Building Capacity in Higher Education Topic Guide

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HEART
HEALTH & EDUCATION ADVICE & RESOURCE TEAM

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CONTENTS

ABBREVIATIONS AND ACRONYMS

AFD	Agence Française de Développement (French Agency for Development)
CE	Continuing Education
CIDA	Canadian International Development Agency
DANIDA	Danish International Development Agency
DCs	Developing Countries
DELPHE	Development Partnerships in Higher Education
DfID	Department for International Development
EBP	Evidence Based Practice
EFA	Education for All
FCAS	Fragile and Conflict Affected States
FE	Further Education
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
HE	Higher Education
HEIs	Higher Education Institutions
HICs	High Income Countries
IHERD	Innovation Research and Higher Education for Development
LDCs	Less Developed Countries
LICs	Low Income Countries
LMICs	Low and Middle Income Countries
MDCs	More Developed Countries
MDGs	Millennium Development Goals
MFL	Modern Foreign Languages
MOI	Methods of Implementation for the Sustainable Development Goals
MOOCS	Massive Open Online Courses
NORAD	Norwegian Agency for Development Cooperation
NORHED	Norwegian Programme for Capacity Development in Higher Education and Research for Development
ODL	Online Distance Learning
OECD	Organisation for Economic Co-operation and Development
PHEA	Partnerships for Higher Education in Africa
SDGs	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
SIVs	Strategically Important and Vulnerable Subjects
SSA	Sub-Saharan Africa
STEM	Science, Technology, Engineering and Mathematics
TE	Tertiary Education
UPE	Universal Primary Education
USAID	United States Agency for International Development

FOREWORD

As the international community moves from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs), higher education (HE) is more critical than ever. Addressing questions such as quality public services, sustainable agriculture, equitable distribution of resources, environmental protection and effective governance requires high-level skills, research and innovation generated at the local and national levels. National governments, bilateral and supranational agencies are now viewing HE as central to development in low and middle-income countries (LMICs), after years of relative neglect. Yet there remains the challenge of how to release the developmental potential of universities, and avoid the elite capture and disconnection from society that has characterised many of these systems in the past.

HE has undergone a period of intense massification since the Second World War, with sharply rising enrolments in high, middle and low-income countries alike. The global gross enrolment ratio has now risen to 33% – although that aggregate figure hides significant disparities, with the rate in high-income countries (HICs) at 74% and in low-income countries (LICs) at 8%.[1] As has been seen at other levels of education in periods of rapid expansion, massification has placed significant pressures on the quality of HE systems and on the government funds available to support them. Furthermore, despite the increases in enrolments, there is still considerable unmet demand, on account of increases in the youth population in a number of countries, as well as the expansion of primary and secondary levels, and the perceived importance of tertiary level diplomas in the employment market.

The rapid growth of institutions and lengthening queues of prospective students have brought with them inevitable challenges. Some commentators (e.g. Carpentier 2012[2]) have described the situation as a threefold challenge of equity, quality and funding. Despite expansion of the system, opportunities to access HE are still scarce for disadvantaged groups, particularly low-income and rural populations, and in some contexts, women and those from particular ethnic or linguistic groups face significant barriers. Quality problems in many lower-income countries express themselves in dilapidated buildings, overcrowded lecture halls and curricula out of touch with the changing societal context. In the context of budgetary constraints, funding an expanding system is an obvious challenge. Transferring the costs to students and their families has clear implications for equity, while reducing funding has a knock-on impact on quality.

Responding to these challenges in the context of globalisation, HE around the world has been characterised by trends of commercialisation and internationalisation. These trends have brought new opportunities, but have presented additional risks. In an attempt to generate new funds, public universities have been encouraged to engage in income-generating activities, and cost-sharing schemes of various forms have been set up in most countries. In addition, there has been a dramatic growth in the private sector, particularly in for-profit institutions. These private providers have provided a welcome increase in capacity, but have for the most part been inaccessible to the poor, and have uneven quality. Internationalisation has been a key driver of many universities, though the beneficial effects have largely been restricted to institutions in HICs. For many institutions in Africa, Asia and Latin America, student and staff mobility, prominence in international rankings and international research collaboration are a distant dream. Developments in technology have enabled a range of new forms of distance learning, including massive open online courses (MOOCs), opening up new possibilities, although constrained by insufficient infrastructure and learner autonomy in disadvantaged regions.

This complex scenario, combined with the critical importance of HE, presents a great onus on effective policy-making. Governments and development agencies need to study closely the trajectories of

universities and HE systems to formulate the most effective policies for enhancing their potential. As is the case in many areas of education, rigorous research and adequate evidence are not always available; in addition, many of the questions are ultimately of a political and moral nature, involving contested issues of public/private, fairness and conceptions of knowledge. This topic guide presents a roadmap through these questions, assessing the available research and evidence around HE systems and their impact, the effectiveness of interventions and barriers to change. Reconciling the competing demands of equity, quality and funding requires a broad understanding of these questions, and the way they manifest themselves in particular political and cultural contexts.

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EXECUTIVE SUMMARY

Higher Education (HE) plays a major role in building a nation's intellectual capital required for poverty reduction, sustainable development and positive engagement in the global knowledge economy. The relative neglect of HE in many less developed countries (LDCs) and recent complex global forces have challenged the performance of HE in LMICs. National governments and international agencies are now working to increase capacity in HE so that it can better fulfil its role in national development, but this is not easy. This topic guide aims to answer the questions, how can the capacity of HE systems and structures in LMICs best be built and how can effective partnerships be generated to best support the process.

ABOUT HIGHER EDUCATION

In this topic guide, HE is defined as optional, formal education in specialised fields that is undertaken after completing secondary education and encompassing academic study and/or professional or advanced vocational training. The primary function of HE is the production, distribution, and consumption of knowledge, through teaching, research, and community engagement. The purpose of HE is traditionally viewed as an investment to build the necessary human capital for economic development but has more recently become more complex and nuanced to include the role it can play in building an inclusive and diverse knowledge society. Building the capacity of HE in LMICs must be effective to allow competition on the global stage.

Many global trends have impacted on and provided the catalyst for change in HE, generating a renewed interest from governments and donors. The economic, political and societal forces of globalisation have pushed HE towards greater international involvement. Some of the most visible aspects of this trend are student mobility with students choosing to study outside their country and pursuing global online programmes and courses. Over the past 50 years, there has been an unprecedented increase in HE enrolment (massification) due to governments wanting more university graduates to allow them to remain competitive in the expanding world economy, and individuals wanting access to HE to improve their own social mobility.

Numerous studies over the past 15 years have challenged the primary focus on basic education. HE is now receiving the attention it deserves in the role it plays in economic and social development. The lack of growth, attention and support for quality HE has impacted on the ability of higher education institutions (HEIs) to train essential officials such as teachers, economic managers and political leaders, all of whom are responsible for ensuring that certain standards of the quality of education are reached. A holistic and comprehensive approach to education that considers the interrelationships between the different levels of education is required.

Movement towards evidenced based practice (EBP) since the mid 1990s has enhanced the demand for good quality research. Governments have increasingly put pressure on educational researchers to ensure their work is relevant and useful to practitioners and on practitioners to ensure their work is based on research. Whilst educational policy and practice is evidence *informed* not evidence *based* this does not lessen the importance of the role of research in HE.

Every individual, irrespective of their socio-economic status, race, ethnicity, disability, gender and sexuality has a right to access HE. However, net rates of access are low in most countries, particularly in low income countries (LICs) with disadvantaged groups poorly represented and enrolment expansion largely restricted to the middle classes in urban areas. Widening participation in HE is a potentially powerful force for democratisation and social justice and many countries now have affirmative action or positive policies to address these inequalities, though with varying success. HE

also has the potential to contribute to post-conflict reconstruction, state-building and peace building by connecting to a wide range of post-conflict recovery tasks; although this area is largely under-studied. This includes re-pooling human capital depleted by war and displacement, research on local social and developmental challenges, and a long-term sustainable approach to capacity building.

EVIDENCE OF IMPACT

Empirical evidence suggests that HE can have a significant effect on the economic growth of nations. Estimates of diminishing returns to increasing levels of education were used to almost exclusively concentrate on primary education. Recent evidence, however, suggests that HE can produce economic benefits and can cause economic development (GDP per capita) arguing for the need to improve HE now to allow time for positive effects on economic development. Private benefits for individuals include better employment prospects, higher salaries, labour market flexibility and a greater ability to save and invest. These benefits can result in better health, reduced population growth and improved quality of life. Public benefits, less well studied than private benefits, also exist and include higher productivity and output per worker, higher net tax revenue and less reliance on government financial support. Moreover, HE has greater benefits than just financial rewards by manifesting entrepreneurship, job creation and good economic and political governance along with the positive impacts of research on economies.

Common to the success of good HE systems are, amongst others, the link between economic and educational planning; quality public schooling; high participation rates with institutional differentiation; labour market demand; cooperation and networks; and consensus about the importance of HE for development. Lack of clarity, co-ordination and support can undermine HE success.

The probability of working in the formal sector increases with increasing levels of education but decreases in the informal sector. Significant differences in the match between demand and supply across country labour markets exist in the Sub-Saharan Africa (SSA) region. Increasing numbers of youths attaining post basic levels of education coupled with the moderate growth rate of the primary employer of graduates, the formal sector, means that young skilled workers are increasingly encountering difficulty in securing employment. The formal private sector has few opportunities for the highly educated which is a cause for concern, especially because the public sector is not likely to grow rapidly in the coming years. However, overproduction of graduates could be a good long-term investment that can contribute to future economic growth providing that the graduates are of high enough quality and entrepreneurial to start more technology-intensive firms that in turn employ more graduates.

HE can also produce non-market benefits for individuals and society. These include the formation of professionals in areas such as education, health and public administration, political participation and stability, the strengthening of governance, leadership and democracy, enabling of spaces for critique and scrutiny of government and policy, the preservation, study and development of local and national culture and heritage and health, empowerment and positively influencing attitudes and practices. However, there is limited evidence on these non-market education externalities and their indirect and delayed effects on development goals.

POLICY ISSUES

There are many good reasons for investing in HE but there are also many policy questions and debates for national governments and international agencies to consider. Four of the major policy issues are considered: human capital flight, cost of HE, capture of HE by elite groups and the purpose of HE.

Participation in HE increases social mobility which can lead to student migration or human capital flight i.e. 'brain drain' through students migrating domestically to more developed areas such as cities, students failing to return home after attending scholarship programmes abroad or students educated within a country moving abroad for work. The latter is likely to increase due to a lack of suitable employment within the job market and massification at HEIs. Consequently, the number of skilled persons in public service reduces, undermining the potential for socio-economic development, technological catch-up and absorptive capacity. In addition, the limited capacity of local personnel required to implement international aid has resulted in many countries reducing aid to HE. In contrast, some consider brain drain as a 'brain gain' when taking into account the beneficial effects of remittances, returning migrants and the aspiration to become more educated to be able to migrate. Other evidence considers brain drain as 'brain circulation' as the diaspora have a readiness to impart their developed knowledge and skills to their homeland and maintain links with knowledge institutions there.

Expanding and reforming HE is costly, and more so than for lower levels of education. However, HE is not only used for teaching and learning but also includes other activities such as research, community outreach, and HEIs are linked to services such as hospitals and knowledge exchange. A direct comparison of the cost of HE to lower levels is therefore unfair. All levels of education are important and should not be traded off against each other but rather treated holistically to allow the positive mutual benefits each level gives to the others.

In most LMICs, HE programmes, especially those at the higher level with potentially the highest rate of return, and the best HEIs, capture elite groups (defined as individuals of superior status, be it economic, political, educational, ethnic or otherwise). Therefore, many question if a country that cannot provide every child with a primary education should cover almost 80 of the costs for all HE students, most of whom are elite, or if the focus should be on allocating public spending and international aid more effectively.

The high cost of HE inevitably leads to policy debates about the purpose of HE. Some argue that HE should only train future leaders and high-level professionals, and should not expand indefinitely. Whilst others think that participation in HE is a right for all and supply-led expansion may boost national productivity and development in the context of the global knowledge economy.

BARRIERS

HEIs face a number of barriers as they try to expand and increase their performance in response to rising social aspirations and demand for social equity, changing demographics, growing socio-economic relevance and massificaton from elite to a mass system. These include increasing the supply of HE to a growing number of students and a more diversified student body, finding additional funding, infrastructure, maintaining the quality of teaching and learning, prior preparation of students and ensuring sufficient numbers of quality academic staff.

Public funding of HE is often inefficient and insufficient. HEIs in LDCs with limited resources face the challenge of containing costs as they expand, become increasingly internationalised and meet the expectation of providing high quality education. Private provision of HE is rapidly expanding as an alternative to publically funded HEIs. Good management and governance of private HEIs is important to ensure high quality delivery while simultaneously encouraging further investment.

The formal employment sector is not able to absorb the increasing numbers of graduates due to slow growth. However, HE in LMICs is not delivering graduates with the generic skills, such as thinking and behavioural skills, and the technical skills required to address labour market and innovation requirements. This may reflect the quality of teaching and learning. Moreover, the share of graduates

in science, technology, engineering and mathematics (STEM) remains too low to support much technological capability. SSA countries are being called upon to slow down the pace of expansion and shift their attention to propping up the quality of their HE systems. HE systems in LMICs are also not providing research of adequate quality to boost technological advancement in business. The interactive and reinforcing nature of under-funding, variable quality and relevance, and non-use and non-support of local research presents a bottleneck to research and research capacity development.

Despite rising enrolment in HE and the demands for social equity, certain demographic groups are poorly represented in many LMICs. There are significant barriers to accessing and remaining in HE depending on context, gender, family wealth, region of origin, race/ethnicity and disability. Lack of access to earlier education levels can also lead to inequities in access to HE. Policy makers are failing to sufficiently address the connection between education levels and the need to address inequalities early and consistently. Furthermore, equity statistics remain poor in some countries and disaggregated data is key to informing policy makers why certain groups are more vulnerable.

HEIs are often managed as disconnected individual institutions. To improve performance and outcomes, HE needs to be seen as a "system" including both institutions and the stakeholders that partner and interact with them – business, public sector, research institutes, earlier education institutions (schools) and other skill providers.

AID AND INTERNATIONAL DEVELOPMENT AGENCIES

There is a long record of investment in HE in LDCs by international donors and agencies which has passed through a number of different phases, but remains a low proportion of total foreign aid. External investments include (a) training and scholarship programmes, (b) establishing networks and consortia and (c) building institutional capacity. With a renewed interest in HE there are indications that investment may increase but there is a lack of consensus on investment priorities. Overseas development assistance for HE continues to be spent in diverse ways, and more international donor coherence along with a holistic approach to HE is required for real impact. Increasingly, a number of universal principles have been adopted by most donors in how they work in HE for development, including demand drivenness and ownership of the South, output financing, and accountability and transparency in partner matching. A review of the evidence indicates a number of common lessons learned which should be taken into account when looking to the future. The most important is the need for more appropriate methodologies and well-managed monitoring and evaluation systems, at both programme and project levels, from which evaluations of external investments in HE can draw their data.

PARTNERSHIPS

Partnership between HEIs in LMICs and other actors including HEIs in HICs, the public sector (e.g. local and national government), the private sector (e.g. business and industry) and civil society (e.g. citizens groups, NGOs, not-for-profit research institutes) range from the relatively formal public-private partnerships (PPPs) to more informal collaborative arrangements. External international agencies and donors can play a central role in the process of establishing, facilitating, funding and incentivising partnerships between HEIs and the other actors in LMICs.

Partnerships can be very beneficial but incredibly hard to deliver successfully. Although the specific challenges that occur will depend on the type of partner and partnership, the literature highlights a number of common factors that may inhibit any such partnership. These include imbalances in resources, funding to initiate but not sustain the partnership (particularly affecting teaching and learning partnerships which are not as immediately effective as research partnerships), poor monitoring and evaluation, cultural divide and a lack of confidence in the weak research capacity for input into the innovation process. A number of general principles have been identified which can help

overcome these challenges and guide the development and management of future effective and sustainable partnerships for HE capacity building.

INNOVATIONS

HE in LMICs contexts needs reforming so that it can fulfil its potential in national development. How to most effectively reform HE is a debated topic and many innovations and initiatives in policy and practice have been designed and implemented. However, each innovation in policy and practice has implications which should be fully taken into account by national governments and the international development community before they are implemented. Robust empirical evidence on their impact is lacking. Evidence that is available suggests that one or two initiatives is insufficient to address the challenges facing HE in LMICs and a combination is necessary, but exactly what innovation to blend together is open to debate and will depend on the feasibility of reform and the specific country context.

CONCLUSION

This topic guide has illustrated that HE can make a positive contribution to national economy and society and is now high on the post 2015 development agenda. Multiple sectoral and institutional changes and reforms are required to meet the new challenges and deliver on the demands of ensuring a highly skilled workforce, a well-informed and democratic populace, sustained economic growth, and sufficient technological innovation to solve global problems such as environmental sustainability and population growth. The challenges facing and the pressures to reform HE, and lower levels of primary and secondary education, are greater and more complex for LMICs; a significant undertaking for LMIC governments.

Multilateral and bilateral donors can complement efforts of national governments in LMICs to improve HE by providing funding and educational resources or training senior HE staff on education management techniques, curricula development or governance and administration. A variety of other potential partners in the private and public sector and in civil society can also help increase the quality, relevance and effectiveness of HEIs and wider HE systems in LMICs.

KEY MESSAGES

- Global forces, such as the growth of the knowledge economy and the recognition of the important role of higher education (HE) in national development has put HE systems worldwide under tremendous pressure to increase performance. HE systems in LDCs are particularly under pressure as, already at a disadvantage, they are struggling to meet the increasing demands placed on them and therefore, risk further marginalisation. Addressing the inequality within HE systems around the world and strengthening their teaching, research and system capacity to contribute to inclusive economic and social development, particularly in LMICs, are two challenges facing the international community.
- Empirical evidence suggests that HE can have a significant and positive **impact** on the economic growth of nations and plays a vital role in societal development in areas such as political participation and stability, democratisation, governance, health, civic engagement, empowerment and gender parity. Together they provide a persuasive argument for national governments and international agencies to invest in HE.
- However, doing so raises a number of **policy questions**, which require governments to make some strategic decisions. These include how to fund the expansion and reform of HE, whether to allocate public funding and if so, how much and how to manage the risk of lower returns through increased mobility and human capital flight. These questions are not easy to answer. They present serious issues which are difficult to address. Nevertheless, they are not insurmountable and, in the long run, investments in HE and in the whole education sector will pay off.
- **Barriers** to building the capacity of HE systems in LMICs include critical shortages of quality staff, limited capacity of governance, leadership and management, inadequate financial support, issues with diversifying funding, problems with the quality and relevance of teaching and research, limited capacity for research, knowledge generation and adaptation capabilities, challenges in meeting increasing demand for equitable access and difficulties in building and retaining the human capital needed for capacity development.
- There is a long record of various types of **investments by international development agencies** in HE in DCs, but there is no conclusive evidence to suggest which type of intervention is most effective. Current international donor trends continue to reflect many different approaches and priorities raising questions and concerns about donor coherence and overall sustainable impact. The evidence highlights the need for more appropriate methodologies and well managed monitoring and evaluation (M&E) systems at programme and project levels, from which evaluations of external investments in HE can draw their data.
- **Partnerships** between HEIs and other actors, such as industry, business, the public sector and civic society, have considerable potential for building capacity in HE and evidence shows that the international development community can play a central role in the process of establishing and maintaining such partnerships. However, there are many complex processes underpinning a HE partnership, such as cultural differences, power differentials and resource limitations and they are very hard to deliver successfully. Nevertheless, there are a number of principles that can guide the development and management of effective and sustainable partnerships but it is important to remember that not all actors are suitable as partners. Identifying the right partner and the pre-partnership process is critical.
- There are many **innovations** and initiatives in policy and practice which can be used to successfully reform HE in LMICs to enhance its contribution to national development. However, how to most effectively reform HE is debated. There is a lack of robust data and evidence about how successful each of these innovations are. Nevertheless, experience suggests that an approach combining one or two initiatives is insufficient to address the challenges facing HE in LMICs and a combination is necessary. The question of which innovations should blend together is open to debate and will depend on the feasibility of reform and the specific country context.

1. INTRODUCTION

Since the early 1990s the global community has prioritised the development of basic education. However, many recent studies have shown that higher education (HE) is a vital asset to the national and global community in the current context of the knowledge economy. HEIs are key in delivering the knowledge requirements, competencies and skills (human capital) for providing individuals with better employment prospects - higher salaries and a greater ability to save and invest. Graduates have been shown to have more positive attitudes towards democracy, human rights and protecting the natural environment, and there is increasing evidence that high levels of quality education in general and of HE in particular, are essential for the design and productive use of new technologies which provide the foundations for a nation's innovative capacity. Moreover, access to strong HE programmes is essential for training professionals in basic education, health and a range of other key governmental and non-governmental agencies. The research and community engagement activities of universities can also have a direct impact on solving local and national development challenges. As a result, capacity building of HE has become an increasingly important focus for governments in LMICs and for multilateral and bilateral donors alike.

A number of highly complex and global forces have impacted on HE in recent years. These include globalisation, internationalisation and massification. These have been catalysts of HE reform but have also presented significant challenges to HE structures and systems in all countries but particularly in LMICs where evidence shows that the quality, relevance and effectiveness of HEIs and the wider HE system was already weak. The challenges LMICs are facing include, but are not limited to, increasing the supply of HE to a growing number of students, and a more diversified student body, increasing the labour market relevance of HE, increasing the amount, quality and relevance of research, managing a larger and more complex HE system, maintaining quality of teaching and learning, the prior preparation of students for HE and ensuring sufficient numbers of academic staff. Innovative partnerships between HEIs, national governments, the international development community and other actors in the public and private sectors have been striving to increase the performance of HE in LMICs. Such initiatives include granting more autonomy, management and academic freedom to HEIs, diversifying funding sources, building and maintaining relationships with organisations in the labour market, and supporting a more diversified and complex HE system. Even so, the data indicates there is still some way to go. Whilst there is a large body of literature on the design and implementation of such innovations and investments, robust empirical evidence on their impact and 'what works' seems to be lacking. Nevertheless, they do provide important lessons learned.

This topic guide aims to answer two main questions; how can the capacity of HE systems and structures in LMICs be built and; how can effective partnerships be generated to best support the process. To answer these questions, the guide presents evidence of the critical role of HE for overall national development, examines the key policy issues and barriers to building capacity in HE in low income settings and reviews the evidence from a number of different innovations that have attempted to overcome these barriers.

The majority of evidence used in this guide was based on recommendations from (and often provided by) an academic advisor with extensive experience and in depth knowledge of the issues being addressed and, through conducting previous systematic literature reviews on HE for DfID, familiar with the availability and quality of evidence available. Other literature was found using educational and organisational databases including the British Education Index, Education Resources Information Center (ERIC), Education Research Complete, EBSCOHost, the National Foundation of Educational Research in the UK, UNESCO and the Social Sciences and Humanities Research Council of Canada. Limits were set from 2005 to the present following guidance from DfID.

It should be noted that this topic guide is not intended to be a comprehensive 'go to guide' for all information and solutions for building capacity in HE in LMICs, but to introduce and provide an overview of the key issues involved and to signpost the reader to the most relevant and best sources of information and evidence available for further information and reading. A list of recommended reading for each section is provided in annex A.

2. ABOUT HIGHER EDUCATION

This section of the topic guide summarises selected key concepts about higher education (HE). It discusses what it is, what it does, what it looks like, how it has changed in the past half century and why there is a renewed focus on it for national governments and the development community alike. In doing so, it acknowledges some of the tensions and debates about HE and seeks to bring greater conceptual clarity to these issues.

2.1 DEFINING HIGHER EDUCATION

HE can be defined as optional, formal education in specialised fields undertaken after completing secondary education. Traditionally, the term referred to academic study taking place at universities, but today it also encompasses professional or advanced vocational training at university-like institutions, colleges or professional schools attached to universities (such as nursing schools or teachers' colleges). While some scholars and practitioners use the term interchangeably with tertiary education (TE), others consider TE to be an umbrella term encompassing both HE and further education (FE) or continuing education (CE), where the latter refers to post-secondary learning of a more technical and vocational nature. Within the context of this guide, HE refers to post-secondary education, and therefore does not include other forms of adult learning such as literacy programmes. (For more information about FE and skills training please see the HEART Skills Topic Guide).

2.2 TYPES OF HIGHER EDUCATION

According to the World Bank (2013),[3] while universities are seen as a key part of all HE systems, globally there is a burgeoning group HEIs in addition to universities both public and private, including, but not limited to colleges, technical training institutes, community colleges, nursing schools, teacher training institutions, research laboratories, and distance learning centres. As education systems vary widely around the world, UNESCO has developed the International Standard Classification of Education (ISCED) to facilitate cross-country comparison, collaboration, and analysis. Annex B provides a detailed description of ISCED 2011.

2.3 FUNCTIONS OF HIGHER EDUCATION

The primary function of HE is the production, distribution, and consumption of knowledge, through teaching, research, and community engagement. The types of knowledge generated, the beneficiaries of that knowledge, and how that knowledge is used have changed over time.[4] Prior to 1945, the main aim of HE was seen to be to better the mind of the elite and to facilitate scholarly discussion and breed debate of a theoretical and abstract nature.[5,6] Key economists in the 1950s and 1960s theorised that people could be 'invested in' to build human capital and that their economic success depended on rates of return to their stock of this capital. HE was seen as a way to build the necessary human capital for successful development, and thus funds were invested in manpower planning/forecasting directed at those considered the 'brightest and best'. Today, while some scholars continue to highlight HEs' importance for economic success, discussions about its purpose(s) have become more complex and nuanced to include the role it can play in building an inclusive and diverse knowledge society.[7] Annex C details the functions of HE as set out in the landmark World Declaration on Higher Education (1998).[8]

2.4 GLOBAL TRENDS IMPACTING HIGHER EDUCATION

Altbach *et al.* (2009)[9] believe that an 'academic revolution' has taken place in HE in the past half a century involving significant and complex changes. Many of these changes are a result of global trends and forces, which have impacted on HE. These have provided the catalysts for the reform of HE and have generated a renewed interest in it. Although several of these trends are inter-related, in this section they are presented separately for clarity.

2.4.1 The growth of the knowledge economy

The 'third industrial revolution' in the 1990s led to the formation of a knowledge economy where cognitive resources were at the centre of human activity and social dynamics[10] and in which growth was dependent on the quantity, quality, and accessibility of the information available, rather than the means of production. This led to a new focus on technology, which can ensure information is more readily available and can simplify communication and collaboration. The growth of the knowledge economy has had important implications for HE. As society has become more knowledge-based, HE has increasingly been drawn into the making and advancement of 'knowledge nations'[11] as one of its main functions is to generate quality research, knowledge and originality. In other words, as governments have come to realise the primacy of knowledge they have simultaneously come to realise that HE is the key driver in providing the knowledge, using the growing stock of global knowledge, assimilating and adapting it to local needs,[11] crafting new technology and creating a skilled population that can use this knowledge and advance further knowledge, innovation and creativity[7].

Although the increased importance of knowledge provides great potential for countries to strengthen their economic and social development it also raises the danger of a growing 'knowledge divide'[10] between MDCs, who are currently generating most of this knowledge, and LDCs, many of which are failing to tap into the vast and growing stock of knowledge because of their limited awareness, poor economic incentive regimes, larger informal sector, weak institutions (including HEIs) and a lack of ICT that can facilitate the effective communication, dissemination and processing of information. Combined with trade policy liberalisation, the knowledge revolution is leading to greater globalisation and increased international competition, which is eroding the natural resource and low labour cost advantage of most LDCs (Ibid.).

2.4.2 Globalisation and internationalisation

Globalisation and internationalisation are related concepts but are not the same. Globalisation can be defined as the economic, political and societal forces pushing HE towards greater international involvement. Internationalisation includes the policies and practices undertaken by academic institutions to cope with the increased global academic environment.[12] HEIs have always been, to some extent, international[11,13] but in the last few decades it has become more central on the agenda.[14] Some motivations for internationalisation include commercial advantage, knowledge and language acquisition and enhancing the curriculum. Specific internationalisation initiatives comprise of branch campuses, cross border collaborative arrangements, establishing English medium programmes, setting up degrees on international issues such as global and multicultural studies, peace education and offering global online programmes and courses, etc.[14] One of the most visible aspects of this trend is increased student mobility with many students choosing to study outside their country. International students have become big business in some cases.[12]

2.4.3 Massification

Over the past 50 years, there has been an unprecedented increase in HE enrolment globally. Recent figures demonstrate that expansion continues today: according to the World Bank World Development Indicators, gross enrolment ratios[1] for HE programmes at Bachelors levels and above

[1] The total enrolment in tertiary education, regardless of age, expressed as a percentage of the total population of the five-year age group following on from secondary school leaving

have risen from 24.1% in 2005 to 32.9% in 2013. The pressure for expansion has come both from above and below. From above, governments have felt the need for more university graduates to allow them to remain competitive in the expanding global knowledge economy, and, from below, individuals around the world have insisted on access to HE in order to improve their own social mobility.[15] There have been greater numbers of young people eligible to participate in HE as a result of the expansion of basic education, increased enrolment and completion rates following programmes to achieve education for all (EFA). Although the question whether HE is a 'universal right' that should be made available to all is hotly debated,[16] moving from elite to mass HE is considered important to attain objectives of poverty reduction and increased national development and therefore, is unlikely to change.

2.4.4 The connection to socio-economic development

According to Colclough *et al.* (2009),[17] during the 1980s, economists studying the impact of different levels of education in DCs (mostly for the World Bank) concluded that the rate of return to primary level was higher than for secondary and higher levels of education. This led to the theory of diminishing returns to education. The findings also suggested that the benefits of HE after secondary school proved substantially higher for the individual than the state. Such research was very influential in determining national and international development agendas and encouraged a focus on basic education. The World Conference on Education for All held in 1990, privileged basic education over other sectors of education, and the Millennium Development Goals set targets for universal primary education (UPE) to be reached by 2015. Numerous studies conducted in the past 15 years have challenged many of the conclusions drawn by the World Bank. The Organisation for Economic Co-operation and Development (OECD), for example, released a report in 2008, which argued that HE is a vital asset to the global community as it encourages social and economic development through the strengthening of a population's knowledge bases, the creation of human capital and the application and dissemination of such knowledge.[18] Such studies generated a renewed interest in the role of HE for national development. Researchers also started to pay attention to the non-economic benefits of HE[19] developing a much broader understanding of how human capital can build domestic capabilities. Such researchers argued that HE has a key role to play in benefitting the public as a whole by enabling individuals to contribute to others and future generations beyond their own personal interests.[20–22] Psacharapoulos (2006)[23] provides a simple diagrammatic classification of the public, private, market and non-market benefits of HE. This is presented in annex D.

2.4.5 The interrelationship with other levels of education

A discouraging and growing cycle of educational failures in basic education programmes in DCs were found to be, in part, caused by a lack of growth within HE. Researchers have increasingly argued that without access to strong HE programmes, the inability to train essential officials such as teachers, economic managers and political leaders, all of whom are responsible for ensuring that certain standards of the quality of basic education are reached, will persist and continue to present a barrier to the achievement of quality basic education. For example, quality in basic education cannot be achieved without quality pre-service teacher training programmes which take place at HE level. As a result, it has become more and more apparent that what is required in today's knowledge society is a holistic, comprehensive, nuanced approach to education that considers the interrelationships between the different levels of education and does not neglect HE. The World Bank (2013)[3] and other multilateral and bilateral donors and international development agencies have acknowledged this and have made a commitment to promote and support HE initiatives.

2.4.6 The movement towards evidence based practice (in education and in development)

HE is viewed as not only vital for improving the quality and relevance of basic education through supplying qualified and skilled personnel but also by providing the evidence about 'what works' in bringing about worthwhile educational improvement and national development. While HE has always

had a research function, the recent movement towards EBP in education since the mid-1990s has enhanced the demand for good quality research with governments increasingly putting pressure on educational researchers to ensure their work is relevant and useful to practitioners and on practitioners to ensure their work is based on robust evidence (research). Although many educationalists argue that the potential of educational research is to say simply and with certainty what works, it is limited due to the complexity, instability, values and uncertainty inherent in education which are located within the broader context of other social relationships, culture, values and purposes,[24] in general, most agree that research can empower policy makers and practitioners to make informed decisions about appropriate courses of action in particular circumstances. In this sense, educational policy and practice is evidence *informed* not evidence *based*.[25,26] Nevertheless this does not diminish the importance of research and the role of the HE system in producing it, especially in resource poor or fragile states. Such countries, faced with huge educational challenges and limited resources, do not have the luxury to waste them on something that does not work or to conduct blue sky research or research for theoretical purposes alone.

The link between research and policy in the area of human development is also of increasing interest and with its research and development function, HE is also now thought to play a vital role in giving operational effect to a joined-up, evidence-based development approach, in a way which puts peoples' needs first, and which has poverty alleviation – and beyond that, poverty eradication – as its overarching goal.[27]

2.4.7 Demands for equity and social justice

In postmodern discourse, the politics of difference along with ideas of diversity and plurality being a resource rather than a deficiency were prominent and led to demands for equal rights, social justice and equity by various marginalised groups such as women and disabled people. Despite some progress, there remains considerable inequity, especially in DCs and people's access to and interaction with key institutions, including HEIs, which continue to be shaped by power imbalances in the political, economic and social spheres resulting in inequality between demographic groups and geographical regions and chronic poverty passed between generations. The need for social equity to achieve poverty reduction for sustainable development has been recognised by the international community, but recent decades have seen rising inequality and inequities, which are in turn partly responsible for the world 'lagging behind' on headline goals such as the MDGs. This development strategy nevertheless, has impacted on HE, which has the potential to contribute to social justice by *importing* equity agendas through the composition of its staff and student populations and *exporting* it by striving to achieve it across the rest of society.[28] Therefore, whereas HE was once the sphere of the elites, it is mostly now seen as being accessible to a substantial part of the age group[29] with the SDG for HE establishing that right.

2.4.8 Peace building and reconstruction

Conflict and fragility present some of the most urgent challenges facing the developing world. They present threats to regional and global security and are major obstacles to poverty reduction and the achievement of the MDGs[30] and SDGs. Therefore, many donors have been scaling up their work in fragile and conflict affected states (FCAS). This has also contributed to renewed interest in HE as HE has the potential to contribute to post-conflict reconstruction, state-building and peace building. In post-conflict contexts HE can connect to a wide range of post-conflict recovery tasks, including re-pooling human capital depleted by war and displacement, research on local social and developmental challenges, and a long-term sustainable approach to capacity building.[31] In spite of an increasing global recognition of the importance of HE in FCAS and a growing number of projects aimed at increasing HE capacity, the evidence base on the effectiveness of HE interventions and policies in these settings is weak and there is a need for greater sharing of knowledge on HE in post-conflict contexts.[31]

2.5 IMPLICATIONS FOR HIGHER EDUCATION IN DEVELOPING COUNTRIES

Given that HE is now widely seen as a 'silver bullet' for policy makers to fire at a range of targets, including the creation of more and better jobs and job-seekers, the promotion of social equity, cohesion and a culture of peace, and the enhancement of global competitiveness, creativity, and innovation,[32] the global HE system is under more pressure than ever. The pressure is particularly significant for HE in LMICs. Inequality among national HE systems and within countries has increased in the past several decades[33] and HEIs in most LMICs are already at a significant disadvantage in their ability to create, absorb and use knowledge. The massification of the system is an aggravating factor and means LMICs risk further marginalisation in the future as they simultaneously try to expand their HE system whilst improving quality all within continuing budget constraints. In fact, if the means of implementation (MOI) target for the Sustainable Development Goal on Education to make more scholarships for students from LMICs to pursue HE in other countries by 2020 is reached without an adequate investment in HEI development in these LMICs, this increased marginalisation is almost a certainty, particularly given that there is no mention of capacity strengthening for HEIs in LMICs. As Unterhalter and Carpentier (2010)[33] state, HE is both a potential source of and solution to inequalities which confront LMICs. The challenge the international community is faced with is twofold: addressing the inequality within HE systems around the world and strengthening their capacity to contribute to inclusive economic and social development.

2.6 MEASURING EFFECTIVE HIGHER EDUCATION

But what does an effective HEI system for the national development in a global knowledge economy context look like? Although there is no single blueprint for the best or most effective HE systems, structures or policies[10] and there is some considerable debate about what makes a 'world-class university',[34] there are a number of ranking systems, which attempt to measure the world's HEIs according to their performance. There are clear methodological issues with all of the systems and they largely favour HEIs that use English as the main medium of instruction, offer a large array of disciplines and programmes, and have substantial research funds from governments.[9] However, as these rankings are widely used and increasingly influential, two of the most prominent are briefly discussed in this topic guide. The QS World University Rankings ranks universities according to six performance indicators: academic reputation, employer reputation, faculty/student ratio, research citations per paper, proportion of international faculty and proportion of international students. The Times Higher Education World University Rankings uses 13 performance indicators to judge universities across their core missions of teaching, research, knowledge transfer and international outlook. Both of these rankings rely heavily on surveys of academics, suggesting that well-known universities are predisposed to do well. Regardless of quality, many universities in LMICs have little chance in even making the list, lacking the resources to promote their 'brand' and build reputation in an increasingly competitive world. According to Badat (2010),[35] there is little to no value in these global rankings because they are incapable of capturing the meaning of the diverse qualities of a university.

Recently, a new, more progressive ranking system has emerged called the Universitas 21 ranking. This system assesses national HE systems, as opposed to individual institutions, against four dimensions – resources, environment, connectivity and outputs. While HICs are still likely to be ranked more highly, these rankings might prove useful for LMICs attempting to understand where their strengths and weaknesses lie. In fact, the report includes an analysis where results are adjusted according to different levels of development. Such data could prove valuable for planning, by providing a more nuanced, comprehensive picture of the HE system that goes beyond resources and brand recognition.

3. EVIDENCE OF IMPACT

The previous section introduced the theory of a relationship, but what does the best available evidence say? This section summarises the empirical evidence on the returns to investments in higher education (HE) and national development and briefly discusses how robust the evidence is. The section is divided into two parts. The first part examines the evidence relating to the economic (or market) benefits of HE and the second to the societal (or non-market) benefits.

3.1. THE MARKET BENEFITS OF HIGHER EDUCATION

Conventionally the contribution of education to economic development is analysed in terms of the relationship between the level of education and earnings and also in the form of rates of return[2] (available estimates on the social and private rates of return to investment in primary education are the highest, followed by secondary education). Returns to HE are the least. Such evidence was extensively used to discourage public investment in HE and to concentrate almost exclusively on primary education in the 1980s and 1990s. Recent evidence, however, suggests that HE can produce both social and private benefits. Estimates of regional average social and private rates of return are shown in the table below. Although there are variations in the rates of return between several countries, generally they show that investment in HE yields positive rates of return to the individual (19%) and society (10%).[36]

Returns to HE

Region	Social (%)	Private (%)
Asia*	11.0	18.2
Europe/Middle East/North Africa*	9.9	18.8
Latin America/Caribbean	12.3	19.5
OECD	8.5	11.6
Sub-Saharan Africa	11.3	27.8
World average	10.3	19.0

*Non-OECD. Source: Psacharopoulos & Patrinos 2002[36]

The contribution of HE to economic development can also be measured with a simple regression equation. Using data from 49 countries in the Asia Pacific region, Tilak (2003)[37] found a significant effect of HE (gross enrolment ratio and HE attainment) on the level of economic development (as measured by GDP per capita). Tilak (2003)[37] pre-empted the argument that there only exists a correlation between the two by allowing a time lag for HE to *cause* economic development (GDP per capita from 1999 was regressed on the enrolment ratio around 1990). This suggests that action to improve HE needs to be taken now to allow time for its effect on economic development. Also, there are very few countries with higher levels of HE being economically underdeveloped, while all the economically rich countries have not necessarily advanced in the development and spread of HE.

Tilak (2003)[37] also showed that the proportion of the adult population with HE (a measure of the stock of human capital) is an important indicator of the level of development. This 'stock' indicator represents the cumulative efforts of a country in the development of HE over the years. The larger the stock of the adult population with higher levels of education, the higher the potential for economic growth.[37] India's rise onto the world economic stage is attributed by some to its decades-long successful efforts to provide high-quality, technically orientated HE to a significant number of its citizens.[22] Research by Bloom *et al.* (2006)[22] supports the idea that expanding HE may promote faster technological catch-up and improve a country's ability to maximise its economic output. Results show that SSAs current production level is about 23% below its production possibility frontier. A one-year

[2] A summary statistic of the relationship between lifetime earnings and the costs of education

increase in the HE stock would raise the growth rate of GDP per capita by 0.24 percentage points and African output growth by an added 0.39 percentage points in the first year. This implies that a one-year increase in HE stock may boost incomes by roughly 3 per cent after 5 years and ultimately by 12%.[22]

The private market benefits for individuals include better employment prospects, higher salaries, labour market flexibility and a greater ability to save and invest.[23] Public benefits, although less well studied, also exist and include higher productivity and output per worker, higher net tax revenue and less reliance on government financial support.[23] Rates of return focusing solely on the private and public financial rewards fail to encompass the broader benefits of HE manifested through entrepreneurship, job creation and good economic and political governance along with the positive impacts of research on economies.[21]

The complex relationships in economic development with a focus on the context in which universities operate (political and socio-economic), the internal structure and dynamics of the universities themselves, and the interaction between national and institutional contexts have recently been studied. Initially a review of the international literature on the relationship between HE and economic development was conducted by Pillay (2011).[21] This was followed by the study of three successful systems – Finland, South Korea and the North Carolina state in the US – that have harnessed HE in their economic development initiatives to distil implications for African countries.[38] Common to the success of all these systems is, amongst others, the link between economic and educational planning; quality public schooling; high tertiary participation rates with institutional differentiation; labour market demand; cooperation and networks; and consensus about the importance of HE for education and development. Finally the key findings of eight African countries and universities – Botswana, Ghana, Kenya, Mauritius, Mozambique, South Africa, Tanzania and Uganda – were analysed and discussed.[39] The following three main conclusions were drawn:

- There was a lack of clarity and agreement (pact) about a development model and the role of HE in economic development, at both national and university levels, in all eight cases. There was, however, an increasing awareness, particularly at government level, of the importance of universities in the global context of the knowledge economy.
- Research production at the eight African universities was not strong enough to enable them to build on their traditional undergraduate teaching roles and make a sustained contribution to development via new knowledge production. A number of the universities had manageable student–staff ratios and adequately qualified staff, but inadequate funds for staff to engage in research. In addition, the incentive regimes did not support knowledge production.
- In none of the countries in the sample was there a coordinated effort between government, external stakeholders and the university to systematically strengthen the contribution that the university can make to development. While at each of the universities there were exemplary development projects that connected strongly to external stakeholders and strengthened the academic core, the challenge remains how to increase the number of these projects.

3.1.2 Linking higher education to the labour market

More-developed SSA economies have better-educated workforces.[40] There is a positive statistical relationship between the share of the working-age population that has attended upper secondary or HE and the per capita GDP across the 23 SSA countries (Majgaard and Mingat 2012 Figure 7.6).[40] Although GDP per capita alone explains only 44% of the variance in educational attainment.

The probability of working in the formal sector increases with increasing levels of education, almost 80% of those with HE work in the formal sector, whilst the probability of working in the informal sector decreases with increasing levels of education (Majgaard and Mingat, 2012 Figure 7.8).[40] Significant differences in the match between demand and supply across country labour markets exist in the SSA

region. For example, unemployment among 25- to 34-year-olds with HE varies between 1% in Lesotho and 48% in Mali. In this age cohort unemployment is less than 10% in nine of 23 SSA countries but exceeds 20% in nine other countries (Majgaard and Mingat, 2012 Table 7.5).[40]

Increasing numbers of youths attaining post basic levels of education coupled with the moderate pace of growth of formal sector employment means that young skilled workers are likely to encounter increasing difficulty in securing employment in the formal sector in the near future than in the past. With older generations of workers already well entrenched in the labour market and likely to hold on to their formal sector jobs until retirement, the prospects of formal sector employment are not particularly bright for young skilled workers.[40]

The formal private sector has few opportunities for the highly educated which is a cause for concern, especially because the public sector is not likely to grow rapidly in the coming years.[40] There is a potential for productivity increasing through an upgrading of skill profiles among workers, but because the formal private sector is growing only at the same rate as the labour force, its absorptive capacity will be limited. Producing more HE graduates than the labour market can absorb, at first sight, appears to make little economic sense, particularly when HE is largely subsidised by public funds. Nevertheless, a certain level of overproduction may be a good long-term investment that can contribute to future economic growth if the graduates are of high quality. The infusion of higher-skilled and entrepreneurial workers could induce new starts of more technology-intensive firms that in turn employ more graduates.[41] In countries where many skilled workers emigrate, universities may need to train extra workers to meet domestic demand. Emigration of skilled workers is not necessarily a long-term loss to the country because many remit their earnings to the home country. In this context, skilled workers may even be considered an export from the home country. However, if most recent graduates cannot find gainful employment or cannot find jobs that match their skills, it may be an indication that the education system needs some form of rebalancing, such as shifting its emphasis on quantity to an emphasis on quality.

3.2. THE NON MARKET BENEFITS OF HIGHER EDUCATION

HE is central to crucial societal tasks, including the formation of professionals in areas such as education, health and public administration, political participation, the strengthening of governance and democracy, enabling of spaces for critique and scrutiny of government and policy, the preservation, study and development of local and national culture and heritage, and health. Although there has been substantial interest in HE economic role, there has been only limited acknowledgment within the empirical literature of these non-market education externalities and their indirect and delayed effects on development goals.[19,42] This is largely because they are more difficult to understand and to quantify. Nevertheless, some evidence is obtainable from both developed and developing country contexts and this is summarised in the table on the next page.[3]

[3] The evidence provided is a small representative sample of that available demonstrating the non-market impacts of and was selected as it was considered robust, covered the key issues and is also available as an open access source. Other sources of evidence of the non-market impact of HE can be found in the reference section.

IMPACT	A SAMPLE OF THE EVIDENCE
HE is related to positive overall human development.	Studies by Tilak (2003)[37] and Cloete *et al.* (2011)[39] found that the higher the level of education in a population, the higher the level of overall human development, especially in terms of life expectancy and GDP per capita.
HE has a positive effect on political stability and democratisation.	In a survey of current third-year students in Kenya, South Africa and Tanzania, Luescher-Mamashela *et al.* (2011)[43] found that HE can enhance democratic attitudes and behaviours. A report from the UK Department for Business, Innovation and Skills (2013)[44] also found that HE has a positive effect on democratisation and political stability as graduates are more likely to vote and participate politically. Gaining a degree was found to be a powerful antidote to political cynicism.
HE can support positive developmental leadership and good governance	Research supported by the Developmental Leadership Program (DLP) illuminated unmistakeable links between HE and developmental leadership in Ghana, Somaliland, and Mauritius (DLPROG).[45] The in-depth case study of Ghana by Jones, Jones and Ndaruhutse (2014)[45] found that quality senior secondary and HE were critically important factors in forming leaders with the skills, values and networks needed to achieve major democratic, economic and media reforms.
HE can positively impact attitudes and practices.	An OECD (2010)[46] study found that higher levels of education impacted positively on various citizenship dimensions, especially in terms of positive attitudes towards immigration. The marginal effect of HE on holding a positive valuation was a 41% compared to only 18% for SE. Findings from a study by Truex (2011)[47] in Nepal show that improving access to HE can reduce the presence of corruption norms and practices.
HE promotes greater social capital	A survey in the USA revealed that, with respect to the number of hours volunteered for community service, within each education group, 22% of those with some post-secondary education give their time to community service activities compared to only 12% of those with only a SE.[48] Bynner and Egerton (2001)[49] using the National Child Development Study in the UK also found a link between HE and participation in community affairs, democratic processes, egalitarian attitudes, parenting and voluntary work.
HE build human capital	HE provides skilled professionals for important public services such as education and healthcare (Tikak, 2003). In this sense, HE has a ''dual effect'' (Oketch *et al.*, 2014)[50] it not only enhances the capabilities of the individual but also the general population through the subsequent work of the graduates
HE positively influences health.	Numerous studies have consistently shown that HE graduates are less likely to smoke, less likely to drink excessively, less likely to be obese, more likely to engage in preventive care, have better mental and general health, lower fertility rates and better nutrition habits.[37,44,46,50] HE has also been strongly linked to lower rates of HIV/AIDS across the African region.[51]
HE can empower individuals and groups	Malik and Courtney's (2011)[52] study in Pakistan proved that participation in HE can open up new options for women as individuals and lead towards significant changes in the direction of greater gender parity. In Eritrea, access to university was found to improve the freedom of women through greater capacity to earn, the avoidance of restrictive marriages and a better choice of future life with regards to career, travel and further study.[53]

3.3 ABOUT THE EVIDENCE

Basic education has been prioritised by the global community since early 1990s because it was considered to be the bedrock of all education and national development. This was difficult to argue against because of the paucity of empirical evidence about the benefits of HE. However, recent studies, many referenced in this topic guide, have shown that HE is a vital asset to the national and global community as it can promote social and economic development through the strengthening of a populations' knowledge base, the formation of human capital and the application and dissemination of such knowledge. Nevertheless, whilst HE in developing nations across the world provide a range of positive benefits to individuals and society, both in terms of economic growth and broader capabilities, a report by Oketch *et al.* (2014)[50] found that in many cases these benefits are currently underestimated. One of the main issues encountered is that whilst there is a large number of innovations and interventions to improve HE for national development, the vast majority of studies investigating interventions focus exclusively on intended outcomes, rather than seeking to capture any wider development impact. Moreover, the actual benefits are currently limited in magnitude as HE is being constrained by a range of limiting factors. These are discussed in detail in the next two sections of this guide.

4. POLICY ISSUES

Previous sections of this topic guide have highlighted the many positive individual and societal benefits of higher education (HE) and have provided a powerful argument for expanding and increasing investment in HE systems in LMICs. Nevertheless, although there is a strong rationale for investing in HE, attempting to do so raises many policy questions and debates for national governments and international agencies to consider. This section briefly examines four of the major policy issues and presents some of the different points of view expressed in the debate. It is acknowledged that this is not an exhaustive list.

4.1 HUMAN CAPITAL FLIGHT

There is strong evidence that participation in HE increases social mobility as it confers to an individual an advantage based on their level of qualification relative to others. This increased social mobility can have negative consequences for LMICs as it allows for increased student migration or Human Capital Flight (often referred to as 'brain drain'). This is the emigration of highly trained or qualified people from a particular country (or region in a country) to another. For LMICs, the brain drain occurs in two ways. The first is when students are sent overseas (or to another area) to study, often on scholarship programmes, and fail to return. The second is when students are educated within the country and then move overseas for work as often as there are limited opportunities in the domestic labour market. Unfortunately, as a result of massification, this second phenomenon is likely to intensify. The number of highly educated individuals will increase and competition within the job market at the higher levels will grow. Furthermore, as individuals reach HE goals, they will become reluctant to work at a lower tech or a lower paying job.

Brain drain reduces the number of skilled persons in public service and actually undermines their potential for socio-economic development, technological catch-up and absorptive capacity. According to the African Capacity Building Foundation, African countries lose 20,000 skilled personnel to the developed world every year. This means there are 20,000 fewer people in Africa to deliver key public services, drive economic growth, and articulate calls for greater democracy and development.[54] It also means that international efforts to increase aid to these countries may have less impact as the local personnel required to implement them are absent. This has led to many countries reducing aid to

HE.[55] It should be noted that brain drain can also happen domestically with students often migrating to more developed areas, such as cities.


Some argue that brain drain is not a major problem and can actually end up as a 'brain gain' as the brain drain hypothesis fails to account for the effects of remittances, the beneficial effects of returning migrants, and for the possibility that being able to migrate to greener pastures induces people to pursue education. Once these factors are taken into account, the migration of highly skilled people becomes a net benefit to the countries they leave.[56,57] There is some recent evidence from Ghana to support this theory.[58] Others contend that it could be seen as a 'brain circulation' as empirical studies have shown that the diaspora has highly developed skills from their overseas study and a readiness to impart knowledge to their homeland and maintain links with knowledge institutions there.[59] Mechanisms need to be found to use the intellectual capital of the diaspora for development at home such as the CODESRIA initiative (see section 8).

4.2 THE COST OF HIGHER EDUCATION


Other critical policy issues facing governments are financial. These include how to pay for the costs of expanding and reforming HE; how much public funding should be used and should funds be reallocated from other sectors or lower levels of education. The costs of HE per student are high, much higher than for both primary and secondary students. According to UIS (2011)[60] in 2009 most countries in SSA spent at least 10 times more on a HE student than on a PE pupil. Spending (US$) per student in Uganda on HE was 14.8 times more than on PE and in Rwanda it was 27.5 times higher. On average, eight out of every $10 spent on university education in Africa is subsidised by country governments (Ibid.). With looming population growth and limited public spending, many governments in LMICs have to make strategic decisions on how to budget for education. Many question whether any country that cannot provide every child with a primary education should be covering almost 80% of the costs for HE students and should fund the expansion of HE at all. Some argue that it is better to keep funds directed at the lower levels of education as this can stimulate more household spending for HE without threatening the growth of the HE sector. UIS (2011)[60] highlights the recent experience of Burundi which brought the number of out-of-school children down from 723,000 in 1999 to just 10,000 in 2009. Over the same period it increased its investment in education from 3.2% of GDP to 8.3%. But what made the real difference was the decision to dedicate a much larger chunk of the budget to primary education, effectively moving public money away from secondary schools and universities. For more statistics on education spending by sub sector in LMICs visit UNESCO.


It should be noted that expenditure on HE is not only used for teaching and learning but includes a wide range of activities including research, community outreach and linked HE 'schools' such as hospitals and knowledge exchange activities. It is therefore, unwise to directly compare HE spending with both primary and secondary education because their functions and needs are very different. Most LMICs already have a significant proportion of their HE funding coming from private sources, even in public universities, but as private funding alone can lead to distortions in course distribution and severe inequities (as it does not allow for the affirmative action policies that can address such issues)[9], many argue that it is important to continue to allocate public funding to HE and in fact the task for international agencies should be to bolster public spending on HE, and then ensure it is allocated effectively, rather than advocate for its reduction. The argument that public funds should be transferred from HE to primary education was put forward in 1980s and 1990s and led to huge reduction in public spending on HE in Africa. It is now clear that this was to the detriment of long term development and innovation, economic growth, and the viability of the whole education system in these countries and this policy should not be continued.

4.3 CAPTURE OF HE BY ELITE GROUPS

 The amount of public money spent on HE also raises questions of equity. In most LMICs, HE programmes and particularly those at the higher levels, with potentially the highest rates of return and the best HEIs, are usually captured by elite groups (defined as individuals of superior status be it economic, political, educational, ethnic or otherwise). This phenomenon is described in detail in annex E. Therefore, the policy question becomes, whether a country that cannot provide every child with a primary education should cover almost 80% of the costs for HE students, who tend to come from wealthier or more privileged backgrounds.

 There are many strategies both at policy and practice levels which can and have been successfully employed to promote equity in access to and completion of HE for disadvantaged populations. Some HE systems in LMICs have reconciled these tensions through stratification (by maintaining a small elite core of high-quality universities, but supplementing it with a demand-absorbing lower quality sector) and others by implementing affirmative action, targeted scholarships, and sensitisation campaigns or by establishing separate courses, classes or even HEIs and catch up courses. Many of these with examples are presented in section 8 of this topic guide.

4.4 THE PURPOSE OF HIGHER EDUCATION

 Due to the high costs, expanding HE is inevitably linked to broader policy debates about the purpose of HE within a society and what its role is in enhancing national socio-economic development. Governments need to develop a shared vision about HE.[61] Some argue that HE should only be a training ground for future leaders and high-level professionals, not an experience that can and should be available to all citizens. They argue that the expansion of HE systems can and should not continue indefinitely and that there should only be as many places as there are subsequent jobs for graduates.

 Conversely, there is an argument that governments and international agencies should continue to invest in expanding and reforming HE, as participation in HE is a right and should be accessible to a large percentage of the population. This is especially the case given that supply-led expansion might boost national productivity and development in the context of the global knowledge economy as highlighted in sections 2 and 3 of this guide.

4.5 CONCLUDING THOUGHTS

These policy questions about expanding and investing in HE cannot be ignored and are not easily reconciled. They present serious issues for governments and international agencies alike and have (successfully) been used in the past to justify the under investment, degradation and decimation of the HE sub sector by governments and donors alike in many LMICs prior to 1998. However, most international agencies (including the World Bank and DfID) have now realised that it is not a wise course of action to reduce funds for HE in LMICs, as it leaves them without the intellectual capital required for poverty reduction and sustainable development and they will lonely fall further and further behind more MDCs.

Moreover, it should not be a case of putting one level of education in opposition to another or prioritising one over another. All levels are important. Recent experience has shown that good quality basic education is not possible if there is not good quality HE. However, there is not good quality HE without good quality basic education. Therefore, it is necessary to provide strong **holistic** support across all levels of education. What is required is a systemic view of the education sector.

Investments in HE will ultimately pay off and the positive benefits will outweigh or even eliminate the potentially negative ones. For example, providing good quality domestic undergraduate and postgraduate education is one way to alleviate the brain drain as it will mean that going abroad is an option and not the only way to get a good quality degree.[62] The first African Higher Education Summit on "Revitalising Higher Education for Africa's Future", held in Dakar, Senegal from 10-12 March, 2015 concluded that investing in HE is the best way to build a strong state economy and that countries need a confident 'bold, long term vision'.

5. BARRIERS

As a result of decades of under investment, little higher education (HE) infrastructure currently exists in most DCs and where it does, capacity is generally weak. There is a clear need for reform to increase performance and improve results in order for HE to enlarge its contribution to sustainable development. Whilst many LMICs are attempting to do this, their governments cannot easily access the expertise or resources needed to commit to the necessary reform and there are many complex and daunting obstacles standing in the way of developing robust, high quality and effective systems of HE. The reforms needed and barriers to implementing these reforms are outlined in this section along with a brief introduction to the pathways in overcoming these obstacles.

CHALLENGES FOR HE	BARRIERS IN LMIC CONTEXTS	PATHWAYS FOR REFORM
5.1. Provide mass HE to all citizens: The growing demand for HE requires a balanced growth on the supply side of staff (academic and administrative) and facilities (including infrastructure)	Increasing the supply of HE in LMICs is hampered by many factors. The increasing demand for HE has not been accompanied by corresponding funding[41,63] so there are inadequate resources to invest in institutions, infrastructure and facilities.[64] There are also challenges in finding qualified academic staff due to competition from the labour market. Graduates, especially with higher degrees, are also in demand by the private sector and the government[65] where salaries tend to be higher. In many LMICs a number of new providers (including private for-profit institutions) have emerged to meet the demand for HE but in several countries, this increase has coincided with a relaxing of state regulation with implications for quality and effectiveness of such institutions.	Increasing the supply of HE in LMICs requires increased funding and a more innovative approach. Berkeens-Soo (2009)[29] argues that increasing the supply of HE cannot be achieved by simply expanding the existing elite HE system but requires efforts in both 'horizontal' and 'vertical' diversity. However, this presents challenges in acquiring the necessary finance (see 4.9) and managing a complex and diversified system (4.10). Others contend that meeting increased demand can be achieved through innovative delivery modes such as the use of ICT.[66]
5.2 Be globally competitive: The internationalisation and the subsequent commercialisation of HE around the world has meant that HEIs in LMICs are in competition with those in HIC.	In the context of rising demand, the lack of capacity and existing weaknesses in many HE systems in LMICs means that countless HEIs are now at crisis point. This has opened the doors to an influx of foreign entities looking to offer academic programmes to students in DCs. Although there are some benefits to this, as Naidoo (2007)[67] points out, foreign providers are often exempt from domestic regulations and may view these international programmes as money making schemes, focusing on scale and cost effectiveness rather than on quality or relevance and so deliver ''off the shelf'' products, with poor pedagogy and assessment that are unsuitable for the local context. It may also mean that national public universities may lose income, and the necessary support for HE capacity building may not be forthcoming (Ibid.). The internationalisation of HE has also caused internal 'brain drain' concerns, as international branch campuses often recruit qualified faculty members from existing public institutions.[68]	Altbach and Knight (2007)[12] believe LMICs are currently at crossroads and need to take measures to ensure international programmes and practices benefit the public and are not just a profit making centre. Naidoo (2007)[67] agrees and suggests LMICs implement regulatory frameworks which require HEIs to respond to local needs in an international context and which contribute to the public good.

5.3 Adapt learning to the knowledge age: In line with the demands of the global knowledge economy, HE is expected to impart to students the skills, knowledge and dispositions related to innovation and the ability to learn how to learn (life-long learning)	Transforming ways of teaching and learning presents a challenge to HE systems in DCs which generally have outdated, irrelevant and knowledge based curricula, which fail to transfer up to date knowledge and skills and which are delivered through traditional pedagogical approaches with learning assessed through summative knowledge based recall tests.[63,69] As a result, employer surveys report that in LMICs HE graduates are weak in problem solving, business understanding, using a computer and teamwork skills.[70]	There is a need for HEIs to build and maintain relationships with organisations in the labour market to develop updated competency based curricula reflecting their needs and including new forms of teaching and learning aimed at training professional skills and attitudes[71] (see 5.4). By raising the level and quality of HE, LMICs may be able to stimulate innovation, promote the diversification of products and services, and maximise returns from capital assets through more efficient allocation and management.[70]
5.4 Increase labour market relevance: The increased relevance of HE for economic development urges the need for graduates qualified for the new type of labour market.	Rapid expansion in HE, coupled with moderate growth in suitable employment opportunities, has resulted in considerable unemployment among recent university graduates in a number of LMICs. Most of these countries suffer from slow growth of the formal sector, which is traditionally the employer of first resort among highly skilled workers. The relatively faster growing informal sector, on the other hand, cannot effectively absorb the rapidly growing numbers of HE graduates.[40] This is compounded by the mismatch between the supply and demand of graduates. In many LMICs there is an uneven distribution of students across disciplines. SARUA (2012)[72] reports that in the Africa region, registrations for the study of humanities and social sciences are high whereas those for science, technology, engineering, and mathematics (STEM) along with business, management and other commercial fields remain low in most LMICs. In East Asia, LMICs also have an uneven distribution of HE students across disciplines. In Cambodia, for example, whereas around 58% of HE students are enrolled in social sciences, business and law, approximately 10% are studying science and 15% engineering and manufacturing.[73]	Whilst some argue that HE should continue to support a wide diversity of disciplines to nurture all of the competencies necessary for a well-functioning society[74] others suggest that enrolment quotas and/or providing scholarships for particular disciplines should be set up in an attempt to incentivise the study of such subjects.[9] Others suggest that HE systems in LMICs in particular should engage in and strengthen entrepreneurship education in order for HE to contribute to economic development (Ibid.)
5.5 Provide high academic quality and capacity	It is a challenge for LMICs to transform the ways of learning and assessment in HEIs as the academic capacity is already low. Under investment and limited funding have restricted institutional ability to hire additional lecturers to cope with the rising student numbers, which has resulted in large class sizes at many institutions. Limited funding has also led to a rapid decline in the wages of academics. As a result, many faculty members find supplementary jobs, which limit	More and better qualified academic staff is needed but there are problems in recruiting and retaining them (see 4.12). Furthermore, academic staff at HEIs need to be given the time and attention to engage in continuing professional development so they themselves can learn and use new skills and forms of teaching and assessment as included in a new curricula. The World Bank (2009)[70] calls on LICs to slow down the pace of expansion and shift their attention to

	their time for teaching, mentoring and research and others opt to leave the sector altogether in search of more highly paid positions.[75] The lack of postgraduate programmes in many contexts, as well as a decline in the prestige of the profession, has also left very few new faculty members in the "pipeline".[76,77] As a result, the majority of university teaching staff worldwide now have only a bachelor's level degree.[9] In addition to these human resource implications, declining funding has curtailed the ability of institutions to invest in their infrastructure or maintain their libraries.	propping up the quality of their HE systems, but this is a challenge in view of rising demand (4.1) and international competition (4.2).
5.6 Generate effective and relevant research: In the current knowledge economy, a priority of many governments is to make sure that their top HEIs are operating at the cutting edge of intellectual and scientific research and development.	HE systems play a critical role in training the professionals, scientists and researchers needed by the economy and generating new knowledge in support of the national innovation system,[73] however, international rankings and research output indicate that HE systems in LMICs are not providing research of adequate quality to boost technological advancement in business. Exploring the challenges involved in setting up globally competitive universities in African countries, Salmi (2011)[63] found that conditions for research have been severely compromised by poor remuneration, heavy teaching loads, the inability to mentor young faculty, and inadequate infrastructure. The interactive and reinforcing nature of under-funding, variable quality and relevance, and nonuse and nonsupport of local research presents a bottleneck to research and research capacity development (Ibid).	Van Deuren (2013:11)[63] provides four pre-requisites for strengthening HE research output and relevance in LMICs. These include (1) better qualified staff (2) a stronger relationship between teaching and research (3) availability of adequate infrastructure and supportive funding and (4) building university – industry linkages. However, achieving all of these present challenges in themselves as indicated by other sections of this chart.
5.7 Provide a more equitable HE system: The need for social equity to achieve poverty reduction for sustainable development has increasingly been recognised and HE systems are now required to supply education to a greater mix of students than in the past	Despite rising enrolment in HE and the demands for social justice, equity concerns are still prevalent across LMICs and access to HE is often restricted to a small proportion of the population (often referred to as elites) leaving certain demographic groups poorly represented. Context, gender, family wealth, region of origin, race/ethnicity and disability can be significant barriers to access. These are largely related to issues of the quality of earlier schooling, funding mechanisms and institutional admissions policies. It is not only a case of equal access to HE in general for underserved populations but equal access to the same kinds of institutions and HE programmes as students from the elite groups, and an equal chance to complete HE. Annex E examines these issues in more detail.	Patterns of inequity are not easily erased and require aggressive policies which are well thought through and designed.[73] It also requires the collection and analysis of more high quality, disaggregated data so that policymakers are well informed about why certain groups are more vulnerable than others and what can be done about it (ibid.).

5.8 Educate a more diversified student body: Massification, internationalisation and the demand for social justice has led to a more diversified student body, including students from diverse demographic sub groups and international and part time students, and it is expected that the student population will become more varied.[9]	Increased access to a more diversified student body has created additional challenges for HE systems in LMICs as new groups of school leavers entering HE are often not well prepared for study at this level.[64] The lack of readiness is the result of limited academic opportunities originating at earlier levels of education. Historically, underserved populations access lower quality primary and especially secondary education and this has been found to be a stronger predictor of HE quality and completion than a student's socioeconomic status. The lack of preparation negatively affects both access and completion. In terms of access, successful performance in HE entrance examinations is linked to prior academic experience. For example, in Vietnam, students from disadvantaged groups score lower marks on the National University Entrance Examination (without this being related to ability) and are less likely to enrol in high-quality HEIs.[78] Annex E provides more detail on the issue of completion.	HE expansion needs to be linked to efficiency improvements in primary and in particular secondary education and in the transition from secondary to HE. The World Bank (2010)[41] suggests that to promote the inclusiveness of HE, governments in LMICs need to fully understand the interrelationship between education levels and adopt a comprehensive vision of the sector as a whole. Within HEIs, different forms of teaching and support mechanisms may be required to increase completion rates but this will either require new and different academic staff or increase the burden on existing staff.[65]
5.9 Increase funding: Expanding demand and enrolment along with the acknowledged need for quality improvement of HE systems in LMICs requires additional budgets and adequate financing.	Financing the expansion, diversification and quality improvement of HE system presents many challenges for LMICs, which already struggle to provide even the most basic of resources to all its citizens. According to Johnstone (2013)[79] the worldwide costs of HE are high and are increasing at rates greater than prevailing rates of inflation and government revenues in most countries. With surging HE costs and enrolment growing more rapidly than financial capabilities, public funding is not sufficient to meet demand. Increasing constraints on public spending has also led to debates about the legitimacy of any public subsidies or financial support for HE which can be seen as a 'luxury'[68] as it seems to bring more private than public benefits[4] and those public benefits may be lost through human capital flight.[80] This has put pressure on governments to minimise public support for HE and, as a result, expenditure per student in HE has declined at the same time that student numbers have increased.[41] This has had an adverse impact on quality including faculty staff retention.	In response to these financial pressures a number of solutions are suggested at policy and practice levels for both the cost and revenue side. These include sharing costs among all stakeholders - students, taxpayers, parents and future employers.[9]

5.10 Transform governance structures at the systems level: As demand for HE continues to grow and governments acknowledge the role of HE in promoting development, it is important to ensure that the system is managed in an effective way.	In the past, HE systems in most LMICs have had highly centralised legal frameworks. However, this can make it difficult for HEIs to be responsive to changes in the labour market and limit their contribution to economic and social development.[66] Therefore many countries now recognise the need to change to new forms of governance. This presents a challenge in terms of what model of management to implement. Whereas central control system limits flexibility, loose oversight can lead to low quality education with minimal return on the investments for students and the public.[81] Moreover, as HE systems are becoming more complex with different types of institutions, including many private ones, pursuing different goals and student bodies, and managing and monitoring the sector is more demanding and requires more specialisation, which puts pressure on government staff in LMICs. Management and governance of private HEIs is particularly challenging and is discussed in more detail in Annex G.	It is generally recognised that the state is not the best arbiter of how HEIs should operate and the management of complex academic communities cannot be done effectively by remote civil servants.[82] Therefore, LMICs should (and have) moved away from a central control model to an advisory or supervisory model where the state regulates and monitors the HE system. There are however, many different models, which could be adopted, depending on need and context. These are discussed in section 7.
5.11 Transform governance and management at the institutional level: The growing trend of autonomy and accountability of HE systems in LMIC has introduced new tasks for HEIs, which require new ways of working, planning, budgeting, decision making and monitoring.	Strong leadership and effective institutional management are critical to the quality and effectiveness of HEIs especially in an autonomous system. Unfortunately, due to the limited authority given to institutions in the past, most HEIs in LMICs suffer from poor, inefficient and highly bureaucratic systems with poorly trained and qualified personnel and inefficient, ineffective and outdated management and administration infrastructure[66]. This makes performing the new tasks very challenging.	As institutions acquire greater autonomy, there is a clear need to strengthen the leadership and management skills of senior HEI leaders and administrators. Leadership capacity building needs to focus on developing the qualities relevant to the new challenges facing HE, including those similar to a CEO, as HEIs are now similar to major enterprises in a competitive global market.[73]
5.12 Increase the supply of human capital: A critical goal of HE in LMIC contexts is to increase the supply of human capital to contribute to national socio-economic development.	Increasing the supply of human capital relevant for national development is a challenge for LDCs countries when the best of the human capital leaves, or migrates, to other countries. This 'human capital flight or 'brain drain' is often a consequence of increased social mobility acquired through participation in HE, combined with a lack of employment opportunities and poor salaries in home countries. The opportunities for migration have increased as a result of globalisation and the internationalisation of HE.	Most papers acknowledge the need for policies and practices to be adopted by both destination countries and countries of origin. Kapur and Crowley (2008)[80] examine a variety of options and argue that the first and foremost priority to stem the brain drain is ensuring security and political stability but where that is not a major issue, reforming HE is crucial to retaining talent.

6. AID AND THE INTERNATIONAL DEVELOPMENT AGENCIES

The international community can play an important role in supporting HE reform in LMICs. This section briefly reviews the landscape of interactions between international players and HE systems in LMICs. It highlights the international development community's initiatives and learning in supporting higher education (HE) in DCs to become both locally relevant and centrally placed to contribute meaningfully to sustainable national development. The section focuses primarily on the role of the international bilateral donor.

6.1 INTERNATIONAL ASSISTANCE TO HIGHER EDUCATION

Between 2002 and 2013, the more developed nations (MDCs) invested an estimated US$42.6 billion into the growth of HE programmes within LDCs. While this figure alone appears overwhelming in size, it should be looked at in light of the US$1.6 trillion in total overseas development assistance (ODA) these developed nations invested during the same time period.[4] In this sense, by 2013, the US$42.6 accounted for only 2.7% of the overall international development budget. With a renewed interest in HE there are indications that this figure will begin to increase. However, this raises the question of how international agencies can best invest their ODA in HE.

6.2 TRENDS IN ODA TO HIGHER EDUCATION

There is a long history of investment in HE in LMICs by external and international development agencies made as a contribution to international development. A rapid review of this history by Varghese (2010)[55] highlights the different phases and trends since the 1950s.

1950s-1960s	Initially assistance to HE was used primarily to provide graduate training in donor countries. Later it was used to establish new HEIs in recipient countries with over 200 being built during the decade by various international donors.
1970s-1980s	Assistance to HE declined due to the results of rate of return studies, which showed lower returns to investment in HE in comparison with primary levels. Fears over the brain drain, structural adjustment and capture of HE by elite groups also contributed to the neglect.
1990s	External donors adopted a unified approach for primary education and education for all (EFA). HE was on the agenda but not high up.
2000s	The rapid progress towards EFA and an increasing demand for skilled labour contributed to an expansion of education at all levels. Other studies emerged, such as the OECD 2008 report (Tertiary Education for the Knowledge Society) which argued that HE is a vital asset to the global community and for national development. Many donors are now following a dual track of investing in primary and post-secondary education with a renewed emphasis on investing in HE.

6.3 A TYPOLOGY OF ODA TO HIGHER EDUCATION

In a review of evaluations of external investments in HE, Creed *et al.* (2012)[83] identify a typology of investments and assesses the impact of three distinct types. A brief explanation of each with a discussion of the evidence of impact found in the literature with links to specific examples is provided below.

[4] Information taken from the Borgen Project; http://borgenproject.org/foreign-aid-higher-education/ with data from OECD (2012)

CATEGORY	INTERVENTION	EVIDENCE OF IMPACT OR OTHERWISE		EXAMPLES
Education and training	Providing professional training for individual students or staff from LIMCs. Includes scholarship or fellowship programmes	Awards can act as a catalyst for development and the benefits of a single scholarship can reach many people.[84] Evidence indicates a high rate of completion with many alumni applying what they have learned by training others or supervising PhDs.[83,85]	There is mixed evidence of a brain drain as a result of these programmes. Some studies indicate that participants in programmes 'don't come back' whereas others indicate over 80% return. It is difficult to measure the effectiveness of such programmes only through complex tracer studies.[86]	USAID's merit-based scholarship programme for Pakistani nationals to pursue master's degrees in education at universities in the United States (MESP). The DANIDA Fellowships programme (dfcentre).
Consortia and networks	Linking individuals and/or departments in HEIs in HICs with individuals and departments in HEIs in LIMCs	Evidence from evaluations shows programmes have resulted in a significant transfer of knowledge, research knowledge and skills to DCs have generated a lot of good will resulting in sustainable partnerships and a shift towards home grown, new local level courses, doctoral programmes, leadership and skills in competitive funding proposals.[83,87]	There are many risks and challenges to establishing effective consortia and networks across HEIs. These include power, resource imbalances and cultural differences.[87,88] These are discussed in detail in the next section of this topic guide.	DelPHE (2006-13) with funding from DfID and its predecessors, aimed to promote partnerships between universities and other HEIs working on collaborative activity linked to the MDGs (DELPHE). CIDA University Partnerships in Cooperation and Development Program (UPCDP) (UPCDP).
Institutional development	Projects and programmes aimed at building capacity of institutions in LIMCs including research capacity	There is evidence of successful capacity building especially in policy, infrastructure, academic support systems (e.g. ICT, library, QA) and raising research capacity.[83]	Requires long term approaches and commitments,[83] the disadvantage is that sustainability is not treated as urgently as in other projects and poor institutions may not be stimulated to look for alternative sources of funding.[89]	The US$ 90 million external multi-donor support to Makerere University in Uganda for the development of new research strategies and directions and strengthening graduate training and management. (University of Makerere).

6.4 CURRENT TRENDS AND PRIORITIES

The SDGs for education includes a target to ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university. On the point of global commitment to these goals there is a change in attitude to HE across the international donor community. Between 2013 and 2014 the UK Department for International Development (DfID) established a HE taskforce, launched a comprehensive literature review on the impact of tertiary education on development and co-hosted a retreat conference. USAID has also positioned HE and workforce development as one of its four education priorities, and launched a statement indicating that 2015-16 will see a funding priority for work in this area.

While there appears to be a common appreciation of the need for HE for development in LMICs there is less consensus on what the investment priorities in HE should be. Besides DfID, a number of other influential bi-lateral donors prioritise support for HE and a quick review of their approaches indicates that ODA for HE will continue to be spent in diverse ways.

NORAD: HE and research are priority areas for Norway's development cooperation policy. The NORHED programme intends to strengthen the institutional capacity and performance of HEIs in LMICs to deliver quality education and research. This includes capacity development within system development, administration and infrastructure, with particular attention to gender balance considerations. NORHED announced in 2013 that it will fund 46 joint projects between HEIs in DCs and Norway, mostly in eastern parts of Africa. The bulk of the funding will go to institutions in Ethiopia, Uganda, Malawi, and Tanzania (NORAD).

USAID: Goal 2 of the current USAID Education Strategy is improved ability of tertiary and workforce development programmes and the agency has a substantial HE portfolio. USAID supports programmes that increase access to vocational/technical/HE and training for underserved and disadvantaged populations, improves the quality of HE and research in support of country development priorities and improves the relevance and quality of workforce development programmes. USAID has a substantial scholarship programme (USAID).

SIDA: SIDA provides funding to develop facilities and human capacities to encourage research and teaching in universities. The primary objective of the IHERD programme is to increase the policy relevance of research and to promote evidence-based policy making in HE, research and innovation for development. This will be achieved through stimulating a shift in the research agenda by reviewing existing research, by commissioning new research and by fostering links with leading researchers and research institutions in the IHERD field. SIDA support to the University of Dar Es Salaam is a good example of such a programme (SIDA).

JICA: JICA works with Japanese universities to provide support to universities in LMICs specifically selected on account of leading the HE sector in their respective country and region. JICA support aims to improve education and research capabilities through the improvement of teacher quality; facilities, research materials and equipment; the strengthening of university management systems; the promotion of industry-university-community cooperation; and the construction of university networks. Support is mainly provided to engineering, agriculture, and public health sectors. JICA focuses support to the ASEAN University Network/Southeast Asia Engineering Education Development Network (JICA).

DANIDA: The Danish Building Stronger Universities in LDCs initiative aims to develop long-term, mutually beneficial partnerships between universities and research institutions in LDCs and Denmark (DANIDA).

AFD: French support for HE has increased in the recent past and is devoted mostly to helping universities in Francophone Africa to restructure their staff qualifications to meet international standards. It also tries to build science and technology capacities in the region. A large share (nearly 50%) of the aid is spent on scholarships for postgraduate students in France. Recent French initiatives include support to the International Institute of Engineering Water and Environment (2IE) in Burkina Faso, AFP, and the creation of the National College of Tourism, Tanzania.

Others: It is not only bilateral donors that support HE for development in LMICs. In 2000, four US based foundations collaborated to establish the 'Partnerships for Higher Education in Africa' (PHEA)

contributing more than US$ 150 million to support capacity development. Annex H provides a detailed account of the PHEA approach, accomplishments and lessons learned.

6.5 CRITIQUES OF CURRENT TRENDS AND PRIORITIES

In his review of aid to HE, globally, Varghese (2010)[55] provides a critique of current development assistance to HE. He argues that international aid to HE is concentrated on only a few countries, is fragmented, spread too thinly and too often utilised at the institutional level to support selected faculties, centres or areas within a department. This, he concludes, is why international development assistance has not made as significant contribution to the overall improvement of the institution or achieved any visible impact on the sector as a whole. McEvoy (2013)[90] agrees that more international donor coherence along with a holistic approach to HE is required to have real impact. He points to the significance of the EFA declaration which gave expression to the consensus of the international community on the importance of basic education and triggered an annual peer review process, which resulted in some commendable progress (particularly in increasing enrolment).

Others contend that international donor programmes in HE are focussed too much on academic cooperation based on mutual interest rather than being geared towards the institutional development of HE and the broader development objectives agreed by the entire donor community such as the MDGs, SDGs and poverty reduction strategy papers. Bursary or fellowship programmes for example are often seen as more of a benefit to the donor country as having home educated graduates around the globe is one of the greatest forms of soft power a country can have. Some question whether support to HE in this form can really be considered as aid (Is it Aid?).

Some Commonalities: Despite these differences in *what* they do, increasingly, a number of universal principles have been adopted by most donors in *how* they work in HE for development and these are already addressing some of the above-mentioned critiques. These are highlighted in a worthy review of issues and trends in international development HE programmes by Boeren (2012)[86] and include, among others, demand drivenness and ownership of the South, output financing, accountability and transparency in partner matching.

6.6 LOOKING BACK TO LOOK FORWARD

The decades of international assistance to HE have generated a number of other lessons learned about effective interventions, which should help in looking forward. The following are some of the more notable indicated in a review of the literature:

LOOKING BACK		LOOKING FORWARD
Reviews and evaluations of HE development programmes by Creed *et al.* (2012),[83] Oketch *et al.* (2014)[50] and Clifford (2013)[91] found it very difficult to draw any broad conclusion about the effectiveness of different types of HE interventions for development or what makes for a good intervention under the different types identified. This was mainly because there was all too often a lack of well managed monitoring and evaluation systems, at both programme and project levels, from which evaluations of external investments in HE draw their data.	➡	As knowledge generated from M&E is necessary to demonstrate the performance of programmes, to steer implementation towards the intended result and for informing future investments, it should be taken seriously right from the design stage of any education sector investment in HE. Different types of intervention will have different conditions for success and this will involve different types of M&E and impact assessments.
A review of HE programmes in Africa by USAID (2014)[66] found that reforming institutions and strengthening institutional performance is one of the most challenging aspects in development and	➡	It is possible to create the right conditions and incentives to build institutional capacity with external assistance (financial and/or technical) but to do so requires careful thought and

can lead to a 'capability trap' where countries or institutions mimic best practice but are actually 'all show and little real action', and this is one of the biggest causes of implementation failure.

attention to the role of external assistance and a focus on *how* to approach HE capacity strengthening, rather than on *what* should be invested in. Development advisors and consultants from international agencies should avoid recommending best practice mechanisms that cannot possibly work in the setting they are proposed for and stop insisting that countries making changes run before they can walk.[92]

Drawing from Mozambique's experience with international aid to HE for the purpose of capacity building in teaching and learning, Chilundo (2006)[93] found that the main weakness in most programmes leading to implementation failure was a lack of local ownership and input.

It is important to *formally* involve all stakeholders (government, civil society, national and international partners and HEIs) and engage in constant dialogue with national stakeholders and international partners, as only this can lead to the successful design and implementation of international aid.

7. PARTNERSHIPS

It has been increasingly acknowledged that partnerships with 'other actors' in the public and private sector can improve the quality and relevance of education, including higher education (HE). This section reviews the evidence available on what types of partners and innovative partnerships could support capacity building initiatives in HE in LMICs. It also briefly examines the role that the international development community can play in establishing and maintaining such partnerships. As partnerships for development in HE are not easy, the section ends by discussing some of the main challenges partners might face and some potential strategies to overcome them.

7.1 A DEFINITION

The concept of partnership can mean several things to individuals and institutions as well as in different cultural contexts. Perhaps the most appropriate description of an effective educational partnership in HE for the purpose of this guide is provided by the Africa Unit (2010: 20).[87]

An effective educational partnership is a dynamic collaborative process that brings mutual though not necessarily symmetrical benefits to the parties engaged in the partnership. Partners share ownership of the projects. Their relationship is based on respect, trust, transparency and reciprocity. They understand each other's cultural and working environment. Decisions are taken jointly after real negotiations take place between the partners. Each partner is open and clear about what they are bringing to the partnership and what their expectations are from it. Successful partnerships tend to change and evolve over time.

7.2 THE 'OTHER' ACTORS

Potential partners for HEIs are presented in the table below.

POTENTIAL PARTNER	MOTIVATIONS FOR HE	MOTIVATIONS FOR PARTNER	EXAMPLE OF PARTNERSHIP
Higher education institutions (e.g. HEIs in developed or HICs with HEIs in less developed or LMICs)	(In LDCs) Provide staff with opportunities for professional development; promote internationalisation; institutional capacity building; help to attract more funds; and receive assistance in the achievement of national development goals.[87]	(In DCs) For internationalisation: to create opportunities for staff to work in new and different socio-political and cultural environments giving a competitive advantage in what is becoming an increasingly global market for HE (ibid.) For development: to develop the capacity of HEIs in LMICs to accelerate poverty reduction in their local, regional and national context and promote sustainable development.[94]	The partnership between University of Bradford, UK and University of Jos, Nigeria (annex I). The Global University Network for Innovation (GUNi) is a partnership created in 1999 with 208 members from 78 countries to strengthen the role of HE in society.
The public sector (e.g. local and national government)	HEIs can increase their service to society by influencing policy and practice through research, consultancies and secondments. Working with the public sector can increase research funding available for disciplines in relevant areas such as education, environmental protection and health; this can contribute to improving the relevance and practical teaching of HE subjects including initial teacher training, medicine, nursing and law.	Knowledge production and transmission are vital for a modern society and receive a lot of attention from policy makers, especially in light of budget constraints that are pushing governments to reduce public spending and increase efficiency of public policies and service. National and local governments can use the results of research conducted by HEIs to improve efficiency in public services in areas such as education and health and for wider civic benefit. HEIs are often internationally wired and have global connections, which can be harnessed for civic benefit. HEIs can also be important to the local economy.[95]	It is difficult to provide a specific example of how HE research has improved policy and practice in the public sector as there is no direct linear relationship between research and practice and research and policy. The processes by which research findings are transformed into practice are subtle, difficult to trace and often take a long time so the link is not always made.[96] However, other kinds of partnerships, such as consultancies or secondments, have provided more tangible benefits. The East African School of Library and Information Science (EASLIS) has implemented knowledge transfer of information management practices through its internship programme since 2006.[97]

Private Sector e.g. business, industry	The private sector can provide HE with additional resources such as providing internship positions for students; making their staff available for guest lectures, bringing their expertise to universities; working together with HE to establish standards to inform the curriculum and educational experience of students in relevant fields; be supportive in the creation, support, and staffing of research laboratories through gifts, donations, and research funding; provide facilities and services and increase the relevance of HE.[98]	HE can provide skills and knowledge to the private sector such as giving technical assistance to local firms; can ensure that graduates have the skills and knowledge required to effectively contribute to the workforce; support faculty to engage in consulting and commercialisation activities and conduct research relevant to business and industry (Ibid.)	The Corporate Graduate Link (CoGL) at the University of Zambia. (UNZA)
Civil Society e.g. citizens groups, associations, NGOs, not-for-profit research institutes and independent think-tanks (as actors of civil society)	Civil society participation deepens the contributions of HEIs to human and social development through their research and teaching functions. It can contribute to the relevant and practical teaching of HE subjects particularly in the social sciences and on issues such as gender sustainability, peace and global citizenship, climate change, human rights, democratisation, governance and transparency; it can increase research funding available for social and human disciplines in relevant areas.	HE can contribute to the local and international social and global human development agenda by bringing research expertise to generate practical and useful knowledge through its research and service functions. HE students often volunteer for local community charity work in areas such as conservation, helping the elderly, organising recycling, supporting people with disabilities and working with children.	Kenyatta University's, Kenya Community Outreach and Extension Program (COEP). (COEP)

7.3 TYPES OF PARTNERSHIPS

There are a variety of partnerships for capacity building in HE, ranging from the relatively formal public-private partnerships (PPPs) to more informal collaborative arrangements. The former type is generally characterised by relatively clear commitments by the participants, stipulated in binding legal contracts. The latter include, among others, more open-ended processes in which the participants engage in dialogue and negotiation.

7.4 THE ROLE OF THE INTERNATIONAL DEVELOPMENT COMMUNITY

External international agencies and donors can play a central role in the process of establishing partnerships between HEIs and the other actors in LMICs. They can act as a facilitator, provider of funding and incentives to develop and encourage HE partnerships and even be a critical source of 'how to'. The USAID funded HELM project, for example, organised a workshop for participants from HE institutions across Indonesia, entitled "Building a Market Strategy for Higher Education Institution's Products and Services," in order to strengthen their capacity to build mutually beneficial partnerships and do business with the private sector (HELM). The Educational Partnership in Africa (EPA), funded by the UK government to help African universities improve entrepreneurship, social enterprise, and enhance graduate employability, facilitated a partnership between Ho Polytechnic in Ghana and the City College Brighton and Hove to improve the matching of engineering graduates with the modern workplace (EPA). DFAT Australia currently partners with the Asia Pacific Technical College and private sector in Papua New Guinea to address the nation's need for skills development and increase in post-secondary education (DFAT in PNG). In fact, a review of case studies of effective university-industry partnerships in Africa by Cresno (2013: 33)[98] found that ''almost every successful example identified by informants include one or more of these entities [international cooperation and aid agencies] as a partner.''

7.5 ISSUES IN DEVELOPING AND MAINTAINING A PARTNERSHIP

An analysis of the definition of partnerships provided above suggests there are many complex processes underpinning them and although they can be very beneficial, the evidence indicates that partnerships for development are very hard to deliver successfully. Although the specific challenges will depend on the type of partner and partnership, the literature highlights a number of common factors that can inhibit any partnership. It is important that donor agencies anticipate some of these issues in order to pre-empt them. A number of principles which emerge from lessons learned from both successful and unsuccessful models along with findings from key empirical studies, can guide the development and management of sustainable partnerships for HE capacity building. Common challenges and potential resolutions are presented in the table below.

CHALLENGES		POSSIBLE SOLUTIONS
Cultural differences	A number of studies reviewing partnerships in HE found that one of the most complex challenges in establishing and maintaining a partnerships is brought about by difference in missions and visions, constituencies, demands and ways of working between HEIs and partners which makes it difficult to agree and harness their respective requirements for working effectively with each other. This can even occur between educational institutions which operate in different education and socio-cultural contexts.[87,88,99,100]	To alleviate the challenge presented by cultural differences, the Africa Unit (2010)[87] stresses the importance of engaging in a thorough pre partnership process including identifying the needs and motivations for a partnership from the outset and the need for partners to understand each other's cultural and working environment. Other studies suggest that successful cooperation requires the selection of the right partner in the first place.[101]

Sustainability issues	Empirical research conducted by the British Council (2015a)[94] to review UK – Africa partnership schemes, found that many were unsustainable because of the project-oriented short term nature of the partnership and funding scheme. Once funding ended, so did the partnership. This was found to particularly affect teaching and learning partnerships compared to research partnerships.	An empirical study by Boeren (2000)[5][101] which examined the sustainability of Dutch support to HE capacity building in LMCs provides a list of nine major requirements and conditions for sustainable partnerships. Prominent among these is the need to re-orient partnerships from project based to product focussed. In this way partnerships will be more flexible and dynamic, rather than time bound.
Lack of resources	Other challenges include the lack of necessary resources to carry out the partnership. The Africa Unit (2010)[87], in examining partnerships between UK and African HEIs, found that "time"' to carry out all the activities was the major challenge[99]. The costs of contracting with other actors, especially the private sector, were often found to be high when compared to the scope and size of the benefits of the partnership programme.	The British Council (2015a)[94] study found that in order to ensure the long term sustainability of partnerships the time scale and funding factor needs to be realistic and sufficient and plans for future funding should form part of the project proposal. The Africa unit (2010)[87] recommends that staff time should be funded so they have the time available to fulfil their partnership responsibilities.
Weak institutional capacity	Another major challenge to the development of partnerships relates to weak HE institutional capacity. An empirical study by the AAU (2012)[88] found that most HEIs do not have the structures and qualified academic and management staff to engage productively and effectively with partners in the private sector and government.	Respondents in the AAU (2012)[88] study believe that a strong leadership at the HEI level is necessary as a first step to building institutional capacity. This was followed by the establishment of an administrative structure and environment, to support partnerships with the 'outside world.' HEIs need to build academic expertise that mirrors national economic and industrial sectors and human development issues and for HEIs to engage in more applied research and teaching.
Lack of confidence	Partly as a result of the lack of capacity, the AAU (2012)[88] study found that industry had no confidence in HEIs as potential partners to input into the innovation process. This has led to a reliance on foreign technologies and some suspicion of local innovations. HEIs are therefore not viewed as sources of useful information and expertise.	The Africa Unit (2010)[87] suggests that partners have clear agreements about their roles and responsibilities in the partnership and about what they bring to the table. These roles and responsibilities should reflect what each institution is *realistically* able to do which is dependent on their capabilities and skills (current and anticipated). Support should be provided if this reveals weakness in capacity training. The study also argues for flexibility in the partnership and that it should be prepared to change and adapt roles if necessary as the capacity and leadership of each partner develops.
Power and resource differentials	The British Council (2015a),[94] the Africa unit (2010)[87] and Tandon (2007)[100] all found that power, resource and funding imbalances could be a major challenge to effective partnerships. The British Council (2015a)[94] found that power differentials often led to a paternalistic attitude of some UK HEIs and this was a challenge to maintain the partnership.	Given historically unequal power relations, it is crucial that one partner is not seen to be setting the agenda of the partnership and that partnerships should have equal benefits for both partners. Although these do not need to be symmetrical,[87] PHEA (2010)[102] emphasises the importance of partnerships which respond to Africa HEI demand and treat consultation as key to effective support.

[5] Although dated, this document has been included as the summary is provides is considered to be very useful and still relevant

Governance issues	Many informants in a study by Cresno (2013)[98] on HE - industry partnerships in Africa specifically mentioned the lack of a clear policy framework establishing the role of HEIs in society and its contributions to national development as a challenge to establishing partnerships, especially with the private sector, as it meant that many potential partners in society did not understand the role of HE and what it could do.	The need for a clear national policy framework from governments that encourage partnerships is a strong message that emerges from the literature. Participants in an empirical study by Cresno (2013)[98] call for a 'national policy on innovation' or a 'national research policy' which defines, in specific terms, the role of the HEIs and how they relate to other sectors of the society; deemed important for national development. They also emphasise the need to implement and monitor the policies once they are developed.

7.6 SOME FINAL THOUGHTS

All partnerships are different and it is important to understand that not all situations are suitable for partnerships and not all actors are suitable as partners. Partnerships can be good and can bring positive benefits, but require careful planning and consideration to ensure they really do deepen and expand appropriate capacity. The literature strongly indicates that the pre-partnership planning process is the most critical phase which requires negotiation and transparency and during that phase it is necessary to:

- Choose a partner with care and one with whom there is an overlapping goal and which has unique but complementary assets and skills to contribute to the partnerships. Partnerships only work when the right partners come together.
- Be sure that the partnership brings added value and that the added value is worth the effort required to maintain the partnership. Partnerships can end up costing more in time, money and resources than anticipated.
- Ensure that the roles, responsibilities and accountabilities of each partner are clear from the outset and the partnership leverages appropriate and realistic partner capacities and competencies. Partners should not be expected to do something that they cannot.

8. INNOVATIONS

Although the need to act quickly is acknowledged, there is less clarity on how to reform higher education (HE) and establish a system of consistently high-quality institutions that will have a positive impact on development in the broader society. The purpose of this section is to review a number of innovations and initiatives in policy and practice aimed at building HE capacity, which have been often supported by international agencies and implemented in a range of contexts. Where possible and relevant, the implications for future policy and practice are presented. Despite being introduced under separate headings, it should be noted that many combine more than one aim. For example, increasing the private provision of HE can expand access but is also a strategy to finance HE provision and reduce costs to the state.

8.1 PROVIDE MASS HE FOR ALL CITIZENS

Issue

Demand for HE in LDCs is growing and is expected to continue to grow[9,41], meaning there is a need for continued expansion of the system.

Innovations

Many initiatives aimed at increasing the reach of HE in the literature involve the use of information and communications technology, such as e-learning, online distance learning (ODL), massive open online courses (MOOCs) and blended learning**.** Kepler, for example, is a nonprofit university programme designed for the developing world. Launched in Rwanda in 2013, it uses accredited courses from leading United States universities to meet the needs of the Rwandan market. Kepler works in close consultation with the Rwandan private sector to identify the skills needed by graduates, and during the course students have the opportunity to choose internships with potential employers and develop employment-specific skills (KEPLER). Other interesting case studies include the South African Institute for Distance Education (SAIDE), funded by the William and Flora Hewlett Foundation (http://www.oerafrica.org) and the Partnership for Higher Education in Africa (PHEA) Educational Technology Initiative (ETI), a multi-year initiative addressing HE e-learning in African universities (PHEA).

Another solution has been the provision of a larger, more diversified, more connected and more complex HE system with HEIs pursuing different goals and audiences. These include 'niche' institutions[68] or private HEIs. Private institutions can absorb the spill over from the pool of fully qualified but unsuccessful applicants to public institutions. Ethiopia has undergone unprecedented expansion of its HEIs. Whereas the number of public universities grew from two in 1991 to a high of 22 in 2007, the private domain grew more quickly with 64 accredited private HEIs in the same period. Private HEIs can offer a limited range of programmes, which also tend to be more market driven. 'Ashesi' is an exciting example of a successful private university in Ghana which offers a small, highly focused curriculum (see ashesi and ashesi-ghana)**.**

Implications

ICT represents a unique opportunity to HE to reach more students and to offer more students with courses that are on a par with those delivered by world-class universities. However, there are many implications for both policy and practice. A report by Escher *et al.* (2014)[103] examined the use of MOOCs in boosting HE in Africa and found that they raise issues of access and affordability and to reach their full potential, several technological, cultural and administrative challenges need to be addressed. In order to benefit from online coursework, students must be familiar with both the use of a computer and the norms of self-guided instruction[80] and have access to electricity and connectivity which cannot be assumed for LMIC contexts particularly those from less advantaged backgrounds. A review of the progress and impact of ICT use in MOOCs, ODL and blended learning in HE in Asia by UNESCO (2014)[104] found that only 5% of the students who enrolled actually completed the course. USAID (2014)[66] provides a thorough discussion on the benefits, challenges and implications for policy and practice of using e-Learning in LMIC contexts and is worth reviewing.

Private HEIs are often supported for their ability to react more flexibly to 'market demand'[41] and the idea that they can provide a better quality education, given their access to alternative (i.e. non-governmental) sources of funding and the market-based competition that can be fostered between providers (ibid.). However, this is not often the reality. In many LMIC contexts there has been a proliferation of private providers of a very low academic standard, Brazil being a case in point[105] (see annex J). The expansion of private provision can also exacerbate problems of quality within the public sector. New private institutions often recruit faculty from existing public universities[106] which negatively affects standards across the sector, as faculty members become less able to devote their full attention to teaching or research at any one institution. The solution to these perceived or real quality problems suggested by Gyimah-Brempong and Ondiege (2011: 44)[107] is close regulation and governance of these institutions such as in South Africa.

8.2 TRANSFORM GOVERNANCE STRUCTURES AT THE SYSTEMS LEVEL

Issue

As demand for HE continues to grow and governments acknowledge the role of HE in promoting development, it is important to ensure that the system is managed in an effective way.

Innovations

In the recent past, many LMIC governments have undertaken new reform measures related to the governance and management of the HE system. A variety of alternative governance models are possible ranging along a continuum from, at the one end, a state control model, where the centre seeks to control HE systems, to, at the other end, a state supervisory model where the centre monitors and regulates them.[82] Most countries have recently moved along the spectrum and put the accent on the supervisory model focussing primarily on autonomy and greater institutional enterprise.[73] According to Fielden (2008)[82] most of these countries have the following elements: (1) legislation that establishes HE as independent entities, (2) withdrawal of the state from certain direct control and management functions, (3) the creation of buffer bodies or agencies to carry out some of the financial control and supervision functions, (4) the adoption of funding models that give institutions greater freedoms and encourages them to develop new sources of income, (5) the creation of external quality assurance agencies and, (6) the development of new forms of accountability through reporting on performance and outcomes in achieving national and institutional goals. For example, in Ethiopia, the 2003 HE proclamation granted autonomy to HEIs in finance and internal organisation, establishing linkages and the administration of personnel. It introduced a block grant system enrolment based budgeting and cost sharing process. In Ghana, reforms initiated in 2007 included new institutional evaluation procedures, the merging of courses, the introduction of a credit system, cost recovery measures and new finding formula, the creation of new governing bodies and buffer institutions, new staff recruitment procedures and the transition from staff from civil service to HE employees. A culture of centralised planning and bureaucratic decision making is deeply rooted across all areas of public service provision in Socialist Viet Nam, but moves towards autonomy and decentralisation in HE has also taken place for the purpose of achieving greater efficiency and effectiveness. Annex K presents a simple typology of four models for governance of public HE with examples of countries implementing them. For a discussion of the regulation of private HEIs see annex J.

Implications

Varghese (2013)[108] examines national reforms and resulting governance models of HE in five African countries, Ethiopia, Ghana, Kenya, Nigeria and South Africa and found that in most instances they have helped to improve the governance and operational efficiency of HEIs and reduced reliance on the state for funding. The reforms in Ghana for example were found to have helped promote a greater sense of responsibility among staff and students and stimulated intellectualism. They also strengthened the decision-making process at the faculty level and enhanced teaching and research. The reforms in Ethiopia however, received some criticism. Many feel that some of the reforms have led to a paradigm shift from academic competency to operational competence. The study concludes that the best role for the state is to develop a framework for operation and regulating the system rather than in terms of financing, managing and controlling HEIs. A similar study of governance reforms in Asian countries by Varghese and Martin (2013)[109] also found that reforms in the governance of HE systems in most, but not all countries, have generally had a positive impact resulting in more active and creative HEIs. The study provides a number of lessons learned for countries looking to move towards autonomy, including (1) autonomy policies as requiring coherent national policies, both horizontally (across departments and ministries) and vertical (centre to region) (2) the introduction of autonomy to be progressive with multiple reform layers, each building on the previous one (3) autonomy to first be piloted in a limited number of HEIs (4) autonomy to be considered as the means to an end and not as the ultimate aim , and (5) the understanding that there is no one model for ideal governance reform in HE.

8.3 IMPROVING MANAGEMENT AND GOVERNANCE AT INSTITUTIONAL LEVEL

Issue

With greater autonomy many HEIs need support to help them fulfil the new tasks it involves such as setting up priorities, developing strategies and study programmes, mobilising resources and creating new structures for greater institutional governance.

Innovations

Although a wide variety of capacity building initiatives exist, there seems to have been an almost exclusive focus on training as the prime method given its simplicity in planning and funding.[110] Other possible interventions include technical advice, support to project management and support for lobby and advocacy work.[111] A number of international donor interventions aim to improve HEIs institutional governance and management, mostly through the development and exchange of 'best practices.' The USAID funded HE Programme (HEP) in Afghanistan is an example of an initiative to improve general leadership and administration, financial management and external stakeholder collaboration (USAID HEP). The emergence of new forms of cross border education provides a number of opportunities for institutional capacity building. Institutional partnerships, for example, can be used to develop capacity in management and governance. Although many partnerships rely on historical links between Northern and Southern institutions, South-South partnerships have also emerged. China, for example, has cultivated a number of partnerships with universities in Africa, establishing institutes on many campuses and investing in training programmes across the continent.[112]

Implications

Experience has shown that institutional capacity building is challenging and success largely depends on the relationship between actors, the context and the measures chosen. What works in one context will not necessarily work in another. Therefore, a strong emphasis is needed on understanding the country context.[30] Nevertheless, although each context is different, there are some common themes about how to build capacity in the literature. Most studies recommend a 'multi actor perspective' in containing different methods such as action learning, experimentation, mentoring coaching and advise.[63] Ashcroft and Rayner (2011)[65] write about capacity development in SSA and propose a process of critical enquiry using an action research model. Van Deuren (2013)[63] presents a list of 10 general principles to be applied in capacity building interventions taken from a review of the literature. These include (1) local ownership and leadership, (2) relation to national priorities and systems, (3) external support focusing on facilitation and investment in local leadership, (4) capacity building as requiring knowledge and profound understanding of local context, (5) a readiness to adapt to local situations using open discussions, (6) a long term perspective while not forgetting short term action plans and interventions, (7) a comprehensive systems wide approach, (8) being prepared for changing needs and flexibility, (9) mutual trust and a relational approach, and (10) relevant systems for monitoring and evaluation.

8.4 REDUCING THE POVERTY DYNAMIC

Issue

To a large extent, access to HE in most LDCs is restricted to the higher socio-economic groups as entry is determined by highly competitive exams and often the ability to pay. This issue has become more pronounced in recent years, as HEIs are increasingly charging fees in order to address their substantial financial shortfalls.

Innovations

Initiatives to address the poverty dynamics of HE include the provision of scholarships, student loans, stipends and even opening outreach centres in poverty stricken areas. Some countries, such as Kenya, have elected to introduce 'parallel streams', in which large numbers of fee-paying students enrol alongside those assuming free-of-charge places. Others, such as Brazil, have chosen to expand access by stratification, maintaining free public universities but allowing for the rapid expansion of a private sector to absorb the majority of the demand. Prouni meaning 'university for all' is a Brazilian educational policy regarding increasing access to higher learning for the low income population. The policy is designed to encourage universities to allocate unfilled places free of charge to low-income students in return for exemption from tax payments.[113]

Implications

Although there is some suggestion that the parallel system in Kenya has contributed immensely towards the financial stability of public universities and enabled them to supplement their funds, other evidence indicates that such a system has eroded the quality of HE as lecturers are overwhelmed by the large number of students and cannot deliver to the expected standards (The Nation Report), (Wangenge-Ouma, 2007).[114] Whilst the policy in Brazil has increased enrolment in HE amongst poorer students, there are concerns that it only involves private institutions[113] and only addresses issues of enrolment not retention meaning that a high dropout rate amongst the poorest students still persists.[105]

8.5 INEQUALITIES OF ACCESS

Issue

Certain sub groups (e.g. disabled, ethnic, racial, cultural minorities and women in some cases) find it difficult to compete for places in the HE system. Equity concerns in HE are widespread across many LMICs given its potential to boost national productivity in the context of the global knowledge economy.

Innovations

Some initiatives aimed at promoting equity in access include affirmative action, targeted scholarships, sensitisation campaigns and even the creation of separate courses, classes or institutions. Uganda's Makerere University introduced an innovative gender mainstreaming directorate (GMD) and initiative as part of the university's strategic plan. This initiative highlights the accomplishments of women and works to create a network and infrastructure of support (GMD UM). Ghana, Uganda, Tanzania and Kenya all implement affirmative action policies for females including weighted admission (Makerere University), women's allocation to residence hall space (Ghana) or lowering cut-off points for university entrance (Kenya). Initiatives in policy and practice not only target women. An interesting example of an innovation in Mexico to address very limited representation of indigenous groups in HE was the creation of a completely new type of institution from the ground up, including the setting up of new buildings, a newly recruited teaching faculty and new course content and structure. These ''Intercultural Universities'' (UIs) were characterised by indigenous, bilingual and intercultural education alongside close social contact between staff and students.[115] Their objectives, progress and difficulties encountered to date are discussed in Schmelkes (2009).[116]

Implications

A study by Onsongo (2009)[117] found the affirmative action policies in Ghana, Uganda, Tanzania and Kenya successfully increased female enrolment in HE. However, although these practices increased equity in admission, they did not receive much support. It was felt that women were being consigned to an inferior status, girls from well-known schools or well-connected backgrounds were benefitting and politicians believed it to be a quota system from which the respective areas they represent should enjoy university admission. A study by Clifford *et al.* (2013: 32)[91] also acknowledges the potential negative consequences of such policies. Where policies aimed to support one group may have positive outcomes for that specific group, it may have unintended negative consequences on another, for example, women in India. The possible repercussions of affirmative action initiatives need to be considered carefully by policy makers. The World Bank (2000: 41)[61] warns that policies and programmes to increase equity of access for disadvantaged groups will only prove sustainable if they do not undermine the standards of excellence on which HE is based. Merit criteria cannot be relaxed, as awarding degrees or certificates to people who do not deserve them is not in the public interest. The answer, the paper argues, is to combine tolerance at entrance to HE with rigour at exit, with members of disadvantaged groups must receive consistent remedial support during their time in HE.

8.6 HIGHER EDUCATION READINESS

Issue

Massification and increasing access for disadvantaged groups has led to the diversification of the student body and the entry of new student populations with more limited academic preparation. As a result, there is often a lower retention and completion rate amongst these groups with the privileged classes retaining their relative advantage in HE in nearly all nations.[118]

Innovations

The literature offers few examples of innovations at HE level in LMIC contexts to address HE readiness. However, there are some initiatives directed at secondary level. The Higher Education Readiness programme (HER) in Ethiopia is a small scale enterprise supported by the Institute of International Education which works with young women in secondary school from underserved communities with scholarship support combined with innovative leadership and life skills training to help them complete their secondary education and equip them with the tools needed to continue on to university (Ethiopia HER). There are some initiatives in HIC contexts which are designed to prepare students for HE study in the UK and these may have some relevance for LMICs. INTO is an independently-owned company partnered with and providing study centres at a number of universities to allow international students the opportunity to study in the UK, China and the US by offering university preparation and English language modules. Courses provided by INTO at the University of Exeter have been proven to help international students' progress to undergraduate and graduate degrees in the UK (INTO Exeter).

Implications

The skills needed for preparedness differ between and within countries and even between subjects studied. Therefore, there is no one size fits all solution. A report by Altbach *et al.* (2009)[9] suggests the focus of innovations should move away from access and readiness to completion. Accountability in HE he argues should not be based on enrolment but outcomes with links to funding. The World Bank (2000)[61] also recommends a focus on completion and the provision of 'catch up' programmes. Nevertheless, the consensus in the literature is to improve the links between secondary school outcomes and HE and the need to establish mechanisms to do that, rather than on 'catch up' programmes. An empirical study by the British Council (2015b)[119] on university preparedness in Mexico provides a list of factors that influence readiness for HE at primary and secondary schools which policy makers should consider. The report emphasises the need for secondary schools to develop both cognitive and non-cognitive (soft) skills in students, such as language, communication, interpersonal skills, as these are all predictors of success in HE and will give students the ability to adapt to the nature of study at HE.

8.7 FINANCINING OF HIGHER EDUCATION

Issue

Expanding demand and enrolment in HE, combined with increasing constraints on public funding, debates about the legitimacy of public financial support for HE in lower-income contexts and the recognised need for quality improvement of HE, have motivated governments to minimise public support for HE and to find innovative and sustainable financing mechanisms.

The most common financing mechanisms are based on cost-sharing initiatives such as tuition fees. These are being implemented for HE in many LMICs (and indeed HICs). These can be effective. In China, for example, a large scale cost recovery initiative was implemented in the mid-1990s. As a result, whilst per capita expenditure on HE doubled, the level of Government support declined. The share of total costs paid by students doubled, with fees increasing by over 200%.[120,121] Whilst cost sharing initiatives have increased revenue for HE, they have jeopardised the ability of some students to participate. Therefore, such schemes are often accompanied by student loans and financial aid for low-income students. Tanzania, for example, introduced a cost-sharing policy that expects beneficiaries to contribute gradually to the cost of their education. Different types of loan systems have been implemented. The most popular seem to be deferred loans, where students are responsible for repaying tuition fees in the future. Deferred loans fall into two types, the 'mortgage type' and the 'income contingent' (ADB, 2009: 18).[122] The latter is where students sign a contract when they enter university and promise to pay a share of their earnings to particular investors for a fixed period after they graduate. Such policies are in operation in Ethiopia, Botswana and Lesotho[41] and seem to be the preferred option for many educationalists. Some countries such as Vietnam have comprehensive and complex packages for charging fees and for fee reductions.[73] Other innovations include dual track policies where a certain number of free (or almost free) places are offered based on particular criteria, for example, performance related or means tested. Uganda, for example, retains government funding for a limited number of places and uses a private entry fee paying scheme for the remaining places (Ibid.). Other types of dual rack systems involve variable fee rates where tuition fees are set differently for different programmes of study. In China for example, fees for science and engineering are less than for languages and medicine.[73] Rather than tuition fees, some countries charge user fees. In Nigeria, student contributions are made through a variety of fees including examination fees, registration fees, library fees and hostel maintenance fees, to name a few. In some cases, public private partnerships are being used to improve the efficiency of HE services provided to students such as meals, housing, and transportation, such as those found in the Ivory Coast (see annex L). Such PPPs can ensure public expenditure is allocated as a priority to academic activities and research rather than to the provision of services to students. In the USA, lotteries have become a significant source of funding for HE (Altman, 2010).[123] HE has also been diversified to offer lower cost and more effective delivery alternatives, such as distance education and private provision, which have been discussed elsewhere.

Marketisation has also become an important way for HEIs to generate revenue from private sources. In this sense, HE is seen as a commodity that can be sold. Strategies include HE-owned for profit companies, co-ventures with private non HE institutions, attracting investment by international companies in HE franchises, the admission of full fee–paying students, opening branches in other countries and franchised degree programmes or curricula. Many LMICs now host HEIs from MDCs or use foreign curricula. They use this to gain prestige, attract more students and gain income. HEIs in MDCs also try to attract students, however, usually international students, to earn profits by charging high fees.[12]

It is not just a case of attracting more private funding that is important but better allocating the public funding that is available. In a few cases, impressive reforms to improve internal efficiency have been implemented, and governments are adopting more effective budget management practices, including formula, performance or competitive funding. The Ghana Education Trust Fund (GET) described in annex M is an interesting example of one such innovation.

Implications

In terms of the financing of HE, the World Bank (2010)[41] makes a strong case for a comprehensive approach combining a number of different methods to ensure more financially sustainable HE systems. The way in which the measures are combined and the pace at which the reforms are implemented will depend on the situation and constraints specific to each country. Experience shows that reforming the financing of HE is challenge, and can generate controversies, tensions and meet institutional resistance. Therefore, policy makers should carefully present the arguments, assess the impacts of proposed solutions, and engage in a wide consultation so that stakeholders are better informed. In addition, reforms should be implemented incrementally.[122]

8.8 RELEVANCE AND EMPLOYABILITY

Issue

Equipping its workforce with the right skills is an important part of LMICs' efforts to accelerate economic growth and further modernisation. However, numerous reports indicate mismatches between supply and demand of graduates in LMICs and consequently high graduate under and unemployment.

Innovations

Innovations designed to better connect HE with the labour market are quite widespread and some examples of how developing nations have been trying to achieve this through partnerships with the private sector have been discussed previously in this guide. Other examples, which have been established in HICs but may have implications for LDCs include national policies and close monitoring of the supply of demand for HE graduates. In Sweden for example, the National Agency for Higher Education publishes an assessment of the future balance in the labour market. Annual reports have been published since 2003 indicating the proportion of university graduates that have been successful on the labour market (12-18 months after graduation). In the case of surplus or shortage of graduates, the number of places offered in different programmes is adapted.[124] Governments have also set up enrolment quotas and/or provided scholarships for particular disciplines, in an attempt to incentivise the study of certain subjects. For example, the UK Government provides additional funding support to broad subject areas that have been identified as both strategically important to the country and vulnerable in terms of their longer term sustainability. These strategically important and vulnerable subjects (SIVS) include STEM, MFL and quantitative social sciences.[124] Botswana has a similar policy. Some HEIs work directly with the private sector to tailor the content of the courses it offers. The partnership between the North Carolina Community College and the Manufacturing Association is acclaimed as an extremely successful example of collaboration.[38] Many LMICs see entrepreneurship as a way of reducing high unemployment rates and as central to economic growth and development and include it in the HE curricula. In Kenya, entrepreneurship education is offered at undergraduate, graduate and PhD levels.[107]

Implications

A study by the IPPR (2013)[125] found that many industries and businesses engage with universities only when it comes to recruitment. That is too far late to have any real impact. They should be connected to what students learn from their first day on campus if they don't want to be disappointed by a lack of skills upon graduation. However, Gyimah-Brempong and Ondiege (2011)[107] believe this is because most countries only really pay lip service to HE-industry links or when it suits them and it should be taken more seriously. Much of the literature reviewed suggests that connecting HE to the labour market requires serious and concentrated national efforts and policy. Di Gropello *et al.* (2011)[73] advocates for more public intervention in HE to mend the disconnect between HE and industry. However, a recent empirical study by the British Council (2015)[94] involving young people found that HE may have to adapt to another new reality as students no longer see their future in conventional salaried employment. Entrepreneurship and social enterprise have become the new valued areas of interest.

8.9 HUMAN CAPITAL FLIGHT

Issue

Student or graduate mobility and migration in the form of 'brain drain' is one of the reasons many donors shy away from extending aid to HE, as it was thought that foreign study programmes combined with domestic universities producing larger number of graduates than the labour market could absorb, encouraged the migration of the educated in LDCs to MDCs.

Innovations

One way to alleviate the brain drain is to better connect HE to the labour market and improve the quality of HE in LDCs. More targeted attempts to ease student migration include UNESCO and Hewlett Packard's Brain Gain Initiative (UNESCO-HP) which attempts to build a sustainable university e-structure for science involving Africa and the Arab states and the Teacher Education in Sub-Saharan Africa initiative (TESSA). The IOM 2001 Migration and Development for Africa programme, emphasises short-term visits and the transfer of knowledge through the internet and diaspora groups rather than focus on the permanent return of skilled migrants to developing nations in Africa as has happened in the past. IOM and the Council for the Development of Social Science Research in Africa (CODESRIA) also has an initiative where diaspora academics mentor post graduate students (CODESRIA). A paper by the United Nations Conference on Trade and Development (2007)[126] summarises a number of options that could be employed by both destination countries and countries of origin. The paper emphasises that policies in the country of origin need to encourage graduates to stay in order to help in the development process. Examples of policies that could be introduced include tying HE funding to the proportion of graduates who work in the country, selecting people to study abroad from only those who are currently employed in the country and holding their positions for them, forgiving or reducing student loans for graduates who do not emigrate, and ensuring meritocracy in a transparent way in job markets.

Implications

International donors and national governments should always take into account the possibility of student migration in their policy and practice in HE capacity building. However, a current study suggests that whether a country gains or losses in the brain drain depends on country-specific factors and there is no one size fits all solution.[127] Therefore, the international community and policymakers should gauge the costs and benefits of the brain drain in their specific context in order to design appropriate responses.

8.10 IMPROVING RESEARCH CAPACITY

Issue

Research is a core function of HE and a well-developed system for research and knowledge generation is important within the emerging knowledge economy. However, limited investment in HE in LMICs has restricted their ability to fully participate in the global research community, and research output in terms of quality and quantity is generally low (Di Gropello *et al.*, 2011).[73]

Innovations

A number of initiatives have been undertaken to improve the research capacity of HE in LMICs. These include strengthening graduate study programmes, improving the management of research, providing funding and linking with other institutions and academics to conduct research and exchange good practice and increasing the distribution and access to academic journals. Some specific examples include the Irish Aid/Higher Education Authority project ''Doctoral Training for Development in Africa Initiative,'' (IE) aimed to build HEI research capacity specifically for poverty alleviation and the achievement of the MDGs. The project tested three different models of partnerships, Africa led, bilateral and multilateral[128] all of which proved successful. The South Africa–Netherlands Research Programme on Alternatives in Development (SANPAD), a doctoral research preparation programme for candidates on the African continent, aimed especially at black women[129] is another successful example. The DfID funded Capacity Strengthening Initiative: UK-Africa Consortia with the Royal Society is aimed at funding scientists who want to develop collaborative research consortia between the UK and SSA (Royal Society-DfID). Examples of innovative research networks include the Regional Initiative in Science and Education (RISE) and the Collaborative Research Support Programs (CRSP) which is described in detail in annex N.

Implications

Evaluations of the doctoral training programmes conclude that their success was largely because they were mutually beneficial, locally led and based on a long term, multi-source funding with capable partners and these areas should be taken into account when building research capacity. A study by the British Council (2015a)[94] also suggests that these are all major elements of effective partnerships for developing research capacity. In examining the challenges facing building research capacity for development, specifically in Africa, Sawyerr (2004)[130] concludes that there are two elements that need to be addressed. They include an active component (skills, competencies, attitudes and values of researchers) and an environmental component (societal, institutional, material and management) - and initiatives which selectively focus on only one of these will not transform the research scene. Only initiatives that address them all, Sawyerr (2004)[130] argues, will remove the knowledge deficit in HE in LMICs and yield substantial and immediate gains, and this should be taken into account.

8.11 IMPROVING TEACHING AND LEARNING QUALITY

Issue

The expansion of HE combined with the lack of funding has had an adverse effect on the quality of the programmes that HE in LDCs offer and there are concerns that they are not producing the technical, behavioural, and thinking skills required to increase productivity and growth in the modern world.

Innovations

Innovations to improve the academic capacity of HEI have focussed on new forms of teaching and learning for new students, new learning goals and new curricula. In recent years, there have been many attempts and regional partnerships designed to support improvements in the quality of teaching and learning in HEIs in LMIC contexts, for example, the Inter-University Council for East Africa, 2010 (IUCEA). A number of donor projects have attempted to improve teaching quality, such as the USAID funded Decentralized Basic Education Two (DBE2) project in Indonesia. The project responded to requests from a number of universities and developed a training programme on teaching methodologies specifically for teaching in HE. The Active Learning for Higher Education (ALPHE) programme was developed in partnerships with HEIs in Aceh and expanded to other provinces. By the end of the project in 2011, the programme had reached 117 HEIs. The final evaluation of the project found that ALPHE had been very successful in improving practice and that many HEIs had institutionalised or integrated the programme into their own CPD training for lecturers (USAID DBE2).

Implications

Experience has shown that fostering academic capacity and quality in teaching in learning requires long term investment and that the results are not as immediate as support for other components. A study by Schendel (2013) in Rwanda,[131] clearly demonstrates the need for continued and sustained efforts at improvement. A review of quality teaching in HE for the OECD by Henard and Roseveare (2012)[132] found that fostering quality teaching in HE is a multi-level endeavour and requires support at three inter-dependent levels: the institution wide level (management and government, policy design and quality assurance mechanisms), the programme level (actions designed to measure and enhance the design, content and delivery of teaching programmes) and the individual level (helping lecturers to achieve their missions and encouraging them to innovate and adapt student oriented practices). Innovations which focus on only one of these levels to the exclusion of the others may be doomed to failure.

8.12 A COMBINATION OF INNOVATIONS

As this discussion has illustrated, a wide number of initiatives and innovations have been implemented to reform HE. Whilst there is a large body of literature on the design and implementation of such policies and programmes, robust empirical evidence on their impact seems to be lacking. However, the evidence that is available suggests that one or two initiatives alone are insufficient to address the challenges facing HE systems in LMICs and a combination is necessary. Exactly what innovation to blend together is open to debate and will vary according to context. To identify the initiatives to take, the World Bank (2010)[41] stresses the need for countries and the international community to consider the 'feasibility of the reform' and what will or will not work in specific contexts. Many LMICs already combine initiatives. For example, the Botswana Government MOE HE education policy 'Towards a Knowledge Society' incorporated a comprehensive package of reforms to HE (Botswana).

9. CONCLUSION

This topic guide has illustrated that higher education (HE) is distinctively positioned to make a positive contribution to national economies and societies in the 21st Century and accordingly is now high on the post 2015 development agenda for national governments and donors alike. However, in order to successfully meet the new challenges and deliver on the demands they have been assigned, HE systems cannot depend on 20th Century policies and practices. Multiple sectoral and institutional changes and reforms are required. The pressures to reform are greater for LMICs because of the uneven distribution of human capital and funds that already exist.

Not only are the catalysts for reform greater for LMICs but so are the challenges. What has become apparent in this topic guide is that the challenges facing HE systems in LMICs are highly complex and inter-related like a 'knotted ball of string'.[9] Mass enrolment has created a demand for expanded facilities and more qualified staff. It has also resulted in a more diverse student body with different needs and expectations. Expansion in demand has also created the need for new providers. System growth requires additional funding and channels for obtaining it. All of this expansion and diversification has generated concerns for quality. Overcoming these challenges is complex and will involve massive expansion and restructuring of the HE systems in particular and, as this guide has clearly demonstrated, of primary and secondary education as well. HE cannot be considered in isolation from the lower levels of the education system: effective learning and equitable access in HE are dependent on the foundations laid at primary and secondary levels, and quality of schooling depends on effective training of teachers. Addressing all of these areas simultaneously is a significant undertaking for governments in LMICs.

However, governments are not alone in this endeavour. Multilateral and bilateral donors can complement efforts of national governments in LMICs to improve HE by providing funding and educational resources or training senior HE staff on education management techniques, curricula development or governance and administration. It is not just partners in the international development community that can support improvements in the HE system. As this topic guide has shown there are a variety of other potential partners in the private and public sector and in civil society that can help increase the quality, relevance and effectiveness of HEIs and wider HE systems in LMICs.

What is clear is that governments and HE systems in LMICs have a lot of work ahead of them if HE is to ultimately deliver on the demands laid at its door of ensuring a highly skilled workforce, a well-informed and democratic populace, sustained economic growth, and sufficient technological innovation to solve global problems such as environmental sustainability and population growth. We hope that this guide can go some way towards inspiring dialogue about how this might be achieved.

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ANNEX A: RECOMMENDED READING

ABOUT HIGHER EDUCATION

- **Altbach, P. G., Reisberg, L. and Rumbley, L. E. (2009)** *Trends in Global Higher Education: Tracking an Academic Revolution*. Paris: UNESCO.[9] This document provides a very comprehensive and accessible overview of the global forces impacting HE and discusses how HE in developed and developing contexts has responded. It also examines potential future trends. Trends in Global HE

EVIDENCE OF IMPACT

- **Oketch, M., McCowan, T. and Schendel, R. (2014)** *The Impact of Tertiary Education on Development: A Rigorous Literature Review.* London: Department for International Development.[50] This provides a useful overview of the literature available on the impact of higher education for national development and includes insightful commentary on the quality and rigour of the studies included. The Impact of Tertiary Education on Development
- **Department for Business, Innovation and Skills (2014**) *The benfits of higher education participation for indivduals and society: Key findings and reports 'the quadrants'*. This report provides a good overview of the benefits of participation in higher education both for the individual and society. The benefits are usefully divided into society, market, non-market and the individual. The report provides many useful links to other studies too numerous to be included in this topic guide. The benefits of HE Participation
- **Majgaard K. and Mingat A. (2012)** *Education in Sub-Saharan Africa: A comparative Analysis.* World Bank[40] Education in Sub-Saharan Africa This book analyses the education sector in SSA from a cross-country perspective. Aimed at drawing lessons that individual country studies alone cannot provide.
- **Pillay P. (2011)** *Higher Education and Economic Development Literature Review*. CHET[21] This literature review explores the relationship between HE and economic development. Higher Education and Economic Development Literature Review
- **Bloom, D., Canning, D. and Chan, K. (2006)** *Higher education and economic development in Africa.* Harvard University[22] The authors review evidence about the impact that HE can have on economic growth and poverty reduction, with a focus on SSA countries. HE and Economic Development in Africa

POLICY ISSUES

- **McCowan, T. (2015)** Is there a Universal Right to Higher Education? British Journal of Educational Studies, vol. 60, no. 2 pp. 111-128. This article provides an overview of the policy issues of the purpose of HE and considers whether it should be a right that is available to all citizens or not. Is there a Universal Right to HE?

BARRIERS

- **Di Gropello, E., Tandon, P. and Yusuf, S. (2011).** *Putting higher education to work: Skills and research for growth in East Asia*. Washington, D.C.: World Bank.[73] This is a comprehensive guide examing HE in the developing countries of East Asia. Measures are proposed to help these countries achieve rapid growth led by gains in productivity in a globally competitive environment. Putting HE to work
- **Fielden, J., and LaRocque, N. (2008)** The Evolving Regulatory Context for Private Education in Emerging Economies: Discussion Paper. The World Bank Group International Colloqium on Private Education.[133] This paper briefly examines international experience of regulating private education at the school and HE level. The report includes a short discussion of the potential benefits of increased private participation in education and proposes some possible good practice propositions for governments to consider. Private Education in Emerging Economies

- **Sawyerr, A. (2004)** African Universities and the Challenge of Research Capacity Development. JHEA/RESA Vol. 2, No. 1, pp. 211–240.[130] This paper considers the context of African research and environmental and human research capacity development. Challenges in developing long-term knowledge generation and application capacities are considered and some programmes that are helping to meet these challenges are described. African Universities

AID AND THE INTERNATIONAL DEVELOPMENT AGENICES

- **USAID (2014)** *African Higher Education: Opportunities for Transformative Change for Sustainable Development.*[66] This report is particularly useful as it reviews the evidence from a number of large USAID funded HE projects in Sub-Saharan Africa and uses it to provide lessons learned and concrete recommendations for how to effect positive transformation at both the system and institutional level. USAID
- **Creed, C,. Perraton, H. and Waage, J. (2012)** *Examining development evaluation in higher education interventions: a preliminary study.*[83] This study surveyed a range of interventions in higher education for international development from different agencies and presents a series of helpful observations of the impact of different types of interventions. Examining Development Evaluation

PARTNERSHIPS

- **The Africa Unit (2010)** *Good Practices in Educational Partnerships Guide***,** *UK-Africa Higher & Further Education Partnerships.* This document usefully provides a list and comprehensive discussion of 10 main principles for establishing effective partnerships between HEIs, which can be applied to any HE partnership. The Africa Unit.
- **The British Council (2015)** *Bridging the Gap: Enabling effective UK-Africa University Partnerships*, British Council. This is a contemporary and relevant review of partnerships in HE. It provides a brief but valuable discussion of the challenges and potential solutions for establishing effective partnerships from empirical research with stakeholders. British Council

INNOVATIONS

The following are recommended as general texts, which review a range of case studies of innovations and initiatives to improve HE capacity. The reader should engage with the resources referred to in section 8 for more information and specific examples:

- **The World Bank (2010)** *Financing Higher Education in Africa*: This is a very useful review of a range of options for the financing of HE. It usefully provides a number of different specific case studies from developing nations in Africa. The World Bank
- **Clifford M., Miller T., Stasz C., Goldman C., Sam C. and Kumar K. (2013)** *How effective are different approaches to higher education provision in increasing access, quality and completion for students in developing countries? Does this differ by gender of students? A systematic review*. This review is useful as it looks at a number of different approaches for increasing access to HE and includes references to specific examples from around the World.
- **Association of Commonwealth Universities**. A website which is a good source of publications and information on interventions/reforms in HE. ACU

ANNEX B: TERTIARY EDUCATION BY ISCED CLASSIFICATION LEVELS

ISCED level 5 programmes are typically practically-based and occupationally-specific and designed to provide learners with professional knowledge, skills, and competencies, in preparation for the labour market. Some level 5 programmes are designed to prepare learners for entry into other tertiary education pathways. Level 5 programmes are a minimum of 2 years in duration, though most are less than 3. Examples of level 5 education include (higher) technical education, community college education, technician or advanced/higher vocational training, associate degree, or *bac+2* (*baccalauréat* + 2).

ISCED level 6 programmes are Bachelor's or equivalent level programmes, designed to give learners the intermediate academic and/or professional knowledge, skills, and competencies necessary for a first degree. While these programmes are typically theoretical in nature, some may include practical components and are informed by research and/or professional practice. Level 6 programmes are either academic or professional in orientation and are offered at universities or other equivalent higher education institutions. Typically, the programme duration for Level 6 programmes is 3 to 4 years.

ISCED level 7 programmes are Master's or equivalent level programmes, designed to give learners the advanced academic and/or professional knowledge, skills, and competencies necessary for a second degree (or equivalent qualification). These programmes include either theoretically-based and/or professionally-based content and are often informed by research and/or professional practice. Some include a significant research component, though this is not sufficient to lead to the award of a doctoral degree. Level 7 programmes are either academic or professional in orientation and are offered at universities or other equivalent higher education institutions. Typically, the programme duration for Level 7 programmes is 1 to 4 years.

ISCED level 8 programmes are doctoral or equivalent level programmes, designed to lead to an advanced research qualification. Level 8 programmes involve advanced study and original research in both academic and professional fields and are only offered at research-oriented tertiary education institutions, such as universities. Level 8 programmes must be at least 3 years in duration and culminate in the submission of an original thesis, dissertation or equivalent written work of publishable quality that will contribute to the knowledge base in a specific field in a significant way. Examples of degree programmes classified as ISCED Level 8 include PhD, DPhil, D.Lit, D.Sc, LL.D, Doctorate, etc.

ANNEX C: MISSIONS AND FUNCTIONS OF HIGHER EDUCATION

World Declaration on Higher Education for the Twenty-first Century: Vision and Action, UNESCO 1998[8]

Article 1. Mission to educate, to train and to undertake research

We affirm that the core missions and values of higher education, in particular the mission to contribute to the sustainable development and improvement of society as a whole, should be preserved, reinforced and further expanded, namely to:

a) educate highly qualified graduates and responsible citizens able to meet the needs of all sectors of human activity, by offering relevant qualifications, including professional training, which combine high-level knowledge and skills, using courses and content continually tailored to the present and future needs of society;
b) provide opportunities (*espace ouvert*) **for higher learning and for learning throughout life**, giving to learners an optimal range of choice and a flexibility of entry and exit points within the system, as well as an opportunity for individual development and social mobility in order **to educate for citizenship and for active participation in society**, with a worldwide vision, for endogenous capacity-building, and for the consolidation of human rights, sustainable development, democracy and peace, in a context of justice;
c) **advance, create and disseminate knowledge** through **research** and provide, as part of its service to the community, relevant expertise to assist societies in cultural, social and economic development, promoting and developing scientific and technological research as well as research in the social sciences, the humanities and the creative arts;
d) help **understand, interpret, preserve, enhance, promote and disseminate national and regional, international and historic cultures**, in a context of cultural pluralism and diversity;
e) help protect and enhance **societal values** by training young people in the values which form the basis of democratic citizenship and by providing critical and detached perspectives to assist in the discussion of strategic options and the reinforcement of humanistic perspectives;
f) contribute to the development and improvement of education at all levels, including through the training of teachers.

Article 2. Ethical role, autonomy, responsibility and anticipatory function

In accordance with the Recommendation concerning the Status of Higher-Education Teaching Personnel approved by the General Conference of UNESCO in November 1997, **higher education institutions and their personnel and students** should:

a) preserve and develop their crucial functions, through the exercise of ethics and scientific and intellectual rigour in their various activities;
b) be able to speak out on ethical, cultural and social problems completely independently and in full awareness of their responsibilities, exercising a kind of intellectual authority that society needs to help it to reflect, understand and act;
c) enhance their critical and forward-looking functions, through continuing analysis of emerging social, economic, cultural and political trends, providing a focus for forecasting, warning and prevention;
d) exercise their intellectual capacity and their moral prestige to defend and actively disseminate universally accepted values, including peace, justice, freedom, equality and solidarity, as enshrined in UNESCO's Constitution;
e) enjoy full academic autonomy and freedom, conceived as a set of rights and duties, while being fully responsible and accountable to society;
f) play a role in helping identify and address issues that affect the well-being of communities, nations and global society.

ANNEX D: RETURNS TO EDUCATION

Table 3. Classification of the Benefits of Education

Benefit Type	Private	Social
Market	Employability Higher earnings Less unemployment Labor market flexibility Greater mobility	Higher productivity Higher net tax revenue Less reliance on government financial support
Nonmarket	Greater consumer efficiency Better own and family health Healthier children	Lower crime rates Less spread of infectious diseases Greater contraception efficiency Better social cohesion Voter participation

Source: Psacharopoulos, G. (2006)[23].

ANNEX E: CAPTURE OF HE BY ELITES

Most LMICs proclaim their citizens right to education as part of the constitution or as contained in other laws but this guarantee usually does not mean that education will be supported at higher levels. In the recent past, HE systems in most countries were clearly exclusive with access being restricted to a very small proportion of the population – the 'elites' (defined as individuals of superior status be it economic, political, educational, ethnic or otherwise).

Expansion of primary and secondary systems, the increasing need for HE qualifications on the job market, the demand for social equity and the recognition of HE as critical for social mobility has moved HE from an elite to a mass system. As HE expands to mass systems, so do opportunities for participation for more of the population. However, despite overall rising enrolment in HE and the demands for social equity, certain demographic groups remain under-represented in HE systems in most LMICs. Depending on context, variables such as gender, wealth, location, race, ethnicity or disability can disadvantage a person looking to participate in and complete HE programmes.

Although quantitatively speaking, access and enrolment have been improving in recent years for some of these disadvantaged groups, it still does not mean that they have the same opportunities to access the same HEIs. Research shows that marginalised populations attend particular types of HEIs and programmes of study and these are typically those that offer fewer opportunities for employment and future study. Furthermore, access to HE does not necessarily mean the same opportunities are available to all equally. Research also repeatedly shows that disadvantged populations once enrolled, are less likely to continue to degree completion than elites.[9]

In 2008 blacks who constitute 79% of the population in South Africa made up only 63% of the student population in HEIs whereas whites who made up only 10% of the national population made up 24% of the HE student population. Moreover, whites comprised 34% of all universities students whereas blacks made up 50% but white enrollment in technical universities was as high as 77%. The structure of enrollment suggests that black South Africans tend to enrol in less pretigious HEIs.[107]

There are a number of intersecting factors presenting barriers to these particular groups in achieving equitable access to HE. These primarily include:

- Institutional admissions policies
- Funding mechanisms
- Earlier levels of education
- Traditional cultural values

As admission to HE is often based on academic performance, access to HE in general and to the best HEIs in particular is determined by access to and quality of secondary schooling and therefore, is skewed towards households with higher incomes or social connections that can afford to send their children to the best secondary schools. Although this reliance on performance can ensure academic standards of incoming students, it discriminates against students from the lower socio-economic groups and those living in rural or remote areas where the quality of primary or secondary education is generally lower due to poor resource inputs and who can not afford the spiralling costs of HE. These issues are becoming more profound in light of the the recognition of the apparent link between HE and economic competitiveness in the global knowledge economy[18], as nation states are aiming to increase the proportion of higher-level-educated individuals in the population, they want those most likely to succeed, and the adoption of fee paying structures (Ibid.).

Socio-economic status:

Access to HE is often dependent on socio-economic status. In many LMICs, participation in HE is dominated by students from the highest income quartiles. In a case study on Ghana and Tanzania, for example, Morley (2012)[134] found that students from low socio-economic backgrounds were under-represented in all disciplines. Often public funding mechanisms serve to exacerbate such inequities by providing free education to the highest performing students who invariably come from the wealthiest households with access to the best secondary schools or even private tuition. Morley (2012)[134] also found that current schemes to assist people from disadvantaged backgrounds to enter HE are not working and these groups need to be targeted more efficiently.

Ethnicity:

Not all races or ethnic groups have equal opportunities to access HE. Inequities by ethnic group often start early in education and are most often further exacerbated in the transition to HE levels. For example, Vietnam's ethnic minorities have HE enrolment rates well below the national average (World Bank, 2011). Inequities by ethnic group exist in secondary education, HE completion rates and in the transition rate from secondary to HE compared to the majority.

Location:

Geography is often underestimated as a factor that limits equal participation in HE. HEIs are not evenly distributed across a nation and are often located in urban centres. Rural populations therefore are far more likely to be more distant to HEIs than urban ones, increasing costs related to transport, accommodation and other related recurring costs. Indigenous populations are even more likely to live in remote areas and this compounds the challenge of improving participation rates of these groups.

Disability:

Little is known about the state of participation in HE of students with disabilities. Categorising disability and evaluating access is extremely difficult outside of isolated case studies.[66] Morley (2012)[134] found that in Ghana and Tanzania, the facilities and programmes designed for students with disabilties did little to support them. In a review of different approaches to improving access and completion of HE in developing countrues, Clifford (2013)[91] found that the lack of supporting infrastructure at HEIs hampered the ability of students with a disability to maintain their place and to succeed and that those that did had to rely on informal infrastructure.

Conclusion:

Policy makers are currently failing to address sufficiently the connection between education levels and the need to address inequalities early and consistently. Equity statistics remain poor in most countries and disaggregated data is the key to informing policy makers why certain groups are more vulnerable.

ANNEX F: GENDER IN HIGHER EDUCATION

Globally, there has been an increase in gender parity in gross enrolment leading many to believe that HE is undergoing a process of feminisation.[135] However, this is not the case universally. While overall HE enrolment has increased, women are still underrepresented in certain disciplines, usually STEM and finance, as they tend to enrol more in the humanities and social sciences[91] and at the higher levels of education that lead to greater earning potential (Sifuna, 2006)[137]. Moreover, patterns of disadvantage and exclusion soon emerge when gender is intersected with socio-economic status and other variables.[135] The table below illustrates this on a global scale.

Ratio[6] of female to male HE enrolment (%)

	2008	2009	2010	2011	2012	2013
World	107.3	107.6	107.6	107.6	109.8	110.3
High income countries	125.2	125.9	126.2	126.0	125.1	123.5
Middle income countries	101.4	102.0	102.3	102.8	106.6	108.3
Low income countries	61.8	62.8	64.2	66.2	67.6	68.5

Source: World Bank's World Development Indicators.

As the data shows, the ratio of females to males enrolled in HE is lower in MICs than in HICs and significantly lower in LICs where there are fewer than seven women enrolled for every 10 men. While HE continues to exclude capable and talented students because of their socio-economic status, ethnicity, and rural residence (World Bank, 2012), these factors can be compounded by gender. Therefore, women often find themselves doubly disadvantaged. Women students generally have higher dropout rates than males due to cultural emphasis on the traditional role of women and their family obligations, which is often in conflict with their desire to pursue advanced studies.[136]

In examining the situation in Kenya, Sifuna (2006)[137] highlights some of the barriers that women face in accessing and participating in HE. These include, but are not limited to low participation and high failure rates in certain fields, such as medicine and engineering, high levels of sexual harassment, resistance from families, lack of opportunities and prospects for future employment and prevailing traditional and cultural views about educated versus non-educated women as wives and mothers.

[6] Ratio of female to male tertiary enrolment is the percentage of women to men enrolled at tertiary level in public and private institutions

ANNEX G: THE MANAGEMENT AND GOVERNACE OF PRIVATE HEIs

According to human rights agreements, governments have an obligation to ensure that their citizens receive a good education regardless of the source, be it public or private. This includes ensuring that teaching staff, facilities, equipment and materials and monitoring, including quality assurance, are of the best quality that can be provided with available funds in both the public and private sectors.

The regulation of private education is thus an important issue and can, when carried out correctly, enable high quality delivery while simultaneously encouraging further investment. In a paper examining the international experience of regulation of private education at the school and HE level, Fielden and LaRoque (2008)[133] demonstrate that government regulations often appear to favour public over private provision in the absence of any public policy rationale. They also argue that the regulatory and funding frameworks in many countries do not promote growth in private education and likely reduce both the quality and sustainability of the private education sector and subsequent benefits that such provisions could bring. For Altbach (2002)[138] and Susanti (2010),[81] entirely open HE markets with no regulation undermine academic values and reinforce inequalities that already exist, giving the most powerful education providers and individuals, unrestricted access, making it difficult for countries, institutions, and individuals with limited resources to flourish. In many LMICs, a number of new providers (including private for-profit institutions) have emerged to meet the burgeoning demand for HE. Unfortunately, in several countries, this increase has coincided with a *relaxing* of state regulation, rather than a concerted effort to improve the rigour and effectiveness of state regulation mechanisms to achieve these dual goals of improved quality and further investment.[67]

ANNEX H: THE PARTNERSHIPS FOR HIGHER EDUCATION IN AFRICA (PHEA)

In 2000 the Carnegie Corporation, Ford Foundation, MacArthur Foundation and the Rockefeller Foundation launched the PHEA to coordinate their support for HE in Africa. The PHEA grants totalled US$ 440 million over ten years up until 2010. The PHEA support was focused in nine African countries: Egypt, Ghana, Kenya, Madagascar, Mozambique, Nigeria, Tanzania, South Africa and Uganda. The PHEA aimed to provide direct support to HE, respond to Africa HEI demand, focus on a subset of HEIs and treat consultation as key to effective support.

Most of the funding (84%) went directly to African grantees, including US$243 million in direct support to universities and colleges. In responding to demands, grants to institutional development usually supported priority areas identified by the universities themselves. Of the 65 HEIs supported, 27 received US$ 1 million or more. Seven received over US$ 10 million each. African regional networks were the second largest type of grantee receiving just under US$61 million.

In 2010, the PHEA published a review of its decade of investment in African HE. In this review, the PHEA cited among its accomplishments: enduring improvements in African HE, including the development of a Bandwidth consortium; developing HE capacity to manage their IT networks; using technology to improve teaching and learning; enhancing gender equity in enrolments and graduation rates; improving access for marginalised groups; strengthening physical infrastructure; expanding the capacity for policy research and advocacy; establishing new and more efficient systems for strategic planning and financial management; supporting the development of advocacy and policy reforms through the establishment of the HE Research and Advocacy Network (HERANA) including the creation of University News; library automation and resource mobilisation; and helping to develop the next set of African academics.

Top amongst the challenges identified by the PHEA for the near future was recruitment, development and retention of African academics. In the view of the PHEA, efforts are needed to strengthen and expand postgraduate capacity, including research productivity, to create institutional policies and practices that nurture junior academics and to adopt natural policy and regulatory environments that help build sustainable institutions and serve development needs.

Among the key lessons cited in the PHEA report were (a) that grants for institutional development must support priority areas identified by the universities themselves, (b) the foundations determined that a policy of going deeper rather than broader was more effective and, (c) a focus on institutional development and transformation rather than sectoral or systemic was more effective.

Source: PHEA (2010)[102]

For more information and all publications from PHEA see http://www.foundation-partnership.org/

ANNEX I: HEI PARTNERSHIPS

The University of Jos in Nigeria identified the need to build the institutional capacity and infrastructure for the prevention, management and resolution of conflicts. It spelt out its aim to reposition iteslf as a centre for excellence in peace and confilct studies and a key reference point in Africa. The University then embarked on a series of foundational activities which resulted in the establishment of the Centre for Conflict Managament and Peace Studies (CECOMPS) in 2002. The estbalishment of CECOMPS was a well though out plan that was factored into the ''Second Strategic Plan'' of the University of Jos. The University decided that it needed to enhance the capacity of CECOMPS for teaching and research in peace and conflict studies.

A consultative mission met at the University of Jos. Its aim was to establish the needs and interests of CECOMPS. One result was a proproasl for the upgrading of the Postgraduate Diploma in Peace and Conflict Studies into a MA programme after two years of running. Whils this was thought to create a great opportunity to enhance capacity building, it also posed several challenges. The biggest challenge was how the capacity of the Centre would be enhanced to be able to undertake such an upgrade.

A consultative workshop prepared the University of Jos to articulate its needs, strengths, limitations and future directions.

The University of Jos then decided that its aim of being a centre of excellence in peace and conflict studies could best be achieved through a partnership programme. Given that the University of Bradford has a long tradition of exposure and excellence as the world's leading and largest department in peace studies, with a unique advantage of an Africa Centre, it was considered a suitable partner. The partnership was considered to be a means of strengthening the Africa programme of Bradford, while allowing the University of Jos to beneift from the academic excellence of the University of Bradford's peace studies department.

Source: Wanni *et al*. The Africa Unit (2010: 23)[87]

ANNEX J: PRIVATE HEIs IN BRAZIL

While enrolments in private institutions are growing across the world, there are still significant differences across countries in terms of the size and quality of the private sector.

With 74% of all enrolments in private HEIs, Brazil is a critical case in point. The country traditionally had a small number of mainly Catholic private institutions, but from the 1990s, a new breed of private institution started to emerge: teaching focused, commercialised, highly attuned to the market and able to expand in a short time-span. Their main function was to absorb the excess student demand from the public sector.

This rapid expansion -- facilitated by the neoliberal policies of the administration in the 1990s -- enabled a rapid increase in access to HE with some 4,966,000 of a total of 6,740,000 students enrolled in private institutions in 2013. Yet opinions are divided as to the desirability of this form of expansion (McCowan, 2007). First, many of these institutions are little more than high schools, with poor facilities, uneven quality of teaching, and mainly part-time hourly paid staff. Regulation has proved a challenge for the Brazilian authorities, particularly on account of the financial interests at stake. Second, the growth of the private sector has led to a stratification of opportunity, with the lower cost institutions generally providing a lower quality experience or at least lower prestige of qualification on the job market. Third, there are concerns over transfer of public funds (in the form of loans and tax breaks) to the private sector, particularly in light of the fact that the majority of these institutions are for-profit. Given the apparent dependence of society on the private institutions for absorbing demand, and the limited ability of the public sector to expand, these tensions are unlikely to be resolved in the short term.

Source: Schendel and McCowan (2015)[68]

ANNEX K: FOUR MODELS OF MANAGEMENT AND GOVERNANCE OF HE SYSTEMS

Governance provides the institutional environment within which the educational enterprise functions. Efficiency in both system and institutional governance is necessary for the educational system to produce the desired results. Good governance includes promoting quality, responsiveness, transparency and accountability in the sector as well as providing it with appropriate standards, incentives and information. The governance of a HE system in a country is a tricky business. On the one hand, the need to produce skilled labour to meet development needs, the amount of public resources devoted to providing HE and the political power that students in HEIs wield suggest the need for government control of HEIs. On the other hand, the need for academic freedom, the freedom to innovate in both teaching and research and the ability to respond to changing environments suggest these institutions need to be free from political control as much as possible. The governance structure of HE that emerges is a balance between these contrasting forces. While some countries set up structures that allow for central government direct control, others set up buffers between the political administration and the governance system.

GOVERNANCE MODEL	STATUS OF PUBLIC UNIVERSITIES	EXAMPLES
State control	An agency of the MOE or state owned corporation	Malaysia
Semi autonomous	An agency of the MOE, a state owned corporation or a statutory body	New Zealand France
Semi independent	A statutory body, a charity or a non profit corporation subject or MOE control	Singapore
Independent	A statutory body, a charity or non profit organisation with no government participation or control but linked to national strategies and related only to public funding	Australia UK

Source: Adapted from Fielden (2008)[82]

The simple typology presented above represents just four models of governance from Fielden (2008)[82] which is based on the degree to which the political system has direct control of the decision making process in HE. However, even these extremes are not simple black and white. Within the state control model there has to be some freedom as a central ministry cannot control everything and within the independent model there is an implicit acknowledgement that the MOE is entitled to hold the institution accountable in many respects and must retain overall strategic control of the sector.

ANNEX L: PUBLIC PRIVATE ALLIANCE IN THE IVORY COAST

In the Ivory Coast, innovative experiments have been tried with a view of involving small private operators in student catering and services without the states' financial participation. To that end, partnerships have been developed with the private sector and areas have been developed (with water, power supply and sewage), for instance, at the public university of Abobo Adjame, where the private operators set up facilities complying with technical specifications drawn up by the university administration. These specifications may include a standard installation layout, the services authorised, opening hours, quality standards and the obligation to provide at least one dish as a minimum price charged in a traditional university restaurant. In such cases, the role of public authorities consists essentially of defining the framework of operations and ensuring compliance with the technical specifications.

Source: The World Bank (2012)

ANNEX M: THE GHANA EDUCATION TRUST FUND

In 2000 the Ghanaian Parliament established the Ghana Education Trust (GET) Fund as a means of financing a more rapid expansion of the country's education system than was possible on the basis of the Government budget alone. The fund was capitalised by increasing the existing value added tax by 2.5%. These revenues were adding earmarked for capital projects in the education sector, and their use for recurrent expenditures such as salaries is prohibited. By 2007, the GET Fund was generating approximately US$ 200 million annually. HE has received roughly 45% of GET funds since its inception.

The beneficiaries are the staff and students of Ghana's HEIs. GET funding has been used to construct educational facilities, capitalise a student loan programme, provide scholarships for poor students, staff development, expand ICT infrastructure and support research and teaching activities, particularly the expansion of post graduate programmes and distance education.

The Fund is governed by an independent board of trustees accountable to Parliament and managed by a Government appointed administrator. Each year the fund's allocation and its specific uses are approved by Parliament to ensure they address the nation's most pressing educational needs.

Source: The World Bank (2010)[41]

ANNEX N: THE COLLABORATIVE RESEARCH SUPPORT PROGRAM

USAID's Collaborative Research Support Program (CRSP), has been running for over 30 years. It engages US HEIs and DC partners in research capacity building. In 2013 the programme was renamed the 'Feed the Future Innovation Labs for Collaborative Research'. It is a collection of programmes which, at its core, has a collaborative relationship between HEIs in the US and DCs, including HEIs, research institutions, international research centres, NGOs and private sector entities. Collaborators conduct research on specific development programmes in LMICs and in doing so assist USAID in carrying out the international food and agricultural mandate. The programmes support long term commitments to partnerships that build human and institutional capacity through collaborative research directed at solving development problems in the host country.

In 2012, a review of the CRSP was commissioned by the Board for International Food and Development (BiFAD) with support from USAID and with a broad mission to review and evaluate the programme as a potential model for research capacity building. In doing so it was to assess other models in order to compare their performance.

The report identified a number of strengths of the programme including strong integration of development research and human and institutional capacity building; an interdisciplinary approach that enables the programmes to draw on a variety of analytical approaches, the ability to attract world class scientists in many cases, mutual benefit of the research to US and host countries; substantial leveraging of external resources; broad engagement with 6 US HEIs and 200 agricultural research institutions and significant positive impacts on people's lives and economic well being.

The report also identifies a number of weaknesses to the programme. Most relevant included the need for more systematic priority setting and aligning of priorities with national and regional development agendas and strategies; the spread of funding to too many small projects; the lack of sufficient USAID oversight and coordination between Washington and the Missions; not enough institutional capacity building with training being done without a clear understanding of institutional performance gaps and not enough investment in rigorous assessments of impact.

Source USAID (2014)[66]
See also CRSP Review