

Responsibility for the contents and presentation of findings and recommendations rests with the study team. The views and opinions expressed in the report do not necessarily correspond with those of Norad.

NORAD REPORT 7/2016



Literature review: Higher education and development

By Susy Ndaruhutse and Stephen Thompson



Norad
Norwegian Agency for Development Cooperation

Postal address: P.O. Box 8034 Dep, NO-0030 OSLO
Office address: Ruseløkkveien 26, Oslo, Norway
Tel: +47 23 98 00 00 / Fax: +47 23 98 00 99
www.norad.no / postmottak@norad.no

Cover photo: Ken Opprann
ISBN: 978-827548-931-7
ISSN: 1502-2528

Literature review: Higher education and development

(Full version)

Authors: Susy Ndaruhutse and Stephen Thompson

**Commissioned by Norad for Norhed conference on Knowledge
for Development
Oslo, 6-7 June 2016**

Table of Contents

1. Trends in higher education prioritisation and financing	3
2. Rates of return analysis and how these have influenced higher education funding	5
3. Evidence on the role of universities in development.....	7
3.1 University partnerships.....	7
3.2 The role of universities for development.....	9
3.3 Linkages between higher education and development.....	12
3.4 The geography and power of knowledge.....	14
3.5 Gender and diversity in higher education and research.....	14
3.6 The role of higher education and research for the SDG agenda.....	16
References	20
Literature summary table.....	26

1. Trends in higher education prioritisation and financing

Research focusing on the links between education, development and social change has a long history; this includes research on higher education investment in low-income countries by external and international development agencies (Power, Millington and Bengtsson, 2015). Analysis of the impact on society of higher education in developing countries emerged alongside post-colonial discourses and modernisation theories. Research generally focused on how higher education could be utilised by governments to train people in the skills necessary for economic growth. Academia in this context was regarded as being irrelevant to local communities. Vocational training was largely left up to public programmes (Thomson, 2008). At this time, higher education aid focused primarily on providing graduate training in donor countries (Varghese, 2010).

In the post-independence period, a significant investment in higher education was made by both domestic and external sources (Oketch, McCowan and Schendel, 2014). The late 1980s and early 1990s saw higher education lose popularity due to a failure to produce expected results and a lack of engagement on local, national and regional issues. Also rates of return for higher education were regarded as low compared to other levels of education. This resulted in less research being focused on higher education in developing countries, and a degradation of established institutes (Thomson, 2008). This decline in support for higher education can be attributed to criticisms of brain drain, mounting unemployment and the emerging priority of Education for All programs (Varghese, 2010). The waning of interest in higher education caused a crisis of quality in many systems across the developing world (Oketch, McCowan and Schendel, 2014). In the 1990s, influenced by the focus of the 1990 World Conference on Education for All in Jomtien, donors focused on trying to universalise primary education. Higher education was on the periphery of the agenda (Power, Millington and Bengtsson, 2015).

Zezeza (2003: 149) argues that as the “development” university of the 1960s and 1970s shifted to the “market” university of the 1980s and 1990s, threats to academic freedom became less political and more economic. Despite the shifting landscape, African universities and intellectuals face challenges to academic freedom as they confront old and new pressures from globalisation, governments, and the general public.

de-Graft Aikins (2008) contends that African universities are in crisis. After being badly hit by the region's socio-political and economic crises of the 1970s and 1980s, they now face dwindling funding for academic resources and research, challenges around scholarships, a rise in university student enrolment and brain drain. Other challenges include low productivity, low engagement in global academic discourses, poor or misguided leadership, increased dependence on external sources of funding and a growing inability to set their own research agendas. Evidence suggests that higher education aid is now concentrated in selected countries with expanded higher education systems, or is fragmented and spread too thinly mostly in countries with less expanded higher education systems. Varghese (2010) argues that future aid would be best directed at supporting the higher education

sector in implementing national policies and institute-wide improvements, instead of focusing on selected faculties for targeted intervention.

Staff in African universities face many challenges, including heavy teaching load, low wages and rising enrolment without an accompanying increase in funds. The situation is unsustainable. It also restricts the capacity of staff members to get involved in projects outside of their day jobs. Many schemes do not fund staff time. This keeps proposal costs down, but hampers effectiveness. This problem is acutely felt by poorer African higher education institutes. Although many funding schemes are designed to strengthen capacity, they often focus on the short term and are unsustainable (Wanni, Hinz and Day, 2010).

The 2000s saw progress towards the education for all target. There was also an increase in demand for skilled labour, which required an expansion of education at all levels. Higher education became regarded as a vital asset to the global community and for national development. Today, donors are investing in both primary and post-secondary education, with a renewed emphasis on investing in higher education (Power, Millington and Bengtsson, 2015).

Although since the 2000s, the dominant rhetoric has been achieving universal access to primary education, higher education is actually the largest recipient of aid.¹ In the 1990s, primary and higher education received on average about one-third and one-fifth of education aid budgets respectively. By the 2000s, higher education and post-secondary technical and managerial training received about 37 percent of education aid budgets, against the 30 percent allocated to primary and pre-school education. This increase in education, and in particular aid focused on primary and higher education, has included funding from non-traditional donor countries, including Brazil, Chile, China, India, Mexico, Qatar Russia, and South Africa. New actors, including non-governmental organisations and global initiatives have provided financial resources, technical assistance, and delivery of educational services in deprived communities. These new actors are competing with traditional donors to influence domestic education policies (Niño-Zarazúa, 2016).

In recent years higher education has regained prominence in the development agenda. As well as being regarded as important to social and economic development, higher education is now being linked to environmental awareness and sustainability, post-conflict resolution, poverty alleviation, upholding human rights, addressing health care issues, and cultural preservation or change (Thomson, 2008). There is also emerging research on the links between higher education, good governance and developmental leadership (Brannelly, Lewis and Ndaruhutse, 2011a; Jones, Jones and Ndaruhutse, 2014). As the global 'knowledge economy' emerges, a renewed interest in higher education has been stimulated. This has led to reform and revitalisation efforts, as well as new research into the impact of investing in higher education on economic growth and development (Oketch, McCowan and Schendel, 2014).

¹ This includes funds for higher education scholarships which are often spent in donor countries.

Specifically, the work of Murenzi and Hughes (2006) states that strategies need to be undertaken to reverse the decline of Africa's share of world trade. Higher education that focuses on the development of national science and technological innovative and entrepreneurship skills can lead to growth and development. A case study of **Rwanda** is presented, where policies and strategies have been implemented to develop knowledge transfer and innovation. The aim is to stimulate and develop the national economy. The private sector will be encouraged as an engine of growth. In the age of globalised processes, higher education institutes, and universities in particular, are considered to be the progenitors of social change through the generation and dissemination of knowledge and new ideas (Thomson, 2008).

2. Rates of return analysis and how these have influenced higher education funding

As outlined above, the 1990s signalled the start of a big change in the focus of external financing for education with donors adopting an economic lens through which they looked at the value of providing financial support to different education sub-sectors. This was influenced by a journal article by a leading World Bank staff member on rates of return to education (Psacharopoulos, 1985) which stated that the economic rates of return to primary education were much higher than those for higher education. This resulted in a view that investment in higher education was regressive; investment in primary education was thus seen as being more socially equitable. Coupled with concerns about brain drain and the focus on primary education from Jomtien, this influenced changes in donor financing allocations, led initially by the World Bank, but then followed by other donors.

“The World Bank drew the conclusion that its lending strategy should emphasize primary education, relegating higher education to a relatively minor place on its development agenda.” (The Task Force on Higher Education and Society, 2000: 39)

Analysing the World Bank's financing of higher education, we see that between 1990 and 1994, it averaged US\$103 million and this dropped to an average of US\$30.8 million during 1995 to 1999 (World Bank, 2009). In percentage terms, from 1985 to 1989, the World Bank allocated around 17 percent of its education budget to higher education and this dropped to only 7 percent between 1995 and 1999 as a result of the increasing prioritisation of primary education after Jomtien (Bloom, Canning and Chan, 2005).

This shift happened a few years later in Sub-Saharan Africa, but was more extreme – in the early 1990s, higher education financing was 51 percent of total education aid in 1992 and dropped dramatically to 7 percent in 2000 before starting to rise again,

Table 1: World Bank financing for education in Sub-Saharan Africa, IBRD and IDA new commitments 1990–2008 (financial years) (US\$ millions)

	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008
Education (total)	310.2	324.11	268.48	194.64	400.03	189.77	472.61	362.91	339.26	373.00
Tertiary education	119.72	163.75	69.94	41.76	46.00	13.95	69.48	45.93	29.07	105.00
% share	39%	51%	26%	21%	11%	7%	15%	13%	9%	28%

Source: data taken and manipulated from Table 1.1 in World Bank, 2009: 4.

With limited national budgets, developing countries were not able to compensate for these changes through their own national budgets, so domestic higher education systems received limited support.

In 2000, world leaders signed up to the Millennium Development Goals and the World Education Forum took place producing the *Dakar Framework for Action*. Both of these focussed on primary education which gave further impetus to donors to continue to prioritise primary education over higher education. The World Bank's financial support to higher education between 2000 and 2005 remained broadly constant (World Bank, 2009).

It was only from 1995 that robust and internationally comparable data on donor funding to higher education became available, but what we see from this, is that four of the top five education donors (in volume terms) – Germany, France, Japan and the United Kingdom – appear to have followed the World Bank in relatively deprioritising higher education during the latter half of the 1990s compared to the 2000s when higher education aid has started to increase again. The United States is the main exception in the top five. A similar trend is seen with the European Union.

Table 2: Average percentage of donors' education aid (official development assistance) spent on higher education 1995-2014

Donors	1995-99 average	2000-04 average	2005-09 average	2010-14 average
<i>All countries</i>	21%	33%	34%	34%
DAC countries total	28%	39%	40%	41%
France	10%	50%	75%	69%
Germany	19%	68%	58%	52%
Japan	28%	48%	50%	51%
Norway	12%	31%	26%	18%
United Kingdom	2%	2%	6%	7%
United States	20%	18%	8%	15%
<i>Multilaterals</i>	5%	15%	15%	18%
European Union	11%	23%	32%	34%
IDA/World Bank	6%	14%	12%	15%

Source: OECD DAC CRS database (authors' own calculations)

By contrast, some of the relatively smaller education donors (in overall volume terms) such as Belgium, Greece and Portugal, have consistently given a relatively high proportion (over 45 percent) of their education official development assistance to higher education.

There has been considerable critique of education rates of return analysis with the main contention being that the focus is purely economic and does not include the substantial non-economic benefits (social, cultural and political) of higher education (see sections 3.3 and 3.6 below) which are often more difficult to quantify.

In a review of education rates of return studies across Sub-Saharan Africa, Bennell (1996) states that country results were often based on small or inappropriate sample surveys when more reliable databases and research was available, leading him to conclude that the aggregated rates of return for Sub-Saharan Africa are flawed. He further argues that conventional rates of return patterns are unlikely to prevail in Sub-Saharan Africa given different labour market conditions and the high probability that social rates of return to education at every level fell during the 1980s and 1990s. Tilak (2007: 84) points out other limitations including the assumption that differences in the productivity between individuals are reflected in their earnings and not separating out the influence of non-educational factors on earnings. He concludes that it is problematic to use education rates of returns as a means of formulating public policy on education investment when they are based on “a narrow technical framework of economic efficiency”.

3. Evidence on the role of universities in development

3.1 University partnerships

Partnerships can improve the quality and relevance of higher education and can exist on many levels. They can be between institutes in low- and middle-income countries, and other actors including institutes in high-income countries, both the public and private sector and civil society. Partnerships range from formal public-private partnerships to more informal collaborations. Donors can be instrumental in establishing, facilitating, funding and incentivising such partnerships. Some of the challenges to the successful implementation of a partnership include imbalances in resources, funding to initiate but not sustain the partnership, poor monitoring and evaluation, cultural divide and a lack of confidence in the weak research capacity for input into the innovation process (Power, Millington and Bengtsson, 2015).

Thomson (2008) argues that partnerships have two related functions. Firstly they facilitate the dissemination of information, research, knowledge and solutions. Secondly, they can deliver collaboration between experts, and higher education institutes on specific projects in education, research and development. An effective educational partnership is defined by Wanni, Hinz and Day (2010: 18) as:

“...a dynamic collaborative process between educational institutions 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.”

Key indicators, such as improved curricula, increased research publications and additional research projects, are often used to establish if a higher education partnership has been effective. Evidence exists that shows the effectiveness of partnerships through quantifiable outcomes. However, such evidence does not always reflect the complex, ongoing processes that underpin effective partnerships. The design and implementation of a partnership must be analysed to understand the conditions that support mutuality, ownership and sustainability, which will facilitate existing and future partnerships. Learning from past experiences of university partnerships is important for future design and implementation. Improving the sharing of practice has the potential to enable greater policy dialogue, exchange of ideas, partner selection, and scaling up options. Teaching and learning partnerships are slow to develop – more research is needed to explore why. It is suggested that outcomes may take longer to accrue in comparison to research partnerships (British Council, 2015).

A diverse range of higher education interventions found in the literature suggests that external agencies are attempting to improve the functioning of tertiary education institutes, including small-scale partnerships, which aim to develop the capacity of individual academic departments. In their rigorous literature review, Oketch, McCowan and Schendel (2014) identified 63 studies related to external interventions. Of these, 39 studies discuss higher education interventions which rely on the participation of at least one foreign tertiary education institute. Most of these studies do not offer an analysis of the impact of higher education partnerships on development outcomes, but do provide an overview of the types of interventions implemented.

In the face of fierce competition from established universities with proven research capacities, many southern universities struggle to establish themselves. Branch campuses overseas and the development of partnerships are a way of expanding research capacity for such universities. Further research is needed to establish the extent to which inter-university partnerships impact on research outputs and their impact on industry links and networks (Brannelly, Lewis and Ndaruhutse, 2011b).

In research that focused on higher education in Africa in relation to other world regions, respondents were asked to voice their top priority geographic regions for future academic relations. The results indicated Africa ranked very low as a partner for cooperation. Africa is not regarded as a viable partner for international education

alliances. Also international development projects are currently not regarded as important in relation to other research areas (Knight, 2008).

University-industry partnerships are increasingly regarded as crucial for development in Africa. Higher education institutes must become more relevant to economic and social demands and partnering with industry is a way of achieving this, while supporting regional and national economies. Despite increased interest in university-industry partnerships in Africa, evidence is limited. Research tends to focus on partnerships in more technologically developed countries, where universities are thought to be able to engage more actively with firms in areas such as sophisticated research and innovation. Industry partnerships with African universities have been limited due to research constraints caused by funding and governance issues in higher education. A lack of political will may also be a limiting factor, with African universities not being regarded as primary sources of input into the innovation process. There is the opportunity for the state to play a facilitation role, providing funding and incentives to develop partnerships (Creso, 2013).

Africa's intellectual diaspora may also offer opportunities for partnership and development. Many of the diaspora are already engaged in an ad hoc basis in academic, research and non-profit activities in their home countries. By utilising these networks, African universities have the potential to connect to the global knowledge community in more structured and effective ways (Teferra, 2010).

The Partnership for Higher Education in Africa website offers some useful case studies on university partnerships and development:

<http://www.foundation-partnership.org/index.php?id=3>

3.2 The role of universities for development

Oketch, McCowan and Schendel's (2014) rigorous literature review reported that tertiary education was found to have an important impact on development in low- and middle-income countries. Higher education provides measurable benefits to graduates, relating to health, gender equality and democracy. It contributes to the strengthening of institutions, and the forming of professionals who are vital for sectors such as education and health. Universities should be acknowledged and supported for the diverse range of functions they offer in addition to contributing directly to economic growth.

Higher education is an important aspect of development. Despite some progress, the challenge of how to release the developmental potential of universities remains. Global higher education has been characterised by trends in commercialisation and internationalisation, resulting in universities facing new challenges and opportunities in the context of globalisation. Internationalisation has been most beneficial to established universities in high-income countries. Over the past 50 years, there has been an increase in university enrolment (massification) due to governments wanting

more graduates to allow them to remain competitive in the expanding world economy, and improve social mobility. To generate funds, public universities have engaged in income-generating and cost-sharing activities. The private sector has grown dramatically. Private providers have increased higher education capacity, but often remain inaccessible to the poor. The research and community engagement activities of universities can impact on local and national development, leading university capacity building to become a focus for governments in low- and middle-income countries and for multilateral and bilateral donors alike (Power, Millington and Bengtsson, 2015).

In his book about Makerere University, **Uganda**, Mamdani (2007) discusses recent reform that saw the university shift from a development-oriented to a market-driven one. In the past, research-based development of the sciences was the priority. Under the new direction, the emphasis was shifted to a humanities-based education. Development-orientated universities produce skills to correct distortions of a colonial economy, whereas the market-driven approach reproduces these distortions. The two main market-driven reforms adopted by the university in the mid-1990s were commercialisation and privatisation. The former was a product of financial decentralisation; the latter involved enrolling privately sponsored fee-paying students. The reforms led to a shift in focus from research to teaching. Knowledge production became regarded as an external process. Mamdani (2007) argues that research capacity building at universities must remain an integral function of higher education, particularly in countries with a colonial history.

Universities are seen by many as playing a key role in delivering the knowledge requirements for development. Evidence suggests a strong association between higher education participation rates and levels of development. Also evidence suggests that high levels of higher education are essential for the design and productive use of new technologies. Universities increase national innovative capacity, and contribute more than any other social institution to the development of civil society. Despite the past rhetoric about the 'development university', African governments have done little to promote the development role of universities. This was due to a lack of coherent development models and the impact of internal and external power struggles. This resulted in a lack of trust and scepticism from many governments, other stakeholders and academics of the university's role in national development. As it was hard to see what universities offered to development, higher education became seen a luxury ancillary, rather than a necessity to development. The situation was made worse by prolonged economic crises and the high costs associated with higher education (Cloete *et al.*, 2011).

African universities are critical for Africa's future. Institutes are needed to generate and apply knowledge. Long-term public support with emphasis on research capacity must be assured. Adequacy of public funding is a crucial condition. The quality of the research environment and adequate infrastructure are among factors that will impact on research capacity. In the last two decades of the 20th century, education systems in

Africa were run down as part of the general decline in the economic and social conditions. Paradoxically, this underfunding of higher education happened at the very moment of the rise of the global knowledge society and exacerbated the knowledge deficit. Reversal of this policy, combined with strengthening of indigenous universities must be part of the drive to reposition Africa favourably in the current global dispensation (Sawyer, 2004).

Hansen and Lehmann (2006) report that capacity building for sustainable development has been a targeted activity over the last decade through university and university consortia networking. Their research into universities in **Africa, Asia, Central America and Europe** found some institutes focused on research and others on higher education. A mixture of the two was found to be more productive. Links to external partners in public and private business were shown to be successful in terms of mutual benefits. Collaboration between universities, business and society at large are necessary though not sufficient prerequisites for constructing and maintaining knowledge societies.

However, not all evidence found shows the positive impact of universities on development. Evidence from **Vietnam** shows that the impact of universities on research is much weaker than teaching. The contribution of universities to the socio-economic development of Vietnam was found to be limited to the production of an educated labour force rather than innovation. Some evidence was found showing university-led innovation but teaching was found to be the main focus (Ca, 2006).

Evidence from **Latin American countries** shows that most research takes place in universities, and does not relate easily with business, government and society. There are exceptions, with some universities producing high quality scientific knowledge while actively in transferring knowledge to society (Schwartzman, 2008).

Mosweunyane (2016) argues that **African universities** and their academics have not contributed meaningfully to the developments of an economic, political, social and environmental nature for the continent. It is argued that this is because of a reliance on western concepts that undermine efforts for development. African development could have been realised if the universities used indigenous concepts. African scholars continue to employ methods of research, which have limited the inventiveness and creativeness of the universities in Africa. There is too much reliance on consultancies undertaken by scholars from the West, instead of local African scholars. It is argued that African universities should promote ideological applications based on locally generated decisions with little to no foreign influence, rather than relying on exotic concepts that have failed the African development agendas.

3.3 Linkages between higher education and development

A lack of access to higher education is a key constraint to the development of a country. This can hamper development at both the individual and societal level (Sifuna, 2006). Development has many contested definitions. For this section, development is understood to involve greater social well-being, and protection of the environment. Economic development, understood as the promotion of prosperity and economic opportunity, is not included in detail here to avoid duplication with the above section on higher education and rates of return. However, it is recognised that dividing development in this way is challenging, as many of its elements are interrelated. Bloom, Canning and Chan (2006) argue that the economic benefits of higher education (including better employment prospects, higher salaries, and a greater ability to save and invest) may result in other development outcomes, including better health and improved quality of life.

In their rigorous literature review, Oketch, McCowan and Schendel (2014) present evidence of potential outcomes of higher education on the following areas of development:

<i>Increased productivity</i>	Some evidence exists which suggests that higher education has a positive impact on workplace productivity. However, the results are not conclusive. More data is needed and further research required to understand the barriers to higher education increasing productivity.
<i>Technological transfer</i>	Macro-level evidence that shows that tertiary education contributes to development through research and innovation is lacking. However, some evidence suggests a link between the proportion of workers with higher education and an increased likelihood of technological uptake and adaptation. Limited evidence shows that research outputs may impact development at local level by increasing the productivity and efficiency of small- and medium-sized enterprises.
<i>Improved capabilities</i>	A positive impact of higher education on individual capabilities was reported. Impact was shown in the areas of health, nutrition, political participation and women's empowerment. The effect of higher education was reportedly not always sufficient to overcome societal barriers.
<i>Improved institutions</i>	A small number of studies was found to indicate a positive impact of higher education on the strengthening of institutions (both formal organisations and social norms). Impact was shown in areas of governance, public services and the environment.

Power, Millington and Bengtsson (2015) present a summary of the empirical evidence on the impact of higher education on national development. Evidence suggests that higher education contributes to both social and private development. Through the

benefits of higher education, individuals can experience improved health and quality of life. Population growth can be reduced. Although the evidence on the public benefits of higher education are less well documented, there are links to both higher productivity and net tax revenue. Societies with more higher education rely less on government financial support. Higher education develops entrepreneurship, job creation and good economic and political governance. Research is shown to have a positive impact on economies. Formal sector employment increases with higher education, although important balances between supply and demand of the labour market must be considered. However, overproduction of graduates could contribute to future economic growth. Higher education can develop sectors including education, health and public administration and governance. It may increase stability and strengthen democratic processes. The evidence on non-market education externalities and their indirect and delayed effects on development goals is limited and further research is needed.

Jones (2001) reported evidence showing a link between level of education and productivity levels. Workers with a tertiary education were found to be most productive. The reported productivity differentials were found to correspond directly to workers' earnings differentials. Evidence from **Asia** reports that higher education is an important form of investment in human capital and reports significant effects of higher education on development. Higher education can lead to rapid industrialisation of the economy, developing workers skills. It can also transform societies by creating attitudes, and making attitudinal changes possible. Through teaching and research, higher education can lead to development through the creation, absorption and dissemination of knowledge. Higher education is needed to develop strong nation-states and global networks. It also offers wider society cultural and political benefits (Tilak, 2003).

Education can empower people to make personal and social decisions. It strengthens democratic institutions and social cohesion. It can create the conditions for technological advancement (Sifuna, 2006). In a knowledge economy, higher education can contribute to advancement in technology, with graduates being more likely to be aware of and better able to use new technologies. Investing in higher education in Africa will accelerate technological diffusion, decreasing knowledge gaps and reducing poverty. Further research into the impact of higher education on development is needed (Bloom, Canning and Chan, 2006).

Eritrea has a highly centralised human resource development strategy, which is working to produce human capital for the development of the nation. Müller (2004) argues that this instrumentalist view only considers social position and does not take into account the development of personal identity and new forms of agency on an individual level. This produces contradictions about the impact of higher education on the individual and the common good.

3.4 The geography and power of knowledge

Higher education is a key driver for societal growth in the Global South. Developing the capacity of universities in Africa is now widely included in donor policies. Adriansen, Madsen and Jensen (2016) explore the roles that specific places and relationships have in knowledge production. Teaching and research is explored by analysing the geography of scientific knowledge. Ideas of legitimate scientific knowledge are negotiated and contested.

Geography is a factor that impacts on participation in higher education. Many higher education institutes are located in urban areas. People living in rural areas may face barriers to accessing higher education, including facing transport and accommodation costs. Also, as higher education admission is often based on merit and determined by the level of quality of secondary schooling, this may discriminate against students from rural areas, where education facilities may be lower quality due to more limited resources than in urban areas (Power, Millington and Bengtsson, 2015).

3.5 Gender and diversity in higher education and research

Oketch, McCowan and Schendel (2014) found that higher education provides a range of broader, measurable benefits to graduates, relating to gender equality among other areas. Power, Millington and Bengtsson (2015) reported that the ratio of females to males enrolled is lower in middle-income countries than in high-income countries and significantly lower in low-income countries, where there are fewer than seven women enrolled for every ten men.

Table 3: Ratio of female to male higher education 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](#)

Evidence from **Eritrea** suggests that access to university was found to improve the freedom of women through greater earning capacity, avoiding restrictive marriages and in general having a better choice of future life with regards to career, travel and further study (Müller, 2004).

Widening participation in higher education can be a force for democratisation, reducing the impact of traditional beliefs that can reproduce privilege and exclusion. A study into the experience of female university students in **Ghana and Tanzania** reported a number of barriers to their education, including a strong social pressure to marry and bear children and sexual harassment. The research found that when gender is intersected with socio-economic status, the participation of poor women is found to be extremely low. Evidence of

gender stereotypes relating to particular disciplinary areas were also reported (Morley and Lugg, 2009).

A study into higher education and empowerment of women in **Pakistan** highlighted economic independence and status within both the family and society as the main benefits. Participation was reported to enable women to make changes for the better with regards to existing discriminatory practices. The authors recommend that future educational strategies are developed with the aim of further promoting gender equality in all areas of education in Pakistan, but particularly focusing on female participation in higher education (Malik and Courtney, 2011).

Low participation in higher education is reported as a key constraint to national development. A comprehensive review of the major obstacles that women face trying to participate in higher education in **Kenya** found that in the existing policy framework, gender is a determinant of educational provision. Colonial economic structures restrict women to a subordinate position. This combined with traditional beliefs can restrict participation. To overcome these challenges, governments must promote female education through legislative and policy reform (Sifuna, 2006).

It is important that leaders of higher education institutes are from diverse backgrounds to reflect the desired diversity in the student population (Brannelly, Lewis and Ndaruhutse, 2011b). Goodall (2006) reported that female leaders are underrepresented in the top 100 universities (most of them in high-income countries), as identified by the Institute of Education Shanghai at Jiao Tong University (SJTU) Index.

In **Ethiopia**, cultural and social impediments to women's education are reflected in higher education enrolment rates – 17 percent of full-time students (largely residential) in public universities are female whereas 24 percent of part-time (non-residential) public students are female. The private higher education sector shows a different trend with 44 percent of students being female. This difference is explained by location, with most private institutes being in Addis Ababa, allowing women to stay at home throughout their studying. In public universities, 7 percent of academic staff are women. In comparison, the regional average for women's participation in degree programmes is roughly 30 percent and the proportion of women academic staff reportedly about 18 percent (Saint, 2004).

Research focused on diversity dimensions of academic freedom argues that of all the divisions that polarise African universities as social and scholarly spaces, including class and ethnicity, gender is the most salient source of contestation. Women's access to higher education institutes remains unequal. The exceptions are **Botswana, Lesotho, Swaziland, Namibia, and South Africa** where gender parity in higher education was achieved by 2000. Apart from these countries, and with the exception of universities for women, such as Ahfad University, Sudan and Kiriri Women University of Science and Technology, Kenya, women remain under-represented in higher education institutes in Africa (Zezele, 2003).

A comprehensive reading list focused on the topic of gender and higher education is available on the University of Sussex website:

<http://www.sussex.ac.uk/wphegt/resources/bibliographies/genderafrica>

Disability is another dimension to equity and equality issues in access to higher education. Evidence from **South Africa** shows that disabled students in higher education find themselves in a contradictory conjuncture of rights, benevolence and the social model of disability. To move forward, South Africa must make a commitment to prioritise equal access to higher education for disabled students (Matshedisho, 2007).

Evidence from **Tanzania** indicates that a desire to overcome perceptions of discrimination and the challenges caused by disability, motivates students to pursue higher education. Higher education provides students with disabilities with a positive outlook on life and its achievement moves them towards a positive future. As social policy in Tanzania is increasingly aware of disability issues, new challenges (both social and physical) are reported. Higher education infrastructure remains inadequate. Also support structures to facilitate the academic development of these students is lacking. Action is needed to facilitate the wider participation in higher education in Tanzania of students with disabilities. Communities must be sensitised on the rights of people with disabilities. Resource allocation must be equitable and the admission process decentralised. More research is needed to show how university education has benefited the lives of persons with disabilities (Mwaipopo, Lihamba and Njewe, 2011).

3.6 The role of higher education and research for the SDG agenda

The Sustainable Development Goals (SDGs) are a universal set of goals, targets and indicators that UN member states will use to frame their agendas and political policies over the next 15 years. The SDGs follow and expand on the Millennium Development Goals (MDGs). Goal 4 is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The targets specific to higher education are:

- Target 4.3 – By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.
- Target 4.b – By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.

Some of the other Targets (such as Target 4.4 focusing on skills development; Target 4.5 focusing on equal access; Target 4.7 focusing on knowledge and skills to promote sustainable development; Target 4.a focusing on inclusive and effective learning environments for all; and Target 4.c focusing on teachers) are relevant to the higher

education agenda, despite not specially making reference to it. With the SDGs only being adopted in 2015, the literature focusing specifically on the role of higher education and research for the SDG agenda is limited and emerging.

Higher education has the potential to contribute to sustainable development by improving social justice by importing equity agendas through the composition of staff and student populations and exporting it by striving to achieve it across the rest of society. Since the international community adopted the SDGs, higher education is more critical than ever. Despite years of neglect, higher education is central to development in low- and middle-income countries. For Target 4.b, there is some concern that if scholarships for higher education are increased, without an adequate investment in higher education institutes, marginalisation may be increased. Capacity strengthening in higher education must be a priority. The challenge is how to release the developmental potential of higher education, while avoiding the elitist disconnection from society that has characterised higher education in the past (Power, Millington and Bengtsson, 2015).

The SDGs relevant to higher education focus on access for all. Yet evidence suggests that the quality of education provided to refugees is generally poor. Teacher quality for refugees is hard to achieve. Humanitarian efforts tend to focus on health, food and shelter (Kipng'etich and Osmon, 2016). Unless more attention is paid to the education of refugees, the SDGs that focus on education will not be achieved.

Global initiatives such as the World Declaration on Education for All and the MDGs changed the structure and composition of aid to education. To achieve the education targets outlined in the SDGs, a more complex set of policy strategies are needed. The success of the post-2015 education agenda depends on various factors, such as how well donors can engage with developing country governments and how education aid can effectively help shape domestic policies to improve education quality (Niño-Zarazúa, 2016).

Filho, Manolas and Pace (2015) provide an overview of the achievements of the United Nations Decade of Education for Sustainable Development (2005-2014) with a focus on higher education. They suggest some key issues which will guide the sustainable development for higher education in years to come. These include the need for suitable financial resources for higher education, as well as better coordination systems to allow progress to be monitored and assessed. Greater emphasis must be placed on models of best practice, as well as thought given to how they can be replicated in different contexts. The higher education community must take responsibility for initiating chain reactions that improve education for sustainable development. Visual arts and technologies can be utilised so people can better understand how sustainable development can improve the quality of their lives and communities.

Boni, Lopez-Fogues and Walker (2016) argue that the vision of higher education offered by the SDG agenda is too narrow and unable to capture the essence and full

meaning of sustainable human development. They propose placing human development as a concept at the heart of higher education, as its central elements such as its normative approach, ideas of capability, functioning and agency can offer a foundation for a more transformative institute. Higher education institutes have the potential to be powerful actors for sustainable development changes. The SDGs focus on a technical, measurable and human capital-centred view of education. Human development thinking offers a different narrative, with university policies being regarded as central to sustainable development outcomes.

The SDGs provide an opportunity to ground disability and education matters in a wider social justice agenda. For the goals to be successful, a greater understanding is needed of the conditions necessary to ensure that students with disabilities gain the opportunity of a quality higher education. Policymakers and those involved in higher education must pay attention to institutional policies that impact on such opportunities. Induction programmes on inclusive and diversity issues for staff may help achieve the desired outcome. Within the student population, differences and commonalities should be celebrated. This can be achieved through developing student awareness, empathy and action with regard to the lives of students with disabilities (Mutanga and Walker, 2015).

In addition to contributing to SDG 4, higher education has also been shown to have the potential to impact on some of the other SDGs. For example, the potentially significant social returns to higher education include increased tax revenues, the creation of new jobs, fostering entrepreneurship, increased civic engagement, increased philanthropy as well as increased community involvement and social cohesion (Bloom, Hartley and Rosovsky, 2007; Heuser, 2007). Higher education is shown to have a positive impact on state-building, democracy and good governance, which are vital for achieving the following goals:

- Goal 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Goal 16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Higher education is shown to have a positive impact on governance. It leads to increased civic engagement and improved social cohesion. It also has the potential to increase tax revenue, which has the potential to improve accountability between taxpayers and the authorities. Also, research conducted by higher education institutes has the potential to inform and improve the effectiveness of social policy and governance (Bloom, Hartley and Rosovsky, 2007). Higher education is shown to be a catalyst for change leading to modernisation and increased democracy. University education encouraging debate, critical thinking, meritocracy, and horizon broadening diversity of

opinion. All of these features of higher education can encourage tolerance and help develop positive leadership skills (Inglehart and Welzel, 2010; Heuser, 2007).

In a study focused on the experience of **Ghana**, Jones, Jones and Ndaruhutse (2014) reported that quality education played an important role in the formation of developmental leadership and was shown to promote social integration and shared values. Through their education, leaders gained qualities, many of which facilitated social integration and increased social mobility. The values created were found to be shared among the leaders. Higher education was found to be critical in delivering economic, political and media reform, thus contributing to improved governance.

References

Adriansen, H., Madsen, L. and Jensen, S. (2016). *Higher Education and Capacity Building in Africa: The geography and power of knowledge under changing conditions*. London: Routledge.

<https://www.routledge.com/Higher-Education-and-Capacity-Building-in-Africa-The-geography-and-power/Adriansen-Madsen-Jensen/p/book/9781138838154>

Bennell, P. (1996). “Rates of Return to Education: Does the conventional pattern prevail in Sub-Saharan Africa?” *World Development*, 24 (1): 183-199.

<http://mobile.opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/3325/Wp10.pdf?sequence=1>

Bloom, D., Canning, D. and Chan K. (2006). *Higher Education and Economic Development in Africa*. Washington DC: The World Bank.

<http://ent.arp.harvard.edu/AfricaHigherEducation/Reports/BloomAndCanning.pdf>

Bloom, D., Hartley, M. and Rosovsky, H. (2007). “Beyond Private Gain: the Public Benefits of Higher Education.” In Forest J and Altbach P. (eds.). *International Handbook of Higher Education*. New York: Springer.

<http://www.springer.com/us/book/9781402040115>

Boni, A., Lopez-Fogues, A. and Walker, M. (2016). “Higher education and the post-2015 agenda: a contribution from the human development approach.” *Journal of Global Ethics*, 12 (1): 17-28.

<http://www.tandfonline.com/doi/abs/10.1080/17449626.2016.1148757>

Brannelly, L., Lewis, L. and Ndaruhutse, S. (2011a). *Higher Education and the Formation of Developmental Elites: A literature review and preliminary data analysis*. Developmental Leadership Program Research Paper 10.

<http://publications.dlprog.org/Higher%20education%20and%20the%20formation%20of%20developmental%20elites.pdf>

Brannelly, L., Lewis, L. and Ndaruhutse, S. (2011b). *Learning and leadership – exploring the linkages between higher education and developmental leadership*. Developmental Leadership Program Research Paper 18.

<http://publications.dlprog.org/Learning%20and%20Leadership.pdf>

British Council (2015). *Bridging the Gap: Enabling effective UK-Africa University Partnerships*. London: British Council.

http://www.britishcouncil.org/sites/default/files/2.5_bridging-the-gap.pdf

Ca, T. (2006). *Universities as drivers of the urban economies in Asia: The case of Vietnam*. World Bank Policy Research Working Paper 3,949. Washington DC: World Bank.

<http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-3949>

Cloete, N., Bailey, T., Pillay, P., Bunting, I. and Maassen, P. (2011). *Universities and economic development in Africa*. Centre for Higher Education Transformation (CHET).

<http://chet.org.za/files/uploads/events/Seminars/CHET%20HERANA%20Universities%20and%20Economic%20Development%20WEB.pdf>

Creso, M. (2013). *Perspective of Industry's Engagement with African Universities*. Accra: African Association of Universities.

<http://www.aau.org/sites/default/files/University%20linkages/Perspective%20on%20Industry's%20Engagement%20with%20African%20Universities.pdf>

de-Graft Aikins, A. (2008). *One Size Doesn't Fit All: Insights from North-South Academic Partnerships in Africa*. NORRAG News, 41: 99-102.

<http://www.norrag.org/es/publications/boletin-norrag/online-version/the-new-politics-of-partnership-peril-or-promise/detail/one-size-doesnt-fit-all-insights-from-north-south-academic-partnerships-in-africa.html>

Filho, W., Manolas, E. and Pace, P. (2015). "The future we want." *International Journal of Sustainability in Higher Education*, 16 (1): 112-129.

<http://www.emeraldinsight.com/doi/abs/10.1108/IJSHE-03-2014-0036>

Goodall, A. (2006). "Who Are Leading the World's Top-100 Universities?" *International Higher Education*, Winter 2006: 3-4.

<http://ejournals.bc.edu/ojs/index.php/ihe/article/view/7877/7028>

Hansen, J. and Lehmann, M. (2006). "Agents of change: universities as development hubs." *Journal of Cleaner Production*, 14 (9-11): 820-829.

<http://www.sciencedirect.com/science/article/pii/S0959652606000205>

Heuser, B. (2007). "Academic Social Cohesion within Higher Education." *Prospects*, 37 (3): 293-303.

<http://link.springer.com/article/10.1007%2Fs11125-008-9036-3>

Inglehart, R. and Welzel, C. (2010). "Changing Mass Priorities: The Link between Modernization and Democracy." *Perspectives on Politics*, 8 (2): 551-567.

<http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=7804329>

Jones, P. (2001). "Are educated workers really more productive?" *Journal of Development Economics*, 64: 57-79.

<http://www.sciencedirect.com/science/article/pii/S0304387800001243>

Jones, A., Jones, C. and Ndaruhutse, S. (2014). *Higher Education and Developmental Leadership: The Case of Ghana*. Developmental Leadership Program Research Paper 26.

<http://publications.dlprog.org/Higher%20Education%20and%20Developmental%20Leadership%20-%20The%20Case%20of%20Ghana.pdf>

Kipng'etich, E. and Osmon, A. (2016). "Role of borderless higher education for refugees programme in offering high quality teacher education and training for refugees in Dadaab settlement in Kenya." *Advances in Social Sciences Research Journal*; 3(2): 9-19.
<http://scholarpublishing.org/index.php/ASSRJ/article/view/1795/pdf>

Knight, J. (2008). "*Africa in relation to other world regions.*" Chapter in Teferra, D. and Knight, J. (eds). *Higher Education in Africa: The International Dimension*. Accra: Association of African Universities.
<http://www.africanbookscollective.com/books/higher-education-in-africa-1>

Malik, S. and Courtney, K. (2011). "Higher education and women's empowerment in Pakistan." *Gender and Education*, 23 (1): 29-45.
<http://www.tandfonline.com/doi/abs/10.1080/09540251003674071>

Mamdani, M. (2007). *Scholars in the marketplace*. Dakar: Council for the Development of Social Science Research in Africa.
<http://www.codesria.org/spip.php?article945>

Matshediso, K. (2007). "Access to higher education for disabled students in South Africa: a contradictory conjuncture of benevolence, rights and the social model of disability." *Disability & Society*, 22 (7): 698-699.
<http://www.tandfonline.com/doi/abs/10.1080/09687590701659535>

Morley, L. and Lugg, R. (2009). "Mapping meritocracy: Intersecting gender, poverty and higher educational opportunity structures." *Higher Education Policy*, 22 (1): 37-60.
<http://www.palgrave-journals.com/hep/journal/v22/n1/pdf/hep200826a.pdf>

Mosweunyane, D. (2016). "Panjandrum in African Universities: Inapt Scholars for African Development." *English Language Teaching*, 4 (1): 1-8.
<http://www.elt-journal.dctthink.org/index.php/elt-journal/article/view/72/pdf-72>

Müller, T. (2004). "'Now I am free' – Education and human resource development in Eritrea: Contradictions in the lives of Eritrean women in higher education." *Compare: A Journal of Comparative and International Education*, 34: 215-229.
<http://www.tandfonline.com/doi/abs/10.1080/0305792042000214029>

Murenzi, R. and Hughes, M. (2006). "Building a prosperous knowledge economy in Africa: Rwanda as a case study." *International Journal of Technology and Globalisation*, 2 (3/4): 252-267.
<http://www.inderscienceonline.com/doi/abs/10.1504/IJTG.2006.011914?journalCode=ijt>
g

Mutanga, O. and Walker, M. (2015). "Towards a Disability-inclusive Higher Education Policy through the Capabilities Approach." *Journal of Human Development and Capabilities*, 16 (4): 501-517.

<http://www.tandfonline.com/doi/abs/10.1080/19452829.2015.1101410>

Mwaipopo, R., Lihamba, A. and Njewe, D. (2011). "Equity and equality in access to higher education: The experiences of students with disabilities in Tanzania." *Research in Comparative and International Education*, 6 (4): 415-429.

<http://rci.sagepub.com/content/6/4/415.full.pdf+html>

Niño-Zarazúa, M. (2016). "Aid, education policy, and development." *International Journal of Educational Development*, 48: 1-8.

<http://www.sciencedirect.com/science/article/pii/S0738059315300225>

Oketch, M., McCowan, T. and Schendel, R. (2014). *The Impact of Tertiary Education on Development*. DFID Education Rigorous Literature Review. London: DFID.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/327901/Tertiary-education-2014-Oketch2.pdf

Power, L., Millington, K. and Bengtsson, S. (2015). *Building Capacity in Higher Education – Topic Guide*. Health and Education Advice and Resources Team, UK.

<http://www.heart-resources.org/wp-content/uploads/2015/09/Capacity-Building-in-Higher-Education-Topic-Guide.pdf>

Psacharopoulos, G. (1985). "Returns to Education: A Further International Update and Implications." *Journal of Human Resources*, 20 (4) (Fall): 583-604.

http://econpapers.repec.org/article/uwpjhriss/v_3a20_3ay_3a1985_3ai_3a4_3ap_3a583-604.htm

Saint, W. (2004). "Higher Education in Ethiopia: The Vision and Its Challenges." *Journal of Higher Education in Africa*, 2 (3): 83-113.

http://www.jstor.org/stable/24486295?seq=1#page_scan_tab_contents

Sawyer, A. (2004). "African Universities and the Challenge of Research Capacity Development." *Journal of Higher Education in Africa*, 2 (1): 211-240.

<http://dfcentre.com/wp-content/uploads/2014/05/African-universities-and-the-challenges-of-research-capacity-building.pdf>

Schwartzman, S. (2008). *University and development in Latin America: Successful experiences of research centres*. Rotterdam: Sense.

<https://www.sensepublishers.com/catalogs/bookseries/global-perspectives-on-higher-education/university-and-development-in-latin-america/>

Sifuna, D. (2006). "[A review of major obstacles to women's participation in higher education in Kenya.](#)" *Research in Post-Compulsory Education*; 11 (1): 85-105.

<http://www.tandfonline.com/doi/abs/10.1080/13596740500507995>

Teferra, D. (2010). "*Deploying Africa's intellectual diaspora: potentials, challenges and strategies.*" Chapter in Teferra, D. and Greijn, H. (eds). *Higher education and globalization.* Maastricht: Maastricht University Center for International Cooperation in Academic Development.

<http://www.acp->

[edulink.eu/sites/all/files/documents/docs/HigherEducation%20and%20Globalization%20English.pdf#page=99](http://www.acp-edulink.eu/sites/all/files/documents/docs/HigherEducation%20and%20Globalization%20English.pdf#page=99)

The Task Force on Higher Education and Society (2000). *Higher Education in Developing Countries: Peril and Promise.* Washington DC: World Bank.

http://siteresources.worldbank.org/EDUCATION/Resources/278200-1099079877269/547664-1099079956815/peril_promise_en.pdf

Tilak, J. (2007). "[Rate of Return to Education: Best Practice?](#)" *NORRAG News*, 39: 83-86.

<http://www.norrag.org/es/publications/boletin-norrag/online-version/best-practice-in-education-and-training-hype-or-hope/detail/rate-of-return-to-education-best-practice.html>

Tilak, J. (2003). "[Higher Education and Development in Asia.](#)" *Journal of Educational Planning and Administration*, XVII (2): 151-173.

<http://www.nuepa.org/libdoc/e-library/articles/2003jbgtilak.pdf>

Thomson, A. (2008). *Exploring the Relationship Between Higher Education and Development: A Review and Report.* Brighton: Guerrand-Hermes Foundation for Peace.

http://www.ghfp.org/Portals/ghfp/publications/thomson_hei_role_dev.pdf

Varghese, N. (2010). "[Higher Education Aid: Setting Priorities and Improving Effectiveness.](#)" *Journal of International Cooperation in Education*, 13: 173-187.

<http://home.hiroshima-u.ac.jp/cice/wp-content/uploads/2014/03/13-2-11.pdf>

Wanni, N., Hinz, S. and Day, R. (2010). *Good Practices in Educational Partnerships Guide – UK-Africa Higher & Further Education Partnerships.* London: The Africa Unit.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31917/10-1031-africa-unit-good-practices-guide-final.pdf

World Bank (2009). *Accelerating Catch-Up: Tertiary Education for Growth in Sub-Saharan Africa.* Washington DC: World Bank.

http://siteresources.worldbank.org/INTAFRICA/Resources/e-book_ACU.pdf

Zezeza, P. (2003). "Academic Freedom in the Neo-Liberal Order: Governments, Globalization, Governance, and Gender." *Journal of Higher Education in Africa*, 1 (1): 149-194.
<http://www.jstor.org/stable/24486118>

Literature summary table

Resource	Trends in higher education	Rates of return	University partnerships	The role of universities for development	Links between higher education and development	Geography of power and knowledge	Gender and diversity in higher education	Higher education and the SDGs
Adriansen, Madsen and Jensen (2016)						X		
Bennell (1996)		X						
Bloom, Canning and Chan (2006)					X			
Bloom, Hartley and Rosovsky (2007)								X
Boni, Lopez-Fogues and Walker (2016)								X
Brannelly, Lewis and Ndaruhutse (2011a)	X	X			X			
Brannelly, Lewis and Ndaruhutse (2011b)			X		X		X	
British Council (2015)			X					
Ca (2006)				X				
Cloete <i>et al.</i> (2011)				X				
Creso (2013)			X					
de-Graft Aikins (2008)	X							
Filho, Manolas and Pace (2015)								X
Goodall (2006)							X	
Hansen and Lehmann (2006)				X				
Heuser (2007)								X
Inglehart and Welzel (2010)								X

Jones (2001)					X			
Jones, Jones and Ndaruhutse (2014)				X	X			X
Kipng'etich and Osmon (2016)								X
Knight (2008)			X					
Malik and Courtney (2011)							X	
Mamdani (2007)	X							
Matshedisho (2007)							X	
Morley and Lugg (2009)							X	
Mosweunyane (2016)				X				
Müller (2004)					X		X	
Murenzi and Hughes (2006)	X							
Mutanga and Walker (2015)								X
Mwaipopo, Lihamba and Njeweje (2011)							X	
Niño-Zarazúa (2016)	X							X
Oketch, McCowan and Schendel (2014)	X		X				X	
Power, Millington and Bengtsson (2015)	X		X	X	X	X	X	X
Psacharopoulos (1985)		X						
Saint (2004)							X	
Sawyers (2004)				X				
Sifuna (2006)					X		X	
Schwartzman (2008)				X				

Teferra (2010)			X					
The Task Force on Higher Education and Society (2000)	X	X						
Thomson 2008	X		X					
Tilak (2007)		X						
Tilak (2003)					X			
Varghese (2010)	X							
Wanni, Hinz and Day (2010)	X		X					
World Bank (2009)		X						
Zeleza (2003)	X						X	
