Ee-JRIF

Ethiopian e-Journal
for Research and Innovation Foresight

Ee-JRIF Vol 3, No 2 2011 –Special issue on Knowledge Issue: pp (92-108)

Promises and Perils of the Virtuous Knowledge Exchange Cycle in Ethiopian HEIs

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Abstract

Advanced economies are now moving from a resource-based to a knowledge-based mode of production. National governments of many developing economies also have come to recognize knowledge and innovation as significant driving forces of economic growth and social development. However, they have many challenges to handle before they pave the way to exploit the knowledge resource they have. In light of this view, Higher Education Institutions (HEIs) are required to play a pivotal role in driving this vision by complementing their traditional role – teaching and research – with the development of an effective knowledge exchange system with the private and public sectors. To be able to do this, they need to develop an innovative approach that allows them to exploit the knowledge that exists outside their reach for further knowledge reconstruction. This vision, however, requires clear deliberation on important strategic as well as technical issues. This paper highlights the challenges of universities are facing in the 21st century. It discusses the rationale for knowledge exchange by identifying the challenges and opportunities universities locally are confronted with. It concludes by identifying priority issues the institutions engaged in higher education delivery must not ignore, whilst also focusing and considering the implementation of knowledge exchange in Ethiopian universities.

Key words: Higher education, knowledge exchange, higher education institutions, innovation, university graduates

Jel Codes: D8, I23, I25

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. Introduction

Society and universities need each other. Society provides the people, the resources and the infrastructure. Universities offer a variety of knowledge by constantly constructing disseminating and reconstructing knowledge production. As products of the society in which they operate, universities in return are influenced by societal requirements. Unlike earlier times, prior to 1990s, that advocated investment in primary and secondary education, the last two decades have seen considerable progress towards the wide acceptance of the crucial role that universities play to promote economic competitiveness, regional regeneration and creation of innovation hubs for business and the community (The World Bank 2002, 2009a). This international recognition has accelerated the growth in the sector; but, in order for this growth to be qualitatively meaningful, a mechanism that allows the flow of knowledge between university and society – a virtuous cycle of knowledge exchange – needs to be in place.

The paper explores the international context of Higher Education (HE) whose constant change is mainly attributed to changes in the contemporary world of knowledge economies. While doing so, it identifies the challenges and opportunities the international setting offers to local universities found in developing economies. Thus, this argument brings about the essential role that the Knowledge Exchange (KE) process introduces to the expected function that Higher Education Institutions (HEIs) are believed to deliver for societal development while at the same time enhancing their internal performance. Finally, the paper addresses key concerns pointing of the way forward to tackle challenges in the Ethiopian context of KE.

2. The realities of the 21st century and the context of HE in Developing Economies

While land was the main source of wealth and income in agricultural societies, capital and machinery were in the industrial society. Today, information and knowledge drive economic growth which gives HE a preeminent space in the production and dissemination of knowledge. However, for the cycle to be complete and for knowledge to bring about desired development, the two dimensions - production and dissemination - need to be supported by the third one – knowledge absorption by the society from which it is constructed (Rochford 2007). This paper argues that the HE system, particularly in developing economies, need to go beyond the

traditional mission of universities - that of teaching and research - and embark on knowledge exchange to impact on economic, social and cultural aspects of life.

Knowledge economies place greater significance and accord significant priority to the production, dissemination and absorption of knowledge. While it is true that some countries produce more knowledge than others, those who produce less need to work much harder and devise ways of protecting themselves from the monopoly of it. The World Bank Report (2009a) estimates that nearly half of today's HE students live in the developing world. However, across most of the developing world, the potential of HE to promote development is being realized only marginally. Thus these developing economies will need to focus on strategizing on their knowledge systems if they aspire to bring about development through their HE systems. Although the challenge is immense, there is room for HEIs of developing economies to be able to identify their niche in this regard. While considering the scenario of HE in the contemporary world, this section opts to adopt three major areas of analysis – expansion, differentiation, and knowledge revolution– which have been taken as major stances of development of HE in World Bank's report (2000) and are highly related to concerns of quality in the system.

a. Expansion - In 1995 more than 47 million students were enrolled in HE in the developing world, up from nearly 28 million in 1980 (The World Bank 2009a). The effect of the constantly increasing number of students in HE worldwide cannot only be seen in terms of numbers. Above all, this quantitative increase has brought about noticeable changes in the demography of the adult population. There is growth in income as well as in urbanization of settlement areas thereby adding value to the growing economic importance of knowledge and skills. As a result, in most countries, HE is no longer a small enterprise for the elite; instead, it has gained universal access and recognition as a vital instrument for a nation's plans for development (World Bank 2009a). Along with expansion however, the visible imbalance in equity - between rich and poor households, urban and rural areas, men and women, and among ethnic groups - needs to be addressed.

b. Differentiation – in the traditional university structure, prominent entities are vocational studies (also known as polytechnics), teaching faculties (those institutions that grant degrees but do not conduct research), and community colleges (Lee 2007). Today, economic development is

associated with a more refined division of labor, and an increasing demand for diversified knowledge and skill. Therefore, universities are undergoing the process of vertical and horizontal differentiation (World Bank 2000). While horizontal differentiation refers to the proliferating diversified field of studies driven by the increasing demand for HE; vertical differentiation refers to the increased diversity of graduates at various levels of qualification. It could be worth noting that the emergence of new institutions operated by private providers, both for-profit and no-profit purposes (philanthropic and religious), further accelerates the process. The spread of distance-learning operations is a typical and important example of differentiation.

c. Knowledge revolution- the rapid expansion of scientific capacity particularly in some economies like China, Japan, Hong Kong, Korea, etc. ; the increased number of patent applications (The World Bank 2009b) contributing to technical innovations, the increased output in published scientific papers (World Bank 2009b) coupled with advances made in Information Communication Technologies (ICTs) and internet technology have not only pushed the knowledge frontier, but have revolutionized the creation and dissemination of knowledge impacting quality of life in general.

Given the above major realities, academic institutions all over the world are now grappling with ways and means of coping up with these transformations taking place in the system. At a broader level, the fast-growing market economy, the rapid development of science and technology, and rising individual income levels and living standards have motivated the ever-increasing demand for HE opportunities. And at the national level, there are various distinctive features of countries that interpret these global changes to the context of each country. Thus, while the challenges play themselves out on a global level, academic systems function in a national environment.

More so, such interpretation gets more complicated as seen in the context of developing economies. Faced with competing demands on resources, governments of developing economies find it difficult to provide adequate funds for HE to maintain standards at the level required. In brief, Altbach and Peterson's report (1999) clearly spelt out the contemporary realities of African universities and identified the following as some of the predominant issues: the effects of demographic changes (student mobility, life-long learning, etc) on the provision of HE; the

adverse effects of a deteriorating economy on quality education; the participation of institutions of higher learning in the production and ownership of knowledge—especially in the area of information technology; and the role of universities in the political and cultural changes that are likely to occur in the 21st century.

For any significant shift in paradigm or policy direction to take place, it is essential that a comprehensive understanding of the working system of HE in such contexts is well in place. Therefore, the following section highlights priority issues that characterize HE systems in developing economies in order to be able to identify the possible niche of meaningful change for low-income countries to consider.

2.1. Resources in HE of Developing Economies - Many of the problems involving HE in the context of developing economies are rooted in a lack of resources. Governments in these countries are pressed by demands for public budgets from the sector of HE. In addition, there is poor coordination of capital and operating budgets (The World Bank 2002) often reflected in situations where major new facilities are built, but then are left with no funds for operation and maintenance. HEIs in the developing world are seen as having deteriorating buildings, inadequate libraries and laboratory facilities, and scientific equipment that cannot be used for want of supplies and parts. Carrying over unspent funds for use in later years is nearly unthinkable in these institutions and wining a budget that is higher than the previous year's actual expenditure is not easy. This creates the "use-it-or-lose-it" mentality, resulting in misspending of resources.

This is further exacerbated in research universities as the pressures of expansion in teaching universities gets significant by the year. Public universities in Africa and Asia often devote up to 80 percent of their budgets to personnel and student maintenance costs (The World Bank 2009a), leaving few resources for infrastructure maintenance, libraries, equipment, or supplies—all key ingredients in maintaining a research establishment. It is not easy for HE systems in these countries to look for ways with which they can make more effective use of their physical and human capital, including access to new technologies needed to connect themselves to the global intellectual mainstream.

2.2. Faculty and students - Most important to consider would be quality of faculty and problems associated with students. A well-qualified and highly motivated faculty is vital to embed a more enlightened view of learning in the system in general and to augment the active intellectual engagement of students in particular. In these institutions, faculty pay is generally very low in relation to that offered by alternative professional occupations; and pay increases are governed by bureaucratic personnel systems that reward long service rather than success in teaching or research (Janjua 2011, Mwiria 2003). Moreover, politicization can also have a wider impact on the ambiance of the system. While university campuses are well remembered for being stages of riot demanding for democracy, it has also been witnessed that many such institutions have been victims of political favoritism and external interference on internal decisions.

A significant number of faculties are engaged with a divided attention (Janjua 2011) as they work part-time at several institutions. Classes are often severely over-crowded and students' living conditions are distracting with limited support from student services. In addition, many students start their studies with inadequate basic and secondary education (Sawyer 2002), combined with a lack of selection in the academic system. Their choice of field of study is dictated by exposure to opportunities and the market condition despite merit and personal inclination; and the risk of unemployment, at the end of education, is rising by the year as the number of graduates constantly increases. Generally, the providers of HE have shortcomings of various nature – the public sector being underfunded while the private (for-profit) sector focusing on addressing market-driven needs primarily.

2.3. Governance and HE leadership - Governments in developing economies have often strived to ensure strong relations of political accountability with leaders of HEIs (Sawyer 2002, Teferra and Altbach 2003). To this end, institutional governance arrangements have been modified to incorporate less stakeholder representation. And the resulting encroachment on academic freedom and university autonomy has been proven to have seriously affected university's identity as a research hub. Important earlier studies were undertaken to deepen understanding of the systemic peculiarities of HE, which have shed light on the sociological organization of universities (Maitra 2007). In fact, it is imperative that governments understand the nature of

such institutions, loosen their role from ‘controling’ to ‘supervision’, and give space for faculty to recognize and respond to their changing role in knowledge-based society.

2.4. The Status of Research in HEIs - Research is a very expensive undertaking particularly for poor countries of the world. For example, Botswana, Burkina Faso, Namibia, Tanzania, Zambia, and Zimbabwe all spend less than 0.5 percent of GDP on research and development (Mouton 2008). Often, research in such universities is conducted by funds from external organizations as governments’ budgets for research diminish by the year. Besides, the increased focus of graduate programs on teaching and the increasing engagement of HE staff in increased teaching workload, for purposes of supplementing inadequate academic salaries, have all together compromised the conduct of research and quality of output. Ultimately, as research universities become unable to find their capability to act as reference points for the rest of the education system, it rapidly becomes difficult for countries to make key decisions about the critical issues affecting them.

2.5. University Education, Employment and Brain-drain - Education has always played an important role in the successful integration of young men into the labour market. In the past, the process of leaving school and getting a job took place in a single step; however, the transition from education to work has become more complex nowadays. The reasons for such a bleak prospect in the reality of the job market could be many among which the rapidly expanding HEIs and their subsequent increasing supply of graduates holds a prominent position, at face value. The diverse specialization and improved qualification of new graduates, and the advancements made in automated technology with its potential risk on job security could be mentioned as additional reasons. While human right provisions of freedom of movement and choice of employment encourage the mobility of migrants to other countries increasing the risk of investment in HE, HEIs in developing nations face the risk of losing their staff to other countries (Teferra and Altbach 2003). Junior staffs are sent abroad for further training and often do not return once their studies are completed; and senior ones look for jobs in either local non-government organizations or international offices where they can be paid better.

In general, despite notable exceptions, most HEIs in developing countries suffer from deficiencies in each of the above discussed areas. While each emerging nation has its own

national priority to determine what it can realistically expect its HE system to deliver, it is undeniably important that this decision must be informed by historical and comparative knowledge about the contribution of HE to social, economic, and political development. Resolving the situation is critical, but not easy. And a nation's capability to play a meaningful role in the change process, as the future unfolds to portray its unpredictable development, requires vision and projection. Every developing country needs to think strategically about how, given their inevitably limited resources, HE might best be deployed to the advantage of future generations.

One best way of strategizing on this line, which is the major theme of this article, is enhancing university function to assist HEIs become innovative rather than focusing on their traditional role of teaching and research only. What distinguishes innovative universities from the mainstream is a holistic approach to knowledge exchange with the recognition that there is a virtuous knowledge transfer and exchange cycle. The following section conceptualizes Knowledge Exchange (KE) and further identifies its specific value and the particular perspectives from which its implementation has to be seen in the context of Ethiopian HEIs.

3. The Rationale for Knowledge Exchange in HEIs

As knowledge becomes more important, so does HE. It has become mandatory for countries to educate more of their young people to a higher standard. A mundane example to mention would be that of first degrees becoming basic qualification for many skilled jobs these days. So also, the quality of knowledge generated within HEIs, and its availability to the wider economy, is becoming increasingly critical to national competitiveness.

For quite some time, the term 'technology transfer' has remained popular in the repertoire of relevant disciplines. Gradually, the focal vocabulary changed from 'technology transfer' to 'knowledge transfer' which, in turn, is being challenged by the concept of the more free-flowing multidimensional concept of 'knowledge exchange' between universities and society.

The term knowledge transfer appears too restrictive in terms of depicting the innovative practice of knowledge exchange, which is defined as "a set of policies and practices which enable the

efficient and effective exchange and co-creation of knowledge between producers and users" (Hagen 2008:113).

This definition describes a virtuous circle of engagement between knowledge producers (typically scientists, but potentially all academics) and knowledge users (policy makers, practitioners, stakeholders, businesses, social enterprises and other publics) so that the boundaries between the producers and users ultimately become merged. Often times, researchers prefer writing their research output in a format in which they can meet their academic requirements. However, decision makers, media and consumers would rarely read them. Therefore, HEIs have to look for opportunities that create effective engagement with audience outside the academic circle thereby forming the virtuous circles between teaching, research and KE with each strand supporting and reinforcing the other.

The concept of KE cycle demonstrates a synergy and inter-connectedness between the two traditional missions of a university and involves a third component– KE. This component of the cycle provides the public (business and the community) with the knowledge, skills and competence it needs while the public can, in turn, influence the development of university's function in terms of developing the curriculum, learning methods, research, governance and public engagement. When graduates move into the world of work, they take with them the body of knowledge, skills and aptitudes acquired at university. While in the world of work, they acquire additional knowledge and skills. This is where knowledge begins to be transferred to the public; but as the graduates return to HE for further training, as many more of them do several times across their lifetime, mechanisms have to be in place for them to bring this additional knowledge to bear on the university. An adaptive university system will judiciously use this to refresh its curriculum, update its professional knowledge, feed into its research agenda, create collaborative research opportunity and develop its learning and teaching markets. Moreover, these students then return to the world of work, where the cycle is repeated.

Recently, there has been recognition of the need for open partnerships between academia and business/industry at the level of HEIs in developing economies. One of the recent World Bank's reports (World bank 2009b) is based on a study of six countries in Sub-Saharan Africa (Ghana,

Kenya, Mauritius, Nigeria, South Africa, Tanzania, and Uganda) observing the relationship between economic growth and education, during 1990-2006, with focus on key drivers behind growth performance in these countries. In this study, emphasis is made on diversification of economic activities and exports and technological capabilities by strengthening ties between tertiary institutions and the business sectors. Some recommendations for policy actions are also made to help raise quality of HE to increase technology-led development in Africa. The notion of this innovation appears to be largely based on the recognition of the importance of a vibrant interchange between creativity and technology to produce commercializable inventions to boost the growth of the business sector. Generally, the focus of such initiatives seems to be focused on technology and knowledge transfer.

The KE dynamics however needs a broader framework of establishing a knowledge management strategy to underpin its responsible partnering processes within a knowledge exchange model, as has been corroborated by Hagen (2008). Accordingly, this approach gives room for the community to participate and influence the direction of the university at a wide number of interfaces:

- Strategic business alliances and collaborations;
- Consultancy, business support and expert advice;
- Joint R&D ventures with business;
- Joint research projects;
- Designing CPD/professional training (short courses for business and professional communities);
- Contracting with each other for the commercialization of Intellectual Property (IP);
- Student placements (graduate and undergraduate) in business and the community;
- Student incubators (enterprise/start-up support) jointly supervised;
- Graduate/post-graduate employment panels;
- Dissemination of ideas via publications with joint articles; and
- Co-publication and sales of software/materials.

(Hagen 2008:114)

Hagen (2008: 128) defines 'Innovative universities' as those which "seek to combine use of knowledge with industrial, business and regional growth and provide a frame for a dynamic interaction between educational, research and development, business and government sectors". As has been underlined in this definition, innovation does not take place within a single company, but involves a range of partners. As the various actors of KE interact and collaborate within the context of an innovation system, the challenge is for universities to stay competitive in a developing global market for HE. The key collaborative partners in this process are public sector bodies, local and central government, research and development institutions, other HEIs, industrial partners, Small and Medium Enterprises (SMEs) and international partners.

Kearney (2009:10) corroborates this idea by taking an integrated view of Higher Education, Research and Innovation (HERI) as the basis for social development and considers the following three dimensions important:

— Placing knowledge, including high-level scientific knowledge, at the service of development
— Converting knowledge, in all its forms, into value via applications and impact assessment
— Sharing good practice, to ensure widespread benefits.

There are quite a number of benefits that the KE process draws to the HE system. Under the general umbrella of allowing a strong relationship between university and the public, it forges a closer cooperation between science and industry to enable HE recognize the gap in the national production process. This means, the value of applied research will be strengthened. It also encourages the engagement of researchers in the field of education in studying practical approaches of learning-teaching that help transform curricular deficiencies. More importantly and at a higher level, KE introduces new framework for HE teaching and research thereby consolidating the national innovation system and increasing international visibility, competitiveness and research impact that HEIs can make.

Thus, HEIs will have better chance of improving their capability to exploit the knowledge in the economy. Through KE efforts, these institutions will be well positioned to interact with the knowledge absorbents. And the effect of this interaction is that HEIs are no longer closed systems that only serve to supply knowledge, but also receive knowledge from the interaction to be able to look inwards and align their activities with needs of industry and other public and

private organizations. Ultimately, the whole interchange is expected to foster a culture of KE among these actors.

4. Priority issues to overcome challenges in the Context of Ethiopian HEIs

Alike many other developing economies, HEIs in Ethiopia are under great strain to accomplish their objectives. And it is high time that they redirected their focus and be more strategic in their approach in light of the escalating demands they have to respond to. All the issues raised under section two (Items 2.1 -2.5) that describe the realities of the 21st century in the context of HE, apply to the Ethiopian case also. Consequently, like many other nations, Ethiopia has taken some measures to respond to the effects of globalization as well as national demands; however, a lot remains to be done in terms of ensuring the 'fitness-for-purpose' of output from the HE sytem. This has been strongly reiterated by Sawyer (2002: 42) while explaining the value of maintaining advanced knowledge and research-driven universities even in poor countries:

> There is no suggestion that all universities succeed in achieving this condition all the time. The point is rather that the best universities aim at doing so and, to the extent that they succeed, they fulfill their true mandate and make a unique contribution to society. Further, that every society – even the poorest – is entitled to access to such a resource if it is to derive full benefit from the world's vast reservoir of knowledge resources.

Perhaps the most critical challenge facing most institutions will be to develop the capacity for change in order to reposition themselves for a constantly changing society. This requires a concerted effort and commitment by the academic community to embark on what should be a great adventure for higher education. The World Bank (2009b) makes references to few universities in Africa who have been so far successful in revisiting their productive and relevant roles to society. Jimma University in Ethiopia is one such case that has pioneered community-based education in the country, through which it requires tertiary students in medicine, agriculture, and other professions to engage local communities, to learn from them, and to pursue problem solving with them. Community-based education is believed to enhance educational relevance to demands of the community. The community is used both as a learning environment to the students and a beneficiary agent of the educational experience. Therefore, the program is of clear benefit to both students and the community. This approach has enabled the university to

offer diverse studies in inter-disciplinary areas; it has allowed a team approach to teaching; it has enhanced interaction with the community and has redirected the focus of research to be problem-based and community-demand driven (www.ju.edu.et/am/research).

It is against this background that the challenges facing Ethiopian universities and their various attempts to survive and thrive must be assessed. In this connection, the following critical points may be considered for any serious deliberation that aims to address the knowledge exchange gap seen in HE.

4.1. The need for systematic collaboration -The following remark (Aschcroft 2004:15) best describes the situation observed among Ethiopian HEIs as far as the issue of synergy and collaboration is concerned:

> If a higher education system is defined as a set of interrelated institutions each with its own function within the system, each with its own goals, each of which makes a particular contribution to the functioning of the country, at the present time it could be said that Ethiopia has a collection of institutions rather than a system.

HEIs need to seize the initiative to work within their own selves to build and strengthen their respective institutions and facilitate full use of endogenous capacities.

One potentially effective way of doing this would be that HE leaders have to, with active support of the academic community, design and develop clear institutional policies, programs and strategies for cooperation and collaborations. Partnership and alliances amongst stakeholders is a key component of creating synergy. National and institutional policy-makers, teaching and related staff, researchers and students, stakeholders from non-governmental organizations and community groups need to build common grounds for effective change to take place. Such a synergy should be based on a consensus-building practice particularly with and between immediate members of HEIs which at the same time recognizes that HE students and staff have the right to organize themselves autonomously. This calls for ensuring conditions necessary for the exercise of academic freedom and institutional autonomy.

4.2 Managing scarce financial resources – As governments move toward the cost-sharing scheme in many countries all over the world, HEIs may need to develop new mechanisms that may allow them earn additional financial support from their stakeholders. In fact, KE creates additional opportunities for universities to devise ways of enhancing their financial autonomy if they work out how to leverage greater funding from nonpublic sources by fostering alumni organizations and establishing business partnerships. Indeed, they also need to revolutionarize their financial system of to be able to use available funds more efficiently.

4.3. Empowering HEI leaders and managers to promote a Culture of Knowledge - implementing KE calls for owning appropriate orientation towards knowledge and its increasing role in society. Training is one such means where leadership and management capabilities can be molded to accommodate change and innovation in universities' functions. However, such trainings should be designed as a developmental process, to address future as well as present needs so that sustainability of efforts can be maintained over time.

For HEIs to increasingly engage with the external society, they have to be more open, flexible and porous, with multiple access points and well-publicized services. Academics typically require some form of KE support in terms of changing their attitude and having adequate infrastructure for their engagement. An accommodating culture toward KE by academics is a pre-requisite for the effective exploitation of knowledge from HEIs. However, attitude change does not come for free, it has to be enhanced through targeted incentives. Most critical of all, the HE leadership should believe in the value of KE and committed to promote and implement it because its success requires a system overhaul.

4.4. The need to improve research capacities – The reality of policies and strategies for research in developing economies need meticulous revisiting. Such strategies must be founded on existing conditions and institutions, and preferably be drawn by in-country researchers and policy-makers. The refinement of appropriate strategies and plans, both on the generation and use of financial resources, will allow the optimal expenditure of efforts and resources and avoid spreading resources for research too thinly. Some may argue that investment on research in poor

countries is a luxury, but Olsson and Mkandawire (2009:29) strongly justify the need for research and innovation in such countries as follows:

> Increasing agricultural production for example is more likely to result from new knowledge than from finding better land; negotiating terms for the exploitation of natural resources; …. mineral resources attractive to foreign investors, requires scientific data collection and analysis; and local problem formulation is needed in order to choose strategies for growth, for education and for international relations, not to mention for signing international treaties and conventions and for weighing their implications.

Along with this, attention has to be given, greater than ever, to the notion of devising strategies for innovation, which are closely related to research strategies. And the role of universities, as opposed to research institutes, also needs to be clarified.

5. Conclusion

This article attempted to bring the issue of KE in HE to the attention of the academic public. Having outlined the prevailing dynamics of HE, both at the national and international levels, it displayed the most visible challenges for local HEIs today. Thus educational policy and reform strategies may need to go beyond improving access, or changing governance structures, given the immediate need for policy interventions that would improve the fitness-for-purpose of universities. Increasing socio-economic impact requires HEIs to become responsive and relevant agents in national and international innovation systems through close relationships with external organizations and with regular dialogue to monitor changing needs. It is also important that there is a porous and flexible HE space, providing easy access to knowledge. More importantly, leadership support is crucial to establish a strong culture of external engagement.

In a nutshell, to confine universities to a mechanical place of learning and teaching only, in the progress of society, is to diminish them; it offers only eventual disillusion as has been clearly explained in Daniel's article (2004).

References

Altbach, P. G. and Peterson, P. M. (eds). 1999. Higher Education in the 21st Century: Global Challenge and National Response. IIE Research Report Number 21. Institute of International Education and Boston College, Center for International HE.

Ashcroft, K. (June 2004). The Massification of Higher Education: A Comparison of the UK Experience and the Emerging Ethiopian Response. *The Ethiopian Journal of Higher Education, Vol 1. No.: 21-40.*

Hagen, S. 2008. From Tech Transfer to Knowledge Exchange: European Universities in the marketplace. Portland Press Ltd. Available at www.portlandpress.com/pp/books/online/univmark/084/. Accessed on July 11, 2011.

Janjua, P. Z. 2011. Upgrading the Standard of Higher Education in Developing Countries Through International Cooperation**.** *International Journal of Education Administration and Policy Studies Vol. 3(7)*, pp. 103-111,

Kearney, M-L., "Higher Education, Research and Innovation: Charting the Course of the Changing Dynamics of the Knowledge Society" In Meek, L., Teichler, U., & Kearney, M-L. (2009). *Higher Education, Research and Innovation: Changing Dynamics* - R*eport on the UNESCO Forum on Higher Education, Research and Knowledge 2001-2009*. International Centre for Higher Education Research Kassel (INCHER-Kassel), University of Kassel, Germany. Available at http://www.uni-kassel.de/incher/. Accessed on Feb. 22, 2010.

Lee, C. "The Theory versus Practice Balance at Universities" In *The Value of Knowledge: At the Interface***.** Morley, I. (ed.). 2007. The 1st Global Conference on The Value of Knowledge, 12th - 14th Feb., pp. 113-124. Sydney, Australia. Inter-disciplinary press, Oxford, UK.

Maitra, P. 2007. *Higher Education and Global Challenges*. Saurabh Publishing House, New Delhi, India.

Mouton, Johann. 2008. "Study on National Research Systems: a Meta-Review." Presented at the UNESCO Symposium on Comparative Analysis of National Research Systems, Paris, January 16.

Mwiria K. 2003. "University Governance and University-State Relations" In Teferra, D. and Altbach P. G. 2003. *African Higher Education - An International Reference Handbook, pp. 32-43*. Indiana University Press, Bloomington, USA.

Olsson, B. and Mkandawire, T. Compelling Rationale for a UNESCO Forum on Knowledge Systems In Meek, L., Teichler, U., and Kearney, M-L. 2009. *Higher Education, Research and Innovation: Changing Dynamics - Report on the UNESCO Forum on Higher Education, Research and Knowledge 2001-2009*. International Centre for Higher Education Research Kassel (INCHER-Kassel), University of Kassel, Germany. Available at http://www.uni-kassel.de/incher/. Accessed on Feb. 22, 2010.

Rochford, F. Why Universities "Oversell What We Do Least Well": Conceptions of Knowledge and the Modern University. In *The Value of Knowledge: At the Interface.* Morley, I. (ed.). 2007. The 1st Global Conference on The Value of Knowledge, 12th - 14th February , pp. 151-164. Sydney, Australia. Inter-disciplinary press, Oxford, UK.

Sawyerr, A. 2002. "Challenges Facing African Universities - Selected Issues"; paper presented at the 45th annual meeting of the African Studies Association, Washington DC, 5-8 Dec.

Smith, Daniel (December 2004). Universities, Paradigms and Ontological Choices. *The Ethiopian Journal of Higher Education* Vol. 1, No.2:61-99.

Teferra, D. and Altbach P. G. 2003. "Trends and Perspectives in African Higher Education" In Teferra, D. and Altbach P. G. 2003. *African Higher Education - An International Reference Handbook, pp. 3-14*. Indiana University Press, Bloomington, USA.

Teferra, D. and Altbach P. G. 2003. *African Higher Education - An International Reference Handbook*. Indiana University Press, Bloomington, USA.

The World Bank Report. 2009a. Accelerating Catch-up: Tertiary Education for Growth in Sub-Saharan Africa – Directions in Human Development. Washington: The World Bank.

The World Bank Report. 2009b. The Challenge of Establishing World Class Universities – Directions in Human Development. Washington: The World Bank.

The World Bank Report. 2002. Constructing Knowledge Societies: New Challenges for Tertiary Education. Washington: The World Bank

The World Bank. 2000. Higher Education in Developing Countries - Peril and Promises. Washington: The World Bank