

# Emerging Research University in Africa: Divergent Views on Relevance and Experiences

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**Abstract** This article provides an analytical literature review on the emerging research university in Africa. Specifically, we advance a deliberation of whether a research university is relevant and various experiences that denote its emergence. Notably, there is a global acknowledgement of universities as major centres for knowledge production. However, commitment to teaching with a minimum focus on research function seems to be a noticeable feature of most African universities. In the last 15 years, some African universities have indicated aspirations and efforts to become research universities. Exploring both theoretical and empirical studies, while reflecting on their rhetoric and real perspectives, we establish that there are divergent views on relevance and experiences of the emergence of a research university in Africa. Relating to the backdrop of this study, which is the link between knowledge and economic advancement, we discuss these divergent views. To date, few studies have provided an in-depth understanding of the emerging research universities in Africa. We advance a wider outlook on African higher education initiatives and directions on constructing research universities and suggest novel avenues for future research.

**Keywords** research, research university, Africa, knowledge economy, knowledge production, economic development.

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**1. Introduction** In this paper, we review literature exploring emerging research university in Africa with special deliberation on their relevance and experiences. The backdrop of this exploration is the contemporary conditions of the global economy place knowledge as important productive force [Evoh, Mugimu, Chavula 2013; Kaur, Singh 2016; Khalil, Marouf 2017; WBI 2009]. These conditions in the global economy are rooted

in the knowledge economy notion meaning production and services base on knowledge-intensive activities, and the key is a reliance on intellectual capabilities than on physical inputs or natural resources [Powell, Snellman 2004].

Therefore, there is an emergence of higher education reforms globally to strengthen research as a result of expectations on universities as core knowledge producers in society to play a crucial role in economic development [Altbach 2011; Kahsay 2017; Marozau, Guerrero 2016; Salmi 2003].

A research university is a concept that a Prussian philosopher Wilhelm von Humboldt originated in the 19th century in Germany, describing universities that closely intertwine research and education in one place [Morgan 2011]. Altbach [2009; 2013], professor of higher education and former director of the Centre for International Higher Education (CIHE) at Boston College, argues that research universities are at both the centre of the global knowledge economy and the pinnacle of the national higher education system.

Since the establishment of the Humboldtian ideal in the early 19th century, many institutions have embraced the concept of linking science and research to national goals of modernisation [Mohrman, Ma, Baker 2008]. Notably, the world has changed since von Humboldt's time, advanced nations seem to be moving away from the manufacturing-based economies they esteemed throughout the 20th century, towards knowledge-based economies [Nicolaidis 2012].

A research university is seemingly a transforming notion, meaning that different nations adapted it uniquely to suit their contexts. Literature present how universities evolved into research universities in different parts of the world for example, [Clark 1993; Altbach, Balán 2007; Altbach, Salmi 2011].

Research universities seemingly being the centre of the global knowledge economy, its analysis appears to ignore developing and middle-income countries [Altbach, Balán 2007]. Conversely, there is the emergence of research universities in recent studies from different parts of the world including developing and middle-income nations for example [Shin, Lee 2015; Zohreh, Nadergholi, Ali 2011; Rungfamai 2017; Ramli et al. 2013; Hladchnko, de Boer, Westerheijden 2016; Huang 2015]

Focusing on the African context, the culture of African universities after independence did not support research as most universities started as teaching institutions often allied with a metropolitan university of colonial power [Zeelen 2012]. Post-independence African universities were expected to be key producers of the human resource of their countries to address the critical shortages and gross underdevelopment of universities under colonialism after the departure of colonial administrators and professionals [Cloete et al. 2011].

Despite the arguments that African universities continue to be teaching universities, the last decade depicts that some African uni-

versities are trying to achieve research university status [Altbach 2013; Teferra 2016; Bunting, Cloete, Schalkwyk 2017; Cloete, Bunting, Schalkwyk 2018; MacGregor 2015; Juma 2016; Kahsay 2017].

While research universities have been widely acknowledged for their potential, research about them in Africa is still in its infancy. Additionally, studies on the evolvement of research universities and its perceived relation to the knowledge economy, the focus is largely on advanced nations and emerging economies from Asia and Latin America, with few focusing on Africa [Asongu 2015; Teferra 2017].

The focus of this article is stirred by some universities in Africa indicating aspirations to become research universities [Altbach 2009]. Therefore, we explore two main questions in this article. Firstly, what is the relevance of research universities in the African context? Secondly, what are the experiences denoting the emergence of research universities in Africa? We begin by describing the review methods and provide a brief theoretical background on a notion of a research university.

## **2. Search Methods**

A broad base of literature has emerged on the topic of a research university and its role to economic development, both from African and non-African context and scholars. To ensure that our literature review covered a wide range of sources incorporating both local and international perspectives, we started the search in 2017 from different databases. We searched EbscoHost Web, ERIC, and SCOPUS, African journals online (AJOL), and the wider Internet with Google Scholar. We conducted all searches using a mix of the keywords [Ridley 2012]. The keywords included African universities, transition, research-intensive, knowledge production, knowledge economy, knowledge production in Africa, knowledge economy in Africa, higher education transformation in Africa, research universities, research-intensive universities, African universities research capacity, African universities research performance and research universities in Africa.

We used the keywords interchangeably and found 144 sources related to the topic. By reviewing the abstracts of these sources, we remained with 94 related articles by eliminating irrelevant literature based on exclusion criteria, meaning studies with very broad coverage or did not relate to research universities or African universities transition to research universities. Out of 94, we reviewed 77 sources that seemed relevant for our topic [Jesson, Matheson, Lacey 2011].

We aim to explore the relevance and experiences of the emerging research university. Through a process of, reading, summarising and reviewing, divergent views emerged around the topic of relevance and experiences emerging research universities in Africa, and it was through these that the ultimate format of the review began to take shape. We discuss these views in turn and suggest areas for further research.

- 3. Brief Theoretical Background**
- 3.1. Research University Definition**
- Altbach [2007; 2009; 2011; 2013] defines a research university as an academic institution dedicated to the creation and dissemination of knowledge in an array of disciplines and fields; it has the suitable laboratories, libraries, and other infrastructures that lead to teaching and research of the excellent levels. A research university priorities discovery of new knowledge and the production of PhDs in a wide range of disciplines [Mohrman, Ma, Baker 2008].
- 3.2. Foundations of a Contemporary Research University**
- Since their origins in medieval Europe, universities were concerned with the transmission, preservation, and interpretation of knowledge, not primarily with the creation of new knowledge [Altbach 2007]. For centuries, universities were known to play the role of teaching institutions but later in the 19th century, German universities began to bring in scholars for research activities to produce new knowledge. Consequently, American universities started to include 'research universities', following the German model [Atkinson, Blanpied 2008].
- The trend of a research university came about in the American higher education system to fulfil the government's needs for new scientific knowledge and the production of well-trained human resource in the areas of health, economy and the military [Duderstadt 2004]. This trend together with establishment of partnership between the government and universities was later followed by other countries due to globalisation and the rise of the market-driven economy [Ibrahim, Mansor, Amin 2012].
- The popularity of the research-oriented university is associated with the success of American university system models. While this model is now vastly imitated throughout the world, it is very specific to America [Castells 2017]. Mohrman, Ma, and Baker [2018] describe what they refer to as an emerging global model of a research university. They also argue that many of the features of this model are rooted in the American experience and is embraced globally.
- America was influenced by the Germany model [Rhoads 2018], as a result, the German university model still pervades some elite American institutions today [Baker, Lenhardt 2008]. However, the model of American universities is too diverse to be described as a product of a model imported from a single country [Ash 2006]. The new US research university model has proven to be a huge success and other countries started to duplicate the graduate school model [Ramli et al. 2013].
- 3.3. Defining Attributes of a Research University**
- Globally research universities seem to possess the following key features. The features we present are not all-inclusive but are those present across extant studies.
- First, most research universities are public institutions with few exceptions such as private research universities in the United States and other countries such as Japan and Chile [Altbach 2009]. Second, research universities engage in intensive knowledge production and wide dissemination [Mohrman et al. 2008; Altbach 2007]. Third, re-

search universities produce new Ph. Ds. with high quality [Altbach 2009; Mohrman et al. 2008; Chirikov 2013].

Also, research universities possess high-quality faculty meaning staff with PhD [Altbach 2007; 2009; 2011]. Furthermore, research universities have appropriate facilities and infrastructure such as laboratories and libraries [Altbach 2009, 2011]. Most importantly research universities have Sufficient and diversified research funding [Altbach 2009; 2011; Lavalle, Nicolas 2017].

Collaboration with government, industry and other universities globally is another attribute of research universities [Rhoads 2011; LERU, AAU, G08, C92013]. Autonomy and academic freedom are important requirement for research universities to shape their programs and practices [Altbach 2011; 2013; LERU, AAU, G08, C92013].

#### **4. Findings and Discussion**

In our review, we focus on the debates that are informing the relevance of research universities in Africa and experiences denoting its emergence in the global knowledge economy context.

##### **4.1. Africa and the Knowledge Economy**

In the introduction of this paper, we highlight the link between knowledge and economic advancement and consequently the role of universities in the knowledge economy. Therefore, it is worthwhile to feature the position of Africa in the knowledge economy. We do not discuss the knowledge economy in this paper as it is not our focus. For the definitions, dimensions, and different issues on the knowledge economy see [Chen, Dahlam 2005; Kaur, Singh 2016; Olssen, Peters 2005; Powell, Snellman 2004; World Bank 2008a; World Bank 2008b].

Comparing to other regions in the world Africa lags regarding its knowledge economy [Asongu, Kuada 2020]. This is associated with numerous factors one being the knowledge-application gap. Africa has a minimal emphasis on research and development activities in general and cannot convert research and development activities into manufactured products [Evoh et al. 2013]. There is weak institutional framework for an adequate flow of knowledge between scientific research and technological applications, as well as upright information flow between knowledge users and researchers [Andrés, Asongu, Amavilah 2015].

For other challenges hindering African nations towards knowledge economy see [Asongu, Kuada 2020; Kolo 2009; Oluwatobi et al. 2020]. Amidst different challenges, the experiences of some developing nations such as India, China, and South Korea shows that it is possible for Africa to leapfrog and catch up with developed economies by using knowledge as a driver for development [Oluwatobi et al. 2020]. In our view this can be bolstered by simultaneously revising the structure of African economies, which currently human capital only play a complementary role while physical capital driving long term growth [African Development Bank Group 2020].

#### 4.2. The Relevance of Research Universities to African National Economic Advancement

For large part knowledge for the economy is an accepted rationale behind the pursuit of research university globally. But most nations in Africa are still dependent on the agricultural and industrial economy and have an elusive connection between knowledge and economy. Then why is research university relevant in Africa? We review extant studies and various documents to address this question

In the early 2000s, international organisations like the World Bank (WB) and regional agencies such as the African Union (AU) and the African Development Bank (AfDB) championed the agenda of revitalising African higher education specifically to align the system with the economic development needs and strategies of national governments [Molla, Cuthbert 2016]. Noting that the WB is one of the main drivers of knowledge economy initiatives in the world, through education, resource sharing, and its online Knowledge Assessment Methodology (KAM) tools [Weber 2011].

Rapid changes in innovation and technology and increasing demand of the labour market for skilled human resource in a global knowledge economy deem investing in African universities critical for developing an inclusive and diverse knowledge society that can progress research, innovation, and creativity to quicken development [Waklaga 2015]. Anyanwu [2012] also concedes that this is the age of incredible pace of knowledge creation, sharing and application in all parts of the economy and society therefore if any nation fails to place itself properly in this global, knowledge-based market place will be unable to compete. With the world moving increasingly toward a knowledge economy, higher education in Africa can help the continent's economies keep up or catch up with advanced societies [Bloom et al. 2014].

United Nations Economic Commission for Africa [UNECA 2012] points out that agriculture and natural resources attributed to the impressive growth of African economies in the past decade. However, the commission contends that Africa's development potential can be set free with the maintenance and development of its intellectual capital. Blankley and Booyens [2010] claim that for developing countries to build their potential as knowledge economies, investments in human capital and a highly skilled labour force, as well as infrastructure for high-technology industries, are essential.

Extant studies depict increased agreement to capitalise on the fact that knowledge is crucial for African economic development [Atuahene 2011]. Pinheiro and Pillay [2016] provide reasons why developing countries need to regard the importance of higher education for national and regional economic development. One is education and training, and research functions enable economic growth and widen participation in the knowledge-based economy. Second, developing countries should not only base their economies through the skills provided by primary and secondary education alone; but also, through skills provided by the higher education system which can raise economic growth rates more quickly.

Despite various challenges facing research activity in African universities [Evoh, Mugimu, Chavula 2013; Fussy 2018; Njuguna, Itegi 2013; Pillay 2015; Salmi 2017; Wangenge-Ouma, Lutomiah, Langa 2015], there is the acknowledgement that Africa's growth needs to be driven by knowledge in the context of growing knowledge-based economies on the continent [Kamara, Bousrih, Nyende 2007].

The empirical analysis of the relationship between the level of knowledge and economic growth across developing economies including sub-Saharan Africa establish that although economic growth is determined by various factors; better educational institutes and more research and development leads to the positive economic growth [Kaur, Singh 2016]. African higher education can assist countries with technological catch-up and thus improve the potential for faster growth [Bloom et al. 2014].

Altbach [2009] argues for the importance of research universities in developing and middle-income countries postulating that knowledge production and dissemination are not to remain a developed nation's domain, convincing that all the regions of the world need a role in the knowledge network. Therefore, identifying, recognising, strengthening, and investing in research universities in Africa is vital and will provide a suitable base to develop Africa knowledge economy [Fonn et al. 2018]. As the post-2015, development agenda of Africa depends on a feasible cost effect and an efficient higher education system that results in relevant and sufficient research output [Pillay 2015].

There is an assumption that educational institutions could support knowledge-driven economic growth and poverty reduction [Evoh, Mugimu, Chavula 2013]. However, evidence to support these claims in African context seems flaccid as African universities and their national governments make claims about their status as pre-eminent research universities on the continent; but the reality on the ground is both uneven and at times even contrary to those claims [Cloete, Bunting, Schalkwyk 2018].

#### 4.3. Research Universities and Africa's Economic Growth Critic

There are contrary arguments to the relevance of research universities to economic development in Africa and global economic engagement. The few indices that try to measure knowledge economies highlights Africa among other developing countries poor performance in the knowledge economy [Ojanperä, Straumann, Zook 2017; Kaur, Singh 2016].

In evaluating the relationship between universities and development in Africa, Cloete et al. [2011] argue that there no clarity and agreement about a development model and the role of HE in development, at both national and university levels. They add that, there is, however, an increasing awareness, particularly at the government level, of the importance of universities in the global context of the knowledge economy.

Kahsay [2017] portraying the vitality of university research in economic development in Ethiopian context establishes that the contribu-

tion of the Addis Ababa University enhancing the economic growth of the country through research and innovation is minimal due to challenges such as insufficient research funding. Juma [2016], an African scholar and internationally recognised authority in the application of science and technology to sustainable development worldwide, claims that the current level of investment in higher technical training and research is low.

Evoh, Mugimu and Chavula [2013] conducted a study to assess whether the African higher education system is ready to contribute to the competitiveness in the knowledge economy. Using institutions of higher education in Kenya and Uganda as case studies, they contend that Africa is not well equipped to produce knowledge for the advancement of African economies.

Zeelen [2012] discusses the current dynamics at African universities concerning the role of research drawing experiences from some universities in South Africa, Uganda, Tanzania, Mozambique, and Ghana. Highlighting the common functional orientation towards excellence in teaching, research, and community outreach, she points out that African universities are predominantly teaching institutions with weak connections to the labour market.

Similarly, Sall and Oanda [2014] two African scholars at the Council for the Development of Social Science Research in Africa (CODESRIA) argue that despite many policy initiatives to revitalise higher education and strengthen its critical role in the continent's development, there is still a question on its impact. Research in Africa is still characterised by low technical skills and competencies of the faculty, financial constraints and brain drain contributing to ill-prepared research graduates and poor research culture [Njuguna, Itegi, 2013].

Fussy [2018] exploring the Tanzanian context argues that development of research in universities face various barriers comprising a fragmented connection among key research stakeholders, insufficient research funding, lack of reading and writing culture and heavy teaching and administrative workload. He argues that these barriers present a weakening impact on the production, dissemination and utilisation of research-based knowledge and skilled researchers, which could subsequently foster the country's socio-economic development.

There are differing views regarding the vitality of the research role of universities and its relevance to economic development. African universities seem to be at the crossroads, therefore more empirical studies are required to build on current debates to shed more light to this paradox.

#### 4.4. Experiences Denoting the Emergence of a Research University in Africa

The prevalent university education in Africa is in essence, a postcolonial occurrence except for North Africa, which has a different history [Sawyer 2004]. However, after independence universities in Africa have been taking different shapes and serving different purposes, as Aina [2010] presents the experience of reforms in African higher edu-



cation linked with the economic and political crises of the 1970s and 1980s that headed them.

Since the end of the 1990s, higher education in Africa regained interest among donors [Assie-Lumumba 2006]. Therefore, the agenda of revitalising African higher education to serve economic needs and government strategies emerged in the 2000s, driven mainly by the WB and AU [Molla, Cuthbert 2016].

Various discourses and the role played by universities at different times in history are accounted for in various studies [Aina 2009; Cloete, Bunting, Schalkwyk 2018; Woldegiorgis, Doevenspeck 2013]. With examples we analyse the continental, regional and national initiatives that have been geared to improve the research role of universities in Africa hence denoting emergence of research universities in the continent.

Studies we review portray conflicting experiences about the emergence of research universities. One side portrays the optimistic stance that African universities are strengthening their research role. While some studies argue otherwise; that African universities are far away from being research universities. We present both sides of arguments discussing various continental, regional, and national initiatives reflect the experiences of African universities and its research role.

#### 4.4.1. Continental Initiatives

In 2005, the African Union Commission (AUC) and the secretariat of the New Partnership for Africa's Development (NEPAD), currently renamed the African Union Development Agency (AUDA) launched the African Science and Technology Consolidated Plan of Action. Articulating the use of science and technology for the socio-economic transformation of the continent and its integration into the world economy, the plan emphasized the development of an African system of research and technological innovation [AU2005].

The AU also put forward the Agenda 2063 in 2015, which in its first aspiration highlights the intention of Africa to develop its human capital through sustained investments at various levels of education including sustained investments in higher education, science, technology, research and innovation. It also aspires to expand access to post-graduate education and ensure world-class infrastructure for learning and research and support scientific reforms that underpin the transformation of the continent [AUC2014].

Another initiative is the AU's 10-year Science, Technology, and Innovation in Africa Strategy 2024 (STISA-2024) of 2014, which aims to respond to the need of transforming Africa into a Knowledge-based and Innovation-led society [STISA 2014]. Discussing how to forge strategic linkages economic transformation, Juma [2016] argues that the achievement of the objectives of STISA-2024 will entail aligning education, research, and innovation with long-term socio-economic objectives.

Molla and Cuthbert [2016] discuss some of the recent higher education development initiatives in the continent, which they construe as

a mark of noteworthy re-imagining of Africa as a knowledge economy. We only highlight two of them, one is the AU's establishment of the Pan African University (PAU) in 2010, with the aim of training master's and PhD students to revitalise higher education in Africa. The second initiative is the World Bank's Africa Higher Education Centres of Excellence Project in 2014. Financed by the WB, this project funds 19 university-based centres of excellence in West and Central Africa and emphasise the role of research in providing African nations with knowledge solutions to enhance development.

There are also continental initiatives run by independent non-governmental organisations, for example, the Council for the Development of Social Science Research in Africa (CODESRIA), with headquarters in Dakar, Senegal. It was established in 1973 as an independent pan-African research organisation to focus on social sciences research in Africa. Its objectives among others are to promote and facilitate research and knowledge production in Africa using a holistic, multi-disciplinary approach [CODESRIA 2014].

#### 4.4.2. Regional Initiatives

One example of the regional initiatives is the African Research Universities Alliance (ARUA) established in 2015 to help a subset of institutions evolve into leading research universities. This alliance advocates for strengthening research and postgraduate training in higher education. With the key intention of addressing the development priorities of the African continent, the primary focus of ARUA is to build indigenous research excellence to assert Africa as a powerful global force [MacGregor 2015].

This initiative is an illustration of similar regional initiatives to fostering research in Africa. They are challenges underway, but they demonstrate the efforts to strengthen research in Africa post-independence and mostly in the last decades. They are also devoted to improving the knowledge production by cooperating with faculties of African universities in respective member countries. Lastly, they boost the number of staff with PhDs in African universities in the respective member countries of programmes.

#### 4.4.3. National Initiatives

This section explores efforts at the national level. Research universities in most countries get their financial support largely from public sources [Altbach 2011; Atuahene 2011]. Also, through the allocation of public resources from national councils for science and technology higher education institutions and research centres on the continent have made steps in investing in knowledge production processes [Oanda, Sall 2016].

Using the ARUA member countries as examples, we present the government funding towards higher education from 2012 to 2015 using data from the United Nations Educational, Scientific, and Cultural Organisation (UNESCO). We present only 4 of the 16 ARUA member countries whose data were available by February 2019, from 2012

**Table 1. Government Expenditure on Tertiary Education as a Percentage of Gross Domestic Product (%)**

| Country      | 2012 | 2013 | 2014 | 2015 |
|--------------|------|------|------|------|
| Ethiopia     | 2.61 | 1.92 | 2.11 | 2.27 |
| Kenya        | 0.97 | 0.77 | 0.72 | 0.69 |
| Senegal      | 1.61 | 2.43 | 2.13 | 2.28 |
| South Africa | 0.76 | 0.75 | 0.74 | 0.75 |

Source: [Data extracted from the UNESCO Institute for Statistics \(UIS\)](#), April 9, 2019.

to 2015. These countries exemplify national initiatives to promote research because they are flagship universities that indicate aspirations to become research-intensive [MacGregor 2015]. We view government funding towards higher education as the national hallmark for strengthening research in African universities.

Research universities cannot thrive based on inadequate funding or severe budgetary fluctuation over time [Altbach 2011]. Table 1 indicates the fluctuation of government expenditure on higher education per Gross Domestic Product (GDP) from 2012 to 2015. Ethiopia and Senegal, despite the fluctuation, maintain their expenditure on higher education above 1.5% of GDP, whilst South Africa and Kenya remain under 1%. One of the agreements of African Science and Technology Consolidated Plan of Action is for African countries to allocate at least one per cent of their gross GDP to research and development by 2020 [AU2005].

However, the trend in Table 1 connotes that the allocation of 1% of GDP to research and development remains rhetorical. We assume this as in Africa University seems to be the only knowledge institution, and hardly any knowledge is produced outside of the university [Cloete, Maassen, Bailey 2015]. So, if less than 1% is spent on overall higher education, research operations inclusive, then it means to research and development alone to get at least 1% from the government is difficult.

#### 4.5. Contrary Views on Emerging Research Universities in Africa

Discussing the importance of postsecondary education Salmi [2017] argues that the research output of African universities is lagging intensely behind that of OECD economies demonstrating the low performance of their research universities. He argues that this situation reflects the absence of ambitious science and technology development strategies in most developing countries, limited funding for research, and the lack of critical mass in the research community.

Wangenge-Ouma, Lutomiah, and Langa [2015] claim that despite an exponential increase in the number of students in African higher education in the past two decades, the research component of the

**Table 2. Shanghai (ARWU) rankings for African universities (2018)**

| Region       | Top 20 | Top 100 | Top 200 | Top 300 | Top 400 | Top 500 | 500–1000 |
|--------------|--------|---------|---------|---------|---------|---------|----------|
| Americas     | 16     | 50      | 79      | 110     | 142     | 167     | 113      |
| Europe       | 4      | 34      | 80      | 120     | 157     | 195     | 171      |
| Asia/Oceania | -      | 16      | 41      | 69      | 99      | 133     | 205      |
| Africa's     | -      | -       | -       | 1       | 2       | 5       | 11       |
| Total        | 20     | 100     | 200     | 300     | 400     | 500     | 500      |

Source: Data extracted from the Shanghai Academic Ranking of World Universities (ARWU), April 9, 2019

university has rarely changed. They argue that African universities are still teaching-intensive due to the structural milieu, which portrays inadequate conditions and incentives to drive academics to engage in a more productive knowledge production culture.

Although several African traditional universities are seeking to improve their quality to achieve research university status, with assistance from external funders, their process is behind levels of academic development compared to those in the other continents such as Europe and America [Altbach 2013]. The recent statistics of the performance of African universities in research output reflect this.

In another study, Cloete et al. [2011] argue that research production at the eight African universities that they explored is not strong enough to enable them to build on their traditional undergraduate teaching roles and make a sustainable, comprehensive contribution to development through new knowledge production. They add that these universities lack sufficient funds for staff to engage in research and the incentive regimes do not support knowledge production.

These arguments portray that there is a gap between aspirations, goals and objectives of African universities concerning research performance and the realities of their performance. There is a positive trajectory of research performance exhibited by some African universities, but largely they remain weak in research output.

## 5. Conclusion

Knowledge is associated to economic advancement in different parts of the world. This is truer in most advanced nations but not the case in most developing nations, particularly Africa. However, there is a promise of leapfrogging and catching up with advanced economies as experience shows in some developing nations such as India and South Korea.

With the promise of leapfrogging and catching up there is a need for a holistic approach towards building research universities in Africa, with a goal for research universities to contribute to both the so-

cial and economic development of nations. Developing strong relations between research universities, government and industries is critical to reduce the knowledge-application gap and accelerate innovation.

We propose further investigation of the contextual understanding of emerging research universities in Africa with robust methodologies. To date, few studies have provided an in-depth understanding of contextual realities related to the emerging research universities in Africa. As the literature indicates, although there are similar features to research universities globally, differences exist in how they emerge in different nations. Moreover, studies with empirical evidence to explore the conceptual understanding of the expected role of African universities and its relevance to the realities of the continent is fundamental.

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