals are submitted at a single stage (Concept Note and full proposal) through Open Calls.28

The scientists should construct consortia of at least three organisations from at least two different African Countries (South Africa excluded) while established research networks and regional bodies recognised by the African Union Council such as Regional Economic Communities, are considered to be partnerships in themselves and do not need to form alliances with other organisations.29

The evaluation criteria of the Concept Note covers the relevance and the experimental design of the proposal and the full application is assessed on the basis of the applicants’ financial and operational capacity, including factors such as availability of sufficient financial resources to maintain the activity throughout the period, the applicants’ management capacity counting professional competencies and qualifications required to successfully complete the proposed action. In addition there are a number of criteria covering aspects such as the relevance of the proposal, its consistency with the objectives of the Call for Proposals, expected impact, sustainability and cost-effectiveness. Scientific quality is not stated as an evaluation criterion in the guidelines for application and evaluation.30

The proposals are evaluated by independent scientific experts and they rotate. The initial ranking of the proposals is done by the African Union Council and Department of Human Resources, Science and Technology’s staff and they prepare together with the experts a draft shortlist of proposals. Then, the Advisory Management Committee (permanent body) composed of scientific and research experts of the five African regions examine and discuss the results of the shortlist. A final selection

28 African Union Research Grants, Open Call for Proposals 2011 and 2012, p 6
29 African Union Research Grants, Open Call for Proposals 2011, 2012 p 7-8
is then made by the Bureau of the African Conference of Ministers in charge of Science and Technology. The results of the evaluations and funding decisions for the proposals are coordinated by the Director of the Department of Human Resources, Science and Technology. The full procedure is estimated to take approximately six months from starting to completion. However, it appears to have taken longer in 2012, since an official list of grant rewards is still not publicly available.

The reporting mechanisms of the programme include annual interim reports and final reports. The reports have a narrative and a financial part. The narrative report follows the established model for monitoring and evaluation in development assistance, called result based management (RBM) or Logical Framework Approach (LFA). The reporting framework includes four levels of achievement e.g. the overall objective, specific objective, expected results and activities. All levels should have qualitative or quantitative indicators that measure progress on each level. In addition, assumptions that were made while formulating the four levels should be stated.

**Governance organisation**

The research carried out under the African Union Research Grant Programme should be conducted by research networks either by the creation of inter-institutional cooperation or by partnerships for regional and sub-regional cooperation.

Only one applicant is allowed to be the grant holding institution but partner institutions are allowed and the role of each partner has to be clearly defined.

**Expected impact of the African Union Research Grant**

The expected impact of this African Union Research Grant Programme focuses solely on socio-economic impacts, including:

- Enhanced food security and food safety
- Better adopted renewable and sustainable energy technologies
- Improved integrated water resources and waste management

**Preliminary observations**

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The African Union Research Grant Programme is financed by the 10th EDP by the intra-APC budget and follows the general application framework procedures developed in EDP at large.\textsuperscript{33} While this seems to be logical from the perspective of development, there are some areas of concern that are worth mentioning in this regard, especially since AUC has decided that African Union Research Grant Programme should strengthen AUC capacity for managing research grants.

\textbf{Relevance versus excellence}

The priorities that the African Union Research Grant Programme focuses essentially on socio-economic impacts, which are supposed to be achieved by central priority setting and by promoting resource concentration at regional and intra-regional level through cooperation. If we compare the evaluation criteria developed in the African Union Research Grant Programme with other funders of research, such as the EU, we can see that there are a number of differences that African Union Council might consider.

The African Union Research Grant Programme assessment procedure differs from the standard assessment procedure adopted by many public and private research funders in that it gives priority to relevance, effectiveness, feasibility and the sustainability of the action. This focus in combination with the relative weight that is given to socio-economic impacts makes it unclear how and to what extent criteria such as scientific quality are assessed in relation to the relevance of the proposal, even if the proposals are peer-reviewed by scientists. In addition, the guidelines for the applicants in the African Union Research Grant Programme define the type of scientific and research methods that the scientists are expected to apply. This may reduce the attractiveness of the instruments for researchers who prefer to have a higher degree of freedom to design their research.

There is no explicit reference to S&T quality as an important indicator for determining the overall quality of the proposals that would be retained. While this is not a problem in itself, it does create the risk that scientists may get the impression that relevance is more important than the scientific quality of the proposal. It may also be useful to try to maintain the link between relevance and S&T quality as much as possible in order to reduce the risk that the funding is seen as creating a two track research capacity: relevance and excellence. It might be worthwhile reviewing practices that have been applied in the European Framework Programme together with those in development assistance to see what options exist for making scientific excellence conditional and the prime criterion for evaluation.

The African Union Council should also consider to what extent the African Union Research Grant Programme should be a development assistance instrument or whether it should be funded from other resources. This is an important aspect since most of the donors of development assistance do not consider scientific outputs and outcomes as important.

The OECD/IHERD report on \textit{Centre of Excellence for Capacity Building} (Hellsröm ed. 20013) show that some key dimensions are important for scientific excellence e.g. (i) the long term viability of

\begin{footnote}{33} See for example similarities to the O ACP-EU Support Programme to ACP Cultural Sectors (ACPCultures II + ACPFilms II) Guidelines for applicants \end{footnote}
the institutions, which includes a sound governance structure ensuring autonomy and self-direction and a broadly accepted commitment to academic values, (ii) the ability to attract academic "stars", high levels of recruitment selectivity and (iii) collegial consultants for resource allocation. Furthermore, there are a number of other criteria that seem to nurture excellent namely (i) compatibility of aims between the instrument and the institutional context (ii) effectiveness and mutual reinforcement objectives of the instrument and institution (iii) acceptability to the programme to its most important constituencies.

Even if emphasis in the current African Union Research Grant Programme is on organisational and management aspects, it is unclear to what extent the projects are evaluated from qualitative defining markers of scientific excellence.

Furthermore, the best available evidence suggests that co-location of basic and applied research is another important marker for nurturing excellence, because excellent basic research capacity is dependent on a variety of stimuli and problems and applied research needs to have close contact to basic research, otherwise it quickly runs into quality problems if kept distinct from basic research. Thus, facilitating contact between basic and applied science, commissioned corporate research and publicly funded basic research is necessary to maintain excellence (Nedeva). It is unclear how these dimensions are addressed in the African Union Research Grant Programme.

It appears that the African Union Research Grant Programme and parts of the Africa’s Science and Technology Consolidated Plan of Action builds on the assumption that once the projects address socio-economic objectives, there will be uptake in the rest of society. It does not pay attention to the fact that science does not provide ready for market solutions. The last thirty years of innovation policy in developed countries shows that the road from the laboratory to the market or the intended beneficiary is one that has to be peopled with several support points to ensure that the result arrives at the intended destination. Furthermore, the ability to move results from the laboratory to the market is best done at a national rather than a regional level. African Union Council therefore has to rely on the ability of the research institutions and national actors to invest resources in the same research projects for mutual reinforcement so that the results have the intended outcome. To insure these linkages there is a need to establish an agreement between the African Union Council member country and the applying institution that all parties would allocate resources to the same project. Otherwise, there is a risk that the African Union Council instrument becomes isolated, which will influence the probability of achieving the intended results.

Financing science and research has traditionally been treated as a rather uncomplicated matter. However, there is a general trend involving a larger share of public R&D funding for science and research which is allocated through competitive mechanisms. There is therefore a need to get more knowledge about the advantages and disadvantages of the types of modalities and the relationship between them. 34

34 Report on Research funding instruments and mechanisms
Providing that the African Union Research Grant Programme should be seen as one step toward constructing an African Research Council, it is important to carefully consider the possible implications of turning to the development assistance community for support. This is because there are very few funders that consider that scientific achievements and capacity-building of research institutions and infrastructures are justifiable results in itself. Thus, these funders would like to ensure that the scientific results have impact beyond the academy, which requires national and institutional commitments.

The key question for the African Union Council to address is what type of funding instruments and modalities are best fitted for the objectives that they have set out to achieve.

**Recommendations**

Providing that the African Union members have a firm political commitment to further develop the African Union Research Grant Programme, we would recommend that the African Union Council invests in building up a knowledge base so that they can adopt a strategic approach to public R&D funding. It is important that they identify best practices to sustain policy.

Research funding has traditionally been treated as a fairly uncomplicated affair and has for the most part been praxis driven as demonstrated in the OECD/IHERD report on research funding instruments and modalities. (Merle 2013)

The above mentioned report shows that funders often differ from each other in the modalities they employ for operationalising funding instruments. The conditions depend on framework conditions such as legal and structural issues, including governance structure of the funding body, its mission and the overall R&D structure. In addition research funders decide on ways on how to operationalise the funding instruments. These procedures are shaped by the framework conditions. Seeing it from this perspective, research financing becomes a rather technical and complicated affair.

For the African Union Council that is currently building up its knowledge and skills for constructing and implementing research funding instruments, we would recommend that the African Union Council invests in building up a knowledge base.

This is important, at least not because the larger share of the public R&D funding allocated through competitive means and the higher the costs of governance of the system. It is at this point where the detailed knowledge of the pros and cons of types of modalities vis a vis each other becomes indispensable knowledge. This is in particular important in the early stages for constructing an African Research Framework Programme.

Another suggestion for the African Union Council is to review the framework conditions and the modalities applied in the European Framework Programme. That brings opportunities to draw lessons from their experiences and contextualize those so as to avoid policy imitation. This is
particularly important, if the members of the African Union decide to develop a fully fledged African Union Research Framework Programme.

References

African Union Research Grants, Open Call for Proposals 2011 and 2012

Merle Jacob (2013) Report on funding instruments and modalities, OECD
Annex 3. Case Study on the Pan-African University

Authors David woods, Anshu Padayachee and Åsa Olsson

Acronyms and abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>CAP</td>
<td>Africa’s Science &amp; Technology Consolidated Plan of Action</td>
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<td>IHERD</td>
<td>Higher Education and Research for Development</td>
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<td>PAU</td>
<td>Pan-African University</td>
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<tr>
<td>R&amp;D</td>
<td>Research and development</td>
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<td>Wi-Fi</td>
<td>Wireless Fidelity</td>
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Introduction

Objective of the case study
The objective of this case study is to describe the policy context, the governance, the operation conditions and the evaluation mechanism of the Pan Africa University (PAU) with the view to say something of its feasibility to achieve the intended policy objectives. The general picture of the Pan-African University will be complemented by providing a detail account of one of the five Pan-African University Institutes selected by the African Union Council. For the purpose of this study we have selected Pan-African University Institute in Cameroon, for the reason that social science and humanities has traditionally been a neglected area in Africa. Thus, this initiative presents an important opportunity for strengthening quality of education in an important area for Africa. By looking at one specific PAU Institute we will get specific information about key influencing factors that are important for generating excellent research and capacity-building in the area of governance, humanities and social sciences.

Background
The PAU was launched last year and it is an initiative of the African Union Commission. The objective of the PAU is to stimulate fundamental and applied research of the highest quality in areas critical to African technical, economic and social development. The PAU should focus on African challenges and promotes integration amongst African scientists, students, academic staff and Diaspora. PAU aspiration is to position African Higher Education as driver for social and economic development and attainment of Africa’s collective vision.

The African Union Commission has selected five research areas which are identified as central to Africa’s development. Further they have decided to concentrate resources in different institutions, called Pan-African University Institutes, which are located in five different established universities in different African regions.

These are:
- Water and Energy (including Climate Change), based at the University of Algeria but initially located at two other institutions, North Africa, Algeria.
- Life and Earth Sciences, University of Ibadan in Nigeria, West Africa.
- Space science for telecommunication, (Southern Africa, location is not yet decided)
- Basic Sciences Technology and Innovation, Jomo Kenyatta University, Juja in Kenya, East Africa,
- Governance Humanities and Social Science at the University of Yaoundé II, Cameroun, Central Africa.

The Pan-African Universities institutes (PAU institutes) should act as centers of excellences and regional “hubs”. In addition each of them will be linked to a network of 10 PAU Centers under the same theme, located in different parts of the continent in a number of appropriate universities and institutions, with the view to pool resources and build capacity in their selected disciplines. Existing facilities serve as host universities and initially no new institutions will be constructed.

Each PAU Institute should be partnered by a so-called “Lead thematic partner”. The lead thematic partner is expected to contribute financially to the PAU Institute, link the departments to similar institutions in the leading thematic partner’s home country and globally, provide the PAU institute with
research equipment, mobilise other funders to support the PAU institute’s work and to participate in the advisory board and council of the institute.

**Policy context**

Like many of the countries in the developing world, some Africa countries have been struggling since the 1960s to create higher education and research institutions of high quality. The initial efforts were geared mainly towards building higher education and research institutions that could be instrumental for scientific and technological development. A significant amount of national and international resources were expended to establish regional and national institutions, especially for physical infrastructure (buildings, modern equipment) and training academic researchers and technicians by sending them to universities located in developed countries or alternately by providing technical assistance to African universities. The expectation was that the higher education and research institutions would naturally grow into strong education and research institutions. In retrospect, this has not materialised due to a number of reasons, chief among them are that periods of social and economic instability and public investments in higher education and research has not been sufficient.

It was not until 2005 that the first continent wide strategy was adopted by the African Ministerial Council on Science, called Africa’s Science and Technology Consolidated Plan of Action (CPA).

**The overall objectives of the CPA are twofold:**

- To enable Africa to harness and apply science, technology and related innovation to eradicate poverty and achieve sustainable development
- To ensure that Africa contributes to the global pool of scientific knowledge and technological innovations.

The implementation of the plan takes place through regional, continental and international cooperation, which aims to (i) improve the quality of science, technology and innovation policies of African countries through promoting and sharing of experiences and policy learning, (ii) strengthen the capacity of regional economic bodies to mainstream science and technology into their sectoral programmes and (iii) establish projects with the view to improve the quality and intensity of regional cooperation (1).

The programmes outlined in the CPA have been designed with an emphasis on African leadership and ownership as well as building on existing efforts for research and development capacity strengthening.

The African Union Council will contribute to achieving these objectives through some specific support measures that are targeted to stimulate resource sharing of R&D infrastructure, improving the quality of research, increasing the number of scientists, technicians and engineers, stimulating new innovative means for financing science and technology in Africa, and lastly contributing to the application of science for achieving some of the Millennium Development Goals.

One of the African Union Council initiatives to achieve the objects set in the CAP is to promote the establishment of the Pan-African University.

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35 Africa’s Science & Technology Consolidated Plan of Action, p 7-12.
Pan-African University governance at a glance

The PAU Institutes should be guided by the principles of academic freedom, autonomy and accountability and international partnerships in academic and research activities. Moreover, the academic programmes should promote multidisciplinary research programmes relevant for policy-making processes. In addition, productive linkages with the industrial sector for innovation and dissemination of new knowledge and technology should be encouraged.

PAU’s strategic orientation is to:
- Develop continent-wide and world-class graduate and post-graduate programmes
- Stimulate collaborative, internationally competitive, leading fundamental and economic growth oriented research, in areas having a direct bearing on the scientific, economic and social development of Africa,
- Enhance the mobility of students, lecturers, researchers and administrative staff between African universities to improve on teaching, leadership, and collaborative research
- Contribute to the capacity building of present and future African Union stakeholders
- Improve on the attractiveness of African higher education and research institutions to attract and retain young talented professionals
- Initiate and invigorate mutually beneficial partnerships with public and private sectors within Africa and the Diaspora as well as internationally
- Promote and strengthen south-south and north-south cooperation in higher education.

Governance/organisation of the Pan-African University
The overall management of PAU will be based on three tier organs: PAU Council, the PAU Senate and the PAU Rectorate, including the AU supervisors. The PAU institutes report to the PAU Rectorate.

The PAU Council is responsible for ensuring and reinforcing the vision of excellence, quality and policy relevance with respect to the AU’s vision, spelled out in the African Agenda. As the supreme governing body the PAU council responsibilities include oversight of policy, finances and property. The PAU Council is comprised of academics, community leaders and representatives of Regional Economic Communities and of the private industrial sectors. They are all appointed by the Chairperson of the African Union Commission.

The PAU Senate is charged with responsibility for all academic affairs and research. The Senate is convened and chaired by the PAU Rector. The role of the PAU Senate is to make recommendations to the Council on issues of organisation, promotion, control of teaching and research activities. It is also charged with the responsibilities related to managing admission and awarding degrees. The Senate comprises of the Rector, the five PAU institute Directors and representatives of the respective Leading Thematic Partner.

The Rector will be the PAU’s executive leader responsible for planning, monitoring and coordinating of the PAU institutes and its hubs. The PAU President will supervise communication and internal and external cooperation. The PAU will also report on a regional basis to the African Union's Conference of Ministers of Education

The PAU Rectorate is the executive body of the PAU and it is responsible for planning, monitoring and coordinating the PAU institutes. They are also responsible for implementing the general policy and strategies approved by the Council.
Each institute is expected to have a leading thematic partner who will coordinate the pool of external funders, promote partnership between the PAU institute and similar institutes in the leading thematic partner’s country, provide technical and financial support to the particular thematic network, help promote staff exchange, strengthening capacity of research activities by procuring research equipment for the PAU and finally, participate actively in the PAU and the Senate Council.

The board of Directors will have primary responsibility for academic matters and it will be comprised by Heads of PAU institute and leaders of the regional hubs as well as students. The board will be chaired by the PAU university president.

The staffing of the PAU institutes is comprised by lecturers and administrators from the host universities, academics invited from African countries, the African Diaspora and staff from the leading thematic partner and other partners.

**Funding mechanisms for the Pan-African Universities**

The PAU will be financed from three different sources e.g. the host country, the AU (mainly in the form of fellowships) and the leading thematic partners.

Each of the parties is expected to contribute a third of the total budget. Discussions have been ongoing about payment of student fees and about the establishment of an endowment fund to guarantee the sustainability of the programme.

Initially, the World Bank has granted 5 million dollars to provide seed funding for kick-starting the programme. The Chinese government has signed an agreement to support the facility for Basic Sciences Technology and Innovation in Kenya. Germany supports the Water, Energy and Climate change institute in Algeria, whilst India and Japan are the leading thematic partners for Life and Earth Sciences in Nigeria, Sweden is the leading thematic partner for Governance, Humanities and Social Sciences and the European Space Agency for Space Science for Telecommunication.

**Pan-african university institute in Cameroon**

**Strategic orientation**

The PAU Institute in Cameroon has the same strategic orientation as the PAU initiative at large; however, the African Union Commission has recognised that the institutional conditions of the selected PAU Institutes are not perfect for achieving the objectives that the PAU has set out. Thus, specific measures will be put in place so that the respective PAU Institutes will be up to the level required in five years time.

The decision to locate the Pan-African Institute Governance Humanities and Social Science was based on bidding amongst universities in Central Africa and the decision was taken by an expert panel. Data on the composition of this panel and the criterion they used are missing.

Since one of the foundations of the PAU Institute is that it should draw on the already existing facilities in the hosting university, it is useful for the purpose of this case study to study to identify key
characteristics that will influence the performance of the PAU Institute located in Cameroon, in relation to the objectives that the PAU initiative have set out to achieve.

Data is missing about the selection process of the PAU Centres.

**Host institution of the PAU Institute in Cameroon**

**Introduction**
The data for this section builds on the Assessment of the conditions and contexts for the establishment of the Pan-African University Institute in Social Sciences, Humanities and Governance in Yaoundé, Cameroon, prepared for the Swedish International Development Cooperation Agency. (Hagberg S. and Anderson A. 2011).
The University of Yaoundé was created as a consequence of the university in Cameroon reform of 1993, although the Faculty of Law and Political Science, Faculty of Economics and Management had been part of the Federal University since its creation in 1961. Today Cameroon has in total eight state universities and more than a hundred private ones. The University of Yaoundé I is considered as the “mother” of all the universities and it has an intertwined relationship to Yaoundé II.

Administratively, social sciences are located in:

- Faculty of Law and Political Sciences
- Faculty of Economics and Management
- Cameroonian Institute of International Relations (IRIC),
- Institut de Formation et de Recherches Démographiques (IFORD)
- Pan-African Institute of University Governance (IPAGU).
- The Faculty of Art and Humanities (Faculté des Arts, Lettres et Humaines) is located at Yaoundé I.

**Research facilities**
The main national research library in Cameroon is hosted by Yaoundé I and although the library has a functioning structure with generous opening hours, the publications have not been sufficiently restocked since 1980. Departmental libraries are weak as in the case of Yaoundé II. In addition, the building in itself needs to be renovated. Access to WIFI is provided for students with laptops but the public computers are out of order.

Yaoundé II has one main library and a number of departmental libraries and the main library is located in a temporary facility and the current facilities are poor although a new library is being constructed.

The computer facilities at Yaoundé II consist of three computer laboratories. One laboratory is open to students participating in distance learning courses and is equipped with video conference facilities. A smaller computer centre provides access to scientific journals and databases and access is based on subscription. The third computer facility consists of 50 computers and is open to all students and admission to the centre is free. Wi-Fi services are offered to students for free allowing access to Internet outside the computer centre.

Classroom facilities have recently been renovated and are sufficient at present but it would also depend the growth of the intake of students.
Student housing is provided for at both Yaoundé I and II and the growing number of students puts severe pressure on the student housing. Many of the halls of residence are in need of renovation and upgrading although new halls of residence are being constructed.

**Administrative capacity**
Since 2009 the Pan-African Institute of University Governance (IPAGU) has worked with universities in Africa, including Yaoundé II, to modernize the governance by focusing on management, analysis and evaluations of all fields of governance of the higher education institutions.

In addition, Yaoundé II is actively participating in the joint initiative lead by UNESCO, AUF and the Association of Commonwealth Universities supporting the Ministry of Higher Education of Cameroon, by introducing web-based application and enrolment procedures. Moreover, Yaoundé II takes part in the Programme National pour la Gouvernance (PNG) hosted at the Prime Ministry to combat corruption and mismanagement of the state administration.

Cameroon is ranked as 146 out of 178 countries in the Transparency International’s Corruption Perception Index and Global Barometer (Transparency International 2009; see also Nawaz 2008). Since corruption is built on networks and interactions, issues of governance and management are issues that have been recognized as important to address.

**Networks and partners**
The University of Yaoundé II cooperates with a wide range of stakeholders and all of them come from the Francophone community with the exception of multilateral partners, Zhejiang Normal University of China, and Alexander von Humboldt Foundation from Germany. This might indicate that research networks of the scholars do go beyond the French speaking community.

**Research capacity**
Senior staff provides the basis both for potential Cameroonian recruitments to the PAU Institute and for the existing research environment. Within the relevant fields of the number of full professors are 51, equally divided between Yaoundé II and the Faculty of Arts and Humanities at Yaoundé I. At the level of Associate Professors, the number of staff at Yaoundé II (54) is higher than at Yaoundé I (33). In total, 138 persons at senior research level.

Bibliometrics and bibliographic analyses are often used as qualitative measures for assessing research outputs. Although these analyses are coupled with a number of well known shortcomings it gives a rough measure of whether or not a research community is connected to wider academic circles, regionally or internationally. A search in Google Scholar amongst relevant senior staff in Yaoundé I and II suggests that 47 out of 49 were cited in Google Scholar. The corresponding number for associate professors was 72 out of 80.

It is well known that scholars from universities in developing countries seldom publish in peer-reviewed international journals and this is also the case in Cameroon. Scholars from Yaoundé II published in seven scientific journals at faculty level and the Faculty of Art and Humanities publishes in two journals at faculty level in addition to the publications at departmental level.

For the period 2000-2008, the Factuality of Law and Political Science produced 52 doctoral theses, and 42 doctoral theses were presented at the Faculty of Arts and Humanities during 2005-2007. At the
Faculty of Economics and Management 52 doctoral theses were defended during the period 2005 to 2010. On average, 29 doctoral level theses were defended annually in social sciences and humanities.

However, the possibilities for Doctoral students to contribute to recent scholarly debates are limited because their theses are not published. Although a review of the most recent PhD theses shows that the majority of the references refer to peer-reviewed articles and books with international audiences, 90 percent of the references were older than five years.

It is still unclear how PAU Institutes will address interdisciplinary issues and how methodological rigor will play out.

**Socio-economic development**

The University of Yaoundé II works with 12 different regional and global partners and has strong linkages with 10 different partners inside Cameroon, which suggest that the institution is well networked at least from the perspective of the Francophone community. There is no available data to what extent scholars works with industry and SME:s

**Student enrolment**

For the academic year 2010/2011 the student enrolment in social science, the humanities and governance was in total 37,450 students and around 13,000 students was recruited to the Faculty of Arts and Humanities at Yaoundé I. There has been a rapid growth in student enrolment, especially in Yaoundé 1. In 2005/2006 Yaoundé II recruited less than 25,000 students.

The Faculty of Law and Political Sciences has the highest student enrolment among the relevant faculties and institutes at the two universities. Female students were in the majority in the Faculty of Arts and Humanities of Yaoundé I, with 57 percent of enrolled students being women in the academic year of 2006/2007. The corresponding figure for Yaoundé II was 46 percent.

If this trend continues the growth of student numbers runs the risk of raising student to staff ratios over time, which might have implications on learning quality and outcomes. In addition, despite the high female enrolment senior research staff comprise only seven percent of the total, with no female professors at either Yaoundé II or I.

The productivity of the Department of Law and Political Sciences was high, including a total of 8,177 advanced studies degrees between 2000 and 2008 and 1,091 students graduated from the Faculty of Arts and Humanities between 2005 and 2007.

**Funding and evaluation mechanisms**

The Cameroonian Ministry of Higher Education and the Minister of Finance and Economic Planning have a commitment to support the PAU Institute but data on the exact amount is not available (2). 36

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36 What could be said, however, is that the Cameroonian government has allocated approximately €15.3 million since 2009 to university-based research and for 2011 the Minister of Higher Education confirmed that approximately €10.7 million would be spent on research in the state universities.
total budget for the PAU Institute is estimated to be € 26,05 million over a period of 5 years and funding for fellowships will be covered by the African Union Commission. (See Appendix 1).

The Swedish International Cooperation Agency has been asked to support PAI with approximately € 552 000 covering initial start up costs.

When Sweden accepted to take on the leading thematic partner role, Sida declared that the regular project assessment procedures would apply before committing any funding.

**Preliminary observations**

From the outset of this case study some of the key characteristics of the PAU initiative have been identified, which allow us to make some observations in relation to PAU actual feasibility to achieve its intended objectives, namely, to stimulate fundamental and applied research of the highest quality and act as centers of excellences and regional “hubs in areas critical to African technical, economic and social development by promoting integration amongst African scientists, students, academic staff and Diaspora.

Based on the case study of the PAU Institute in Cameroon there are some key challenges that we would like to address:

**Global context of internationalisation of higher education and research**

Higher education is now a major industry worldwide and the expansion has been dramatic. This has both advantages and a disadvantages for developing countries that are building up their research capacities. (Altbach 2004; Knight 2008). Advantages include the possibilities that the Internet provides for individuals anywhere to take advantage of global knowledge. In many countries, universities may be the only institutions adequately linked to global networks. Thus, there are possibilities for exchange between them. At the same time, globalisation provides a number of disadvantages. The global academic marketplace for professions and students means that staff and students can go anywhere. Globalisation tends to favour better resourced universities over those on the peripheries. (Altbach 2013).

Globalisation has the effect that all scholars need to be linked to the norms of the disciplines and of scholarship that are established by the larders of research, located in major universities. The research methods applied in the main scientific journals dominate the world science. Universities that intend to be considered as research oriented need to participate in international scientific networks and compete with institutions worldwide. The costs of joining world science are high and a prerequisite for joining is the required research infrastructure, equipment and scientific leadership. (Ibid)

This overall landscape of world science is a difficult challenge for the Pan-African University as for any other universities in developing countries. As shown in the case study of the PAU Institute in Cameroon, the host institution lacks appropriate research facilities and academic leaders that publish in international peer-reviewed journals. Further, while the PAU Institute in Cameroon appears to be well networked amongst French speaking countries it is missing partners from the English speaking world. While that is not a problem in itself, it is important to note that appropriate competence in English is fundamental for accessing the world of global science.
Governance structure and funding

The PAU has established a complex system of various bodies to govern the PAU institutes. There is the PAU Council which is composed of academics, community leaders, representatives of regional economic communities and industry. Then there is the PAU Senate composed of the PAU Rector, the five Directors of the PAU institutes and representatives of the lead thematic partner. The next body that is involved is the PAU Rectorate. Finally the lead thematic partner will establish a Board of Directors for the individual PAU institute with whom the lead thematic partner is involved. The Board of Directors is chaired by the PAU President and is composed of the PAU Institute Director, regional hub leaders, students and representatives of the lead thematic partners. The question in this respect is to what extent is this governance structure likely to support the development of high quality research and education?

The OECD/IHERD report on Centre of excellence for capacity building (Hellström ed. 2013) shows that some key dimensions are important for scientific excellence e.g. (i) the long term viability of the institutions, which includes a sound governance structure ensuring autonomy and self-direction and a broadly accepted commitment to academic values, (ii) the ability to attract academic “stars”, high levels of recruitment selectivity and (iii) collegial consultants for resource allocation. Furthermore, there are a number of other criteria that seem to nurture excellence namely (i) compatibility of aims between the instrument and the institutional context (ii) effectiveness and mutual reinforcement objectives of the instrument and institution (iii) acceptability to the programme to its most important constituencies.

At this stage it is difficult to assess to what extent the current governance and organisational structure will support the objectives that the PAU Institutes have set out to achieve from the perspective of the defining markers of excellence described above. What could be said is that the long-term funding is still not certain and it involves at least three main funders, e.g. the host institution, the lead thematic partner and the African Union and the overall governance structure is very complex, cumbersome and expensive, which puts question marks to what extent the Pan-African University can be effective.

Another major issue is that 2/3 of the funding is expected to come from international resources. This implies that the linkages to the host institution would be weak. The PAU institute then runs the risk of becoming academically and pedagogically isolated at the same time as it makes use of local resources.
References


Hagberg S. and Anderson A. (2011) Assessment of the conditions and contexts for the establishment of the Pan-African University Institute in Social Sciences, Humanities and Governance in Yaoundé, Cameroon, Swedish International Development Cooperation Agency


Annex 3.1. Minutes African Union

Addis Ababa, 30 May 2012

On 30 May 2012, the Lead Thematic Partners (LTPs) of the Pan African University (PAU) met with AUC Commissioner Ezin in order to get clarification on certain issues in relation to the PAU.

Participants:

- AUC/HRST (Commissioner Ezin, Claude Akotognon, Beatrice Njenga, Yohannes Woldentensae),
- EU DEL to AU (Harry De Backer, Ron Hendrix),
- Japan (Asuka Tekawa)
- Sweden (Kwame Gbesemete)
- Excused: Mechthild Ruenger (GIZ-D), Susanne Blum (D)

The following issues were discussed:

Organisation and MoU:

1. The LTPs feel that the student accommodations, computer, laboratory and library facilities are presently not adequate.

   AUC: this is clear, the PAU is established in existing institutions were some elements are not perfect but they should be excellent in 5 years time.
2. How does one guarantee that the programme is pan-African if Cameroon, Kenya and Nigeria chose to finance the Masters Programme?

AUC: the programs are no longer the programs of Cameroon, Kenya and Nigeria; the programs and curricula were discussed and endorsed during the curriculum development workshop in Addis Ababa in November 2011. Following the tripartite agreement the funding is not confined to the host country but a contribution from their side is a requirement. The LTP is the lead partner but not the only partner.

If SE is reluctant to support the Masters program in Yaoundé but only the PhD program (as they have indicated from the start), AUC will go ahead with another partner for financing the Masters program.

3. According to the PAU statutes (Article 10, § 3) the LTPs are not members of the Board of the Institutes, this is strange considering the fact that the LTPs are financing the Institutes.

AUC admitted that this was an omission from their side. However, the Statutes have been adopted at the AU Summit in January 2012. For the time being in the tripartite agreements it will be indicated that the LTPs will be represented in the Board, at the same time AUC will start the procedure for an amendment of the Statutes.

4. In the MoU submitted for comments, the LTPs have no commitment for funding only responsible to mobilise others.

AUC indicated that the budget will be financed by the LTP, AUC and host country. LTPs are not committed to mobilize funds but it would be appreciated if they do. SE indicated that in the tripartite agreement it should be clearly indicated what the LTP should fund, e.g. ⅓ of the budget. However, the tripartite agreements will not be the same and will differ in details agreed among LTP, AUC and host country.

5. From the Swedish side it is too early to sign the MoU until Cameroon makes the necessary commitments as spelt out in the SIDA and AfDB Assessment Reports.

This needs to be discussed among the three partners.

6. Appointment of a newly graduated student as a programme Director? A PAU graduate programme has to be coordinated by a senior Academic who has to have at least a PhD.

SE indicated that as so many things need to be done an experienced person at PhD level would be needed. AUC explained that there will be no program Director only a program assistant which is a junior position.

7. Are the salary top-ups standardised across the PAU Institutes? This is important to avoid internal brain drain at the host institutes.

AUC indicated that the top-up will be according the AUC rules on post adjustment. Presently the figure is 15% for Kenya.

8. The recruitment is unfair to staff: many will leave for PAU. How to solve this?

Answer provided at Cape Town Tuning conference: Ibadan explained that the staff would only work part-time for the program. The scholars would need to get approval of their current employers to be able to part-time participate in the PAU program. AUC explained that they want to provide to excellent professors as much as possible the opportunity to participate and in this way to attract the best.
9. How does the satellite system work?

AUC does not know yet but the call for satellite centers has stopped. This system will only start at a later stage but not this year. This means that students will only be studying at Yaoundé, Ibadan and Nairobi.

In response to the EU DEL to AU who indicated that Yaoundé University has no Masters program for Translation and Interpretation, AUC indicated that they will send a letter to the European Commission Directorate General for Interpretation (SCIC) with a request for clarification on collaboration in this regard.

10. How can countries work with the hubs, how do you get other countries involved?

AUC: that is why there is an open call for lecturers from all over Africa. Lecturers should at least stay for three weeks. Students are also from all over Africa.

Awareness creation

11. How will more awareness on the PAU be created as many participants are not aware of it?

Answer provided at Cape Town Tuning conference: Yaoundé II has a communication plan for awareness raising. Furthermore the programs are popularized by sending the posters to other universities. The Association of African Universities (AAU) has informed all member universities. JKUAT informed that the 1st Chancellors of all public universities in East Africa have received the call for staff. Ibadan referred to the PAU and university websites and indicated information was distributed by the Ministry of Higher Education in Abuja and through the RECs. AUC asked participants to help in awareness raising as a lot has been done but it is never enough.

In addition, AUC indicated that two high-level advisors will be provided by GIZ; it is not clear when they will start. AUC has sent a letter for clarification to GIZ.

Budget:

12. The AfDB Assessment report has revealed that the rectorate costs as much as running a whole PAU institute.

The PAU budget over 5 years

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.88</td>
<td>35.30</td>
<td>47.32</td>
<td>45.83</td>
<td>50.23M$</td>
<td>210.56 M$</td>
</tr>
</tbody>
</table>

The total costs for the rectorate Year 1-5 = 33.20 M$.

The total cost for PAU-GHSS in Cameroon Year 1-5 = 34.07 M$

Therefore, the report needs some clarifications.

For AUC it is too early to go into the details of the budget. It nevertheless indicated that the PAU-net (an internet platform for connecting all directorates) will be $8 million. The Directorates will also have travel costs, and will be having international staff and paid accordingly. Furthermore, they are responsible for paying the salaries of the Institute Directors, etc. hence the high costs of the rectorate. SE indicated that as the Council has 29 members and the Senate 22 members, a considerable amount will be allocated to administrative/travel costs.

Call for candidates and scholarships:
13. 30th June is the deadline for submission of applications. Are scholarships foreseen?

    AUC is responsible for this and should secure them, so it will be either the AUC or other donors
    (possibly China) who will pay. AfDB is willing to secure 15% of the scholarships.

14. According to the PAU Statutes the PAU Institutes are supposed to have a Board to endorse the
    selection of the students and award of scholarships. Has the Board been created?

    AUC: no board is yet established; the current internal structures will be used until the Board is
    created. The Board will probably be created by a Decision of the AU Summit in January 2013. 
    The Council and Senate will also be endorsed by the AU Summit in January 2013. The chair of
    the Board will not be an academic but a political figure. SE expressed concern over having a
    political figure heading an academic board.

15. The maximum age for admission into the PHD is 40 years. Why not decreasing it to 30-35 years
    as the average life expectancy in some countries is only 50 year?

    SE suggested this decrease in order to ensure that the person graduated would contribute to
    society as much as possible. As currently many lecturers only have a Masters degree and have
    been working already for some years, AUC wants to give them an opportunity to apply as well.
    In addition, Africa is working on extending the life expectancy.

16. Short-listed candidate will undergo a written examination. Will the exam be available cross all 
    54 AU MS and who will examine the students?

    AUC: applications are now received. During the short listing it will be determined where these 
    exams will be held, possibly regional as well. The Ministries of Education will help to create
    these written exams. The written exams will be sent in a sealed envelop to the regional hubs for
    the supervision; for Southern Africa NEPAD will execute this supervision.

17. Applicants are supposed to state their employment history. For what reason? Young students 
    that just graduated will disqualify themselves because they don’t have sufficient work 
    experience!

    AUC: employment history is not a requirement but can be useful to make a final decision.

18. How will transparency be ensured on the acceptance of students? Will only the best students be
    recruited?

    Answer provided at the Cape Town Tuning conference: JKUAT explained that the selection will
    be very strict. Based on the application a shortlist will be prepared. These pre-qualified
    students will then be tested by a panel consisting of (international) academics. Ibadan indicated
    that all students have access to the peer review.

19. How does it relate to the mobility of students aspect of Africa?

    Answer provided at the Cape Town Tuning conference: Ibadan indicated that the best students
    will be selected from all over Africa so mobility is ensured. In addition, AUC explained that also
    local students will be recruited to a maximum of 20% of the whole.

20. The PhD is between 3-4 years. It is important to state the exact number of years. Those who
    exceed the stipulated number of years should finance the remaining years themselves.

    In SE and NL a PhD is 4 years, while in BE it differs along the subject. UK and Kenya have 3-4
    years, depending on the experience of the person; e.g. a person who has already worked at a
    university as a lecturer might need only 3 years while a person just graduated with a Masters
    degree would need 4 years. Flexibility is needed.
21. Why should people come to make a masters degree if they already have a Masters? The programme should concentrate on PhDs.

AUC: in principle the Masters programs are not open for people who already have a Masters degree; they should apply for the PhD program. AUC will check whether this is misleading in the application form.

**Multilingualism**

22. How will the problem of languages (EN/FR/PT) be sorted out?

Answer provided at the Cape Town Tuning conference: Ibadan explained that students would receive a 6 months training.

**Recognition of the degree**

23. How is it ensured that graduates are worldwide recognized?

Answer provided at the Cape Town Tuning conference: Yaoundé II informed that the diploma will be signed by the university and the AU. JKUAT explained that it will be a joint degree signed by host JKUAT and PAU. Ibadan also confirmed that the student would receive a joint award from the host university and the PAU. AUC explained that all selected universities have language centers to train students.

24. PAU is a Pan-African Institute but the programs are accredited by national organizations?

Answer provided at the Cape Town Tuning conference: JKUAT indicated that as there is no Pan-African quality assurance organization, accreditation can only be done by national organizations. AUC explained that they are working on Pan-African quality assurance system.

**Communication between PAU institutes:**

25. Any information that UNECA is responsible for PAU Network that will link the PAU institutes and centres across Africa?

The AUC admits that in one of the reports this has been mentioned, but it needs further clarification because the PAU Network is foreseen in the operation of the rectorate (see point 12)

EU DEL to AU: The European Commission has €13 million foreseen for the connection of the African National Research Networks to the European GEANT-2 network. This project is being executed by DANTE-Cambridge (UK), but unfortunately it will only connect East and Southern Africa. Funds need to be earmarked in the EDF11