Higher Education for Development: An Exploration of the Necessities, Barriers of Management, Governance and Regulation of Higher Learning Institutions in Developing Countries

Sabin Hitimana¹ Janvière Tuyisenge ² Sylvestre Munyengabe ³*
1. Department of Information Technology, Tumba College of Technology, P.O.BOX:6638 Rulindo Northern Province, Rwanda
2. School of Logistics Engineering, Beijing Jiaotong University, No.3 Shangyuancun, Beijing 100044, China
3. School of Education, Beijing Institute of Technology, No. 5 South Zhong Guan Cun Street, Beijing 100081, China
* E-mails of the corresponding author: munyesylve@yahoo.fr

Abstract
This review paper focused on the major transformations undertaken to develop higher education. The higher education systems have been undergoing a major transformation influenced by national and international developments in developing countries. The main causes of such transformations were based on rapid expansion of student enrolment, a relative decrease in public funding along with a shortage of private funding, the increasing importance of research and innovation in the global and knowledge-based economy, and wider competition between higher education institutions. The role of higher education as a primary tool for development of countries has been identified. Developing countries intend to build a strong vibrant higher education system that will be internationally competitive, meet the demands of the population and regional economy for skilled and educated workers, and deliver research, innovation and knowledge transfer to support social and economic development. This paper has tempted to review the necessities and barriers that hinder development of countries through the development of higher education by adequate management, governance and regulation. The paper also suggested related solutions to barriers that were identified in this review.

Keywords: Management, Governance, Institutional autonomy, Transparency, Higher education.

1. Introduction
The higher education system for any country constitutes an influential part of its education system and the overall development of the country (Munyengabe et al., 2017). The development over the past decades indicate that globally the higher education sector has moved from a state of decline and disrepair to a state of revival and revitalization in this century (Altbach, 1984; Anandakrishnan,2004; Carroll & Ruseski,2011 and Birnbaum,2004). The 1980s was a period of decline of higher education when student enrolment declined even in the developed countries and the developing countries, especially in Africa, experienced a state of erosion of facilities and capacities (Kinyanjui et al., 1994; Anandakrishnan, 2004; Carroll & Ruseski, 2011). The decline in higher education system was linked with the financial crisis accompanied by the less founding resulted from that decrement (Altbach, 1984). The higher education system in the developed countries was fast in responding to the decline through ‘cut back management’ policies and measures to withdraw public subsidies (Subotnik, 2003; Terasaki, 1979; Tierney & Minor,2003; and Wang & Xiao,2017).

The developing countries were slow and delayed in their response, although they too adopted reforms to reduce cost (including staff reduction, a freeze on new appointments, and a freeze on increase in staff salary, etc.), share cost, generate income, and to improve efficiency of the system (Altbach, 1984; Anandakrishnan,2004; Carroll & Ruseski,2011). According to Altbach (1984), Anandakrishnan (2004), Carroll & Ruseski (2011) some of the reforms drove academic staffs in other activities different from those related to their career development. In additional to that, some of lecturers migrated to other countries to find the appropriate job they perceived to get (Mahajan & Bali, 2012). Such policies also led to a deterioration of physical facilities and academic standards, contributing to a sharp decline in the quality of teaching and research (Chen et al., 2017).

These trends are reversed in this century in the developing countries, notably in Africa. Between 2000 and 2010, the system not only expanded considerably more million students annually, but the developing countries also accounted for a major share of this increase in enrolment; budgetary allocation to higher education increased; staff salaries improved, as did teaching-learning conditions, leading to a revival of the sector (Prakash, 2007; Rao& Singh, 2009; Singh, 2011). Today the rates of growth of higher education are the highest in countries in Africa, although their enrolment base still continues to be low (Prakash, 2007). It is important to note that the expansion of the system in this millennium was relying increasingly on non-state funding. Developing countries have been characterised of higher level of poverty, social and political crisis. This, is where the fundamental change in higher education lies (Collis,2004; Duderstadt,2004; Fang, 2012 and Feng, 2013).
It is very important to note that higher education in developing countries is mainly based on undergraduate studies, majored specifically with the public sector generally catering for full time students who mainly enter higher education on completing secondary school and the private sector mainly for those in employment who wish to study in the evenings and/or at weekends (Krämer, 2007; Mahajan & Bali, 2012 and Mok, & Wu, 2016). Postgraduate provision and research, innovation and knowledge transfer remain as yet underdeveloped and some of developing countries until recently used the global exchanges and cooperation to develop their postgraduate studies. The rapid expansion of higher education has put a significant strain on the available resources (Graham, 1989; Glenny, 1959; Gupta, 2015; Hamilton, 2004; Hammond,1986; Huang, 2017; Joshi, 2011; Kaneko, 2010; Kinyanjui et al., 1994, Krämer, 2007; Mahajan & Bali, 2012; Mok & Wu, 2016). To develop this important sector it requires the significant investment in physical, human and learning resources to enable the delivery of quality higher education (Morphew, 1999; Munyengabe et al., 2016, Munyengabe et al., 2017). The higher education system in developing countries was mainly characterized with a shortage of qualified lecturing staff to work in higher learning institutions. The revival and revitalization of the sector reflecting increased resource availability, new programmes, and diversified provisions are results of the reforms implemented in the sector (Altbach, 1984; Anandakrishnan, 2004).

These reforms helped to reduce reliance on states funding and states control on institutional governance and management, made institutions autonomous and self-reliant, and made households willing investors in higher education (Prakash, 2007; Rao& Singh, 2009; Singh, 2011; Subotnik, 2003; Terasaki, 1979; Tierney & Minor, 2003 and Wang & Xiao, 2017). These changes altered the way the higher education system is governed and institutions are managed (Altbach, 1984). This paper attempts to analyse the necessities and main challenges that higher education systems face in their management, governance and regulations.

2. The necessities of management, governance and regulation in higher education
The good management, governance and regulation are pillars of the sustainability in higher learning institutions (Munyengabe et al., 2017). It is quite indispensable for the managing staff at higher learning institutions to be influential in developing the higher education sector and the whole country by taking into considerations the followings:

2.1. Higher education and social stratification
To explore the role of adequate management, governance and regulation for higher learning institutions we should first refer to answer the following question: Is there any gap between the rich and the poor widening and hardening? Evidence is accumulating about income inequalities all over the world about the contrasting life expectations of those with college degrees and those without (Hammond, 1986; Huang, Joshi, 2011; Kaneko, 2010).

More than at any previous time, education and training beyond high school are necessary conditions for middle class life (UNESC0, 2015). For individuals and for society, public policy must assure the development of human talent, and higher education is more critical than ever to such development that are needed (OECD, 2012, Hammond, 1986; Huang, 2017; Joshi, 2011; Kaneko, 2010). In order to develop the country, the developing countries have to develop their higher education and assign to them all necessities so that they remove the existing gaps in the whole population.

2.2. Increasing enrolment demand
The higher education should work in accordance with the enrolment demand (Hamilton,2004). After more than a decade of relative stability, the nation’s high school graduating classes has begun to grow dramatically in the late 1990s, and continue to grow. For example in America Overall, the high school graduating class of 2008 is projected to reach an all-time high of 3.2 million students, 26 percent more than in 1996 (UNESC0, 2015; Carroll & Ruseski, 2011 and Chen et al., 2017).The development of countries goes in hand with their education system (Munyengabe et al.,2017; Choudhury,2016; Collis, 2004 and Duderstadt, 2004). Countries solve the issues of enrolment demand by establishing new colleges and universities which requires the strong policy accompanied with management and university governance which relay on enhancing the required reveal development desired for any country (Fang, 2012; Feng, 2013; Graham, 1989; Glenny, 1959; Gupta, 2015; Hamilton, 2004; Hammond, 1986 and Huang, 2017).

2.3. Pressures of cost containment
The major expansion of higher education for different countries is the response to the baby boom cohort, taking place when public budgets grow rapidly (Altbach, 1984; Anandakrishnan, 2004; Birnbaum, 2004 and Carroll & Ruseski,2011). Besides that, competition from other social services the public schools, health services, welfare, and corrections will require colleges and universities to tighten their belts (Bali, 2012; Munyengabe et al., 2016; Wang & Xiao, 2017). In this difficult of financial context, countries should revisit policy commitment to
instruction, research and public service the broad array of benefits historically associated with higher education.
In such case, the adequate management and governance in higher education will be the pillars of the successful for any planned expectations from the higher education (Kinyanjui et.al, 1994, Krämer, 2007; Mahajan & Bali, 2012; Mok & Wu, 2016; Morpew,1999; Munyengabe et al., 2017; Prakash, 2007; Rao& Singh,2009; Singh, 2011; Subotnik,2003; Terasaki,1979 and Tierney & Minor, 2003)

2.4. Growing concerns about quality
The management and the governance of any higher learning institutions has the concerns of providing the quality education from their higher learning institutions (Collis,2004; Duderstadt,2004; Fang, 2012; Feng, 2013; Graham, 1989). Although, the managing staff should be responsible to the all expenditure from different higher education stakeholders and be responsible to the related expectations (Glenny,1959); Gupta, 2015; Hamilton,2004 and Hammond,1986). The policy related to the higher education should include responsibility for seeing that higher education performance meets public needs, and for recognizing and supporting quality assurance mechanisms( Huang, 2017; Joshi, 2011 and Kaneko, 2010);

2.5. The Influence of technology in education
The higher education managing staffs are responsible to be adaptive with the technology that has already revolutionized researches and which has also a major impact on college and university administration (Morpew, 1999; Munyengabe et al., 2017, Prakash, 2007; Rao & Singh, 2009; Singh, 2011; Subotnik, 2003; Terasaki, 1979 and Tierney & Minor, 2003). The management and governance in higher learning institutions will help in understanding how technology will affect the quality and accessibility of instruction on and off campus (OECD, 2012, Hammond, 1986 and Huang, 2017)
The higher learning institutions leaders are supposed to stimulate greater competition and the entry of new providers of higher education. Technology threatens the efficacy and relevance of many policies that are predicated upon geography, such as institutional service areas, regional higher education governance (Joshi, 2011 and Kaneko, 2010 and UNESCO, 2015).

3. Challenges of management, governance and regulations in Higher Education
Literatures identified different barriers that hinder the good management, governance and regulation of higher education in different developing countries. In this study we focused on four majors barriers of the persistence of higher education. These barriers include lack of autonomy, financial support, transparency and the recruitment of the required staffs.

3.1. Higher learning institutions' Autonomy:
Institutional autonomy is based upon the argument (based on long experience) that the institutions can properly undertake the work expected of them by the community which supports them only if they have freedom of choice and of action (Munyengabe et al., 2017, Krämer,2007 and Mahajan & Bali,2012).
This does not exempt them from public interest and criticism, nor does it mean that their policies should not be under review by themselves, and by others (Bali, 2012). One of the more important areas of institutional autonomy is in the selection of staff and students (Munyengabe et al., 2016; Wang & Xiao, 2017). Although pay scales and, under certain circumstances, conditions of employment may require government approval, the individuals appointed to posts, even at the highest level, are ultimately a matter for the institutions' councils alone (Rao & Singh, 2009;Singh, 2011).
Student numbers are determined by government on the advice of many agencies or boards but the acceptance or rejection of applicants for places is entirely a matter for the institutions (Mahajan & Bali, 2012). Another aspect of institutional autonomy lies in the determination of curricula and the setting of standards (UNESCO, 2015). Although choices will necessarily depend upon prior educational achievement at school and upon employers' and professional bodies' needs and expectations of graduates, and there will be financial limitations in some disciplines, responsibility for what is taught and how well it is taught lies with the institutions (Munyengabe et al., 2017, Prakash, 2007; Rao& Singh,2009; Singh,(2011); Subotnik,2003; Terasaki,1979 and Tierney & Minor, 2003).
Institutions can react to society's needs by the provision of new courses or the modification of existing ones much more effectively through their own network of contacts (including lay members of governing bodies and alumni) than through inflexible official channels concerned with manpower planning (UNESCO, 2015 and OECD, 2012).

3.2. Financial constraints
It is indisputable for some higher learning institutions governance being challenged by economic constraints (Altbach, 1984; Anandakrishnan, 2004; Birnbaum, 2004 and Carroll & Ruseski, 2011). Because higher
education is the largest discretionary item in states’ budgets, state funding for higher education tends to rise when the economy and resulting state revenues are good and to drop during recessions (UNESCO, 2015 and OECD, 2012). Even during boom times, funding may be less than it appears once inflation and rising enrolments are taken into account (Altbach, 1984).

Declining capital dollars for funding to construct, renovate, and maintain classroom or research buildings and campus infrastructure may be as big constraint on institutions’ ability to accommodate enrolment growth, recruit faculty, and conduct research as are state appropriations for operating expenses (OECD, 2012, Hammond, 1986; Huang, 2017; Joshi, 2011; Kaneko, 2010). These great changes lead to the consequences of less states funding to the higher education. State funding declines and resulting institutional strategies raise the following questions:

**Access, success, and diversity:** How will further tuition increases affect student access to and success in higher education? Unless sufficient need-based financial aid is provided, low-income students and historically underrepresented ethnic groups may be excluded (UNESCO, 2015). Even if students and their parents are able and willing to pay higher tuition, some institutions and state policy makers facing fiscal pressures are preparing to cap or even reduce enrolments, despite growing enrolment demands (Rao & Singh, 2009). If so, it is possible to think what will happen to students unable to get in.

**Impacts on faculty:** Over the next decade, many new faculty will be needed, both to replace the large numbers of expected retirements and to teach the growing numbers of students (Altbach, 1984; Anandakrishnan, 2004; Birnbaum, 2004 and Carroll & Ruseski, 2011). In this environment, both public and private institutions may hire an increasing proportion of faculty who are ineligible for tenure, generally at lower salaries than tenure-track faculty. Growing use of temporary faculty presents both advantages and problems (Carroll & Ruseski, 2011). On the one hand, it increases institutions’ ability to respond to changing student demand and reduces institutional costs. On the other hand, it creates a two-tier academic labour force. According to Kaneko, (2010); Kinyanjui et al (1994), Krämer (2007); Mahajan & Bali,(2012) and Mok & Wu (2016) the increasing reliance on part-time, temporary, and adjunct faculty threatens the tenure system and may harm the quality of higher education.

**Program reallocations:** In a more market-driven environment, the institutions (private as well as public) respond by shifting program resources toward fields that promise tuition-paying students high-paying jobs (Joshi, 2011; Kaneko, 2010). To date, the impact of budget cuts on programs affects largely the survival of any higher learning institutions (UNESCO, 2015, OECD, 2012).To solve this challenges in some cases, disproportionate numbers of faculty positions in certain fields have to be left vacant, and also may leave an imbalance between faculty expertise and institutional needs.

**Conflicting pressures on governance and control:** Within the institution, budget constraints may lead to both greater centralization and greater decentralization of authority (UNESCO, 2015, OECD, 2012). It is concluded that retrenchment “generally undermined faculty participation in governance and faculty authority over the direction of the curriculum.” At the same time, institutional decisions to require academic units, especially professional schools like business and law, to become self-supporting through tuition revenues or private gifts and contracts tend to shift control from central administration to more autonomous units and to diminish adherence to institution-wide missions (Choudhury, 2016; Collis, 2004; Duderstadt, 2004).

**Impacts on the higher education system as a whole:** The financial constraints resulted from decrement of funds creates the gaps between public and private institutions on a number of measures generally considered as quality indicators, such as faculty salaries and student/faculty ratio, leading to questions about whether public institutions can retain past levels of instructional and research quality (Munyengabe et al., 2017, Prakash, 2007; Rao & Singh, 2009; Singh, 2011 and Subotnik, 2003).

### 3.3. Transparency

The issue of transparency is not the barrier for good management and governance for only higher education in developing countries but also some developed countries encounters such challenge (Altbach, 1984; Anandakrishnan, 2004). Many higher education professionals often complain that the higher ups at their institutions are not transparent in their dealings (Birnbaum, 2004 and Carroll & Ruseski, 2011). This can have a negative impact on faculty morale and thus a devastating effect on the functioning of an institution. To talk about how institutions can actually ensure transparency and counteract the problem of lacking transparency. Transparency is, of course, a vital component of just about any professional enterprise, but it is particularly important in higher education for maintaining positive relationships within the organizational structure between higher education and those that I am referring to here as “the higher ups,” which include administrators and so forth (Prakash, 2007; Rao & Singh, 2009; Singh, 2011 and Subotnik, 2003).

Transparency in communication and action builds trust, which is essential to effective shared governance. The strategic challenges facing higher education today, including remaining mission-driven within the context of a sustainable financial model, touch upon deeply held beliefs about institutional direction. The academic values
and tradition recognize that such critical decisions are best informed by the perspectives of faculty, staff, students, alumni and board members (UNESCO, 2015; OECD, 2012). A lack of transparency with any constituent group compromises the ability to form effective partnerships necessary for creating a shared vision required to move our institutional agenda forward. The most common problem is that a perception of mistrust is likely to develop making it more difficult to align priorities and efforts designed to strengthen the institution. When priorities are not aligned between faculty, administrators, and the governing board, organizational functioning may be negatively impacted (Terasaki, 1979; Tierney & Minor, 2003).

This often appears as tensions surrounding the rights and responsibilities of various groups for certain types of decisions (Munyengabe et al., 2017; Prakash, 2007). The challenge, of course, is that more attention and energy can become focused on who has prime responsibility for what decisions versus figuring out how to collaborate in a collegial manner to address the most pressing issues facing the institution. In some cases, relationships become strained, decision making can stall, and, ultimately, organizational effectiveness is compromised (Kinyanjui et al., 1994, Krämer, 2007; Mahajan & Bali, 2012; Munyengabe et al., 2017, Prakash, 2007; Rao & Singh, 2009; Singh, 2011; Terasaki, 1979 and Tierney & Minor, 2003).

It’s also important to note that, while transparency is a healthy aspect of organizational culture, it is not necessarily sufficient for effective governance (Mok & Wu, 2016; Morphew, 1999). Effective governance requires ongoing education regarding the strategic issues impacting the organization (e.g., shifting demographics, improving educational outcomes, exploiting competitive strengths, etc.). Insisting on transparency regarding key institutional metrics can build support for difficult decisions, facilitate continuous improvement, and meet the growing demand for quantitative outcome data (Subotnik, 2003; Munyengabe et al., 2017, Prakash, 2007).

3.4. Appointment of staff in higher learning institutions
The staff appointment differs from country to country. The challenged staff recruitment is that where governing boards and teaching staff are appointed by the central government sometimes based on the political influence (Choudhury, 2016; Collis, 2004 and Duderstadt, 2004). Here below are different factors that influence academic staff recruitment:

Factors out with institutions: Some factors which affect staffing are outside the control of higher education institutions (Duderstadt, 2004). These factors include variations in supply of qualified staff for different subject disciplines, as well as location and competition in terms of pay and alternative conditions, political influences in some countries and corruption (Altbach, 1984 and Anandakrishnan, 2004).

Staff shortages: Many stakeholders report that there is a shortage in overall numbers of qualified staff in some disciplines and this is now encouraging some countries to look overseas. Evidence from of some developing countries where over a third of staff come from outside (UNESCO, 2015 and OECD, 2012). The movements or recruitment in developed countries relies on attracting top quality researchers whereas for the developing countries recruits for fulfilling the vacant lecturing positions because of the lack of qualified staffs in their countries (Duderstadt, 2004); Fang, 2012; Feng, 2013; Graham, 1989; Glenny, 1959; Gupta, 2015 and Hamilton, 2004).

It is also proving difficult and/or expensive to recruit staff with appropriate professional experience and the academic jobs are becoming less attractive in different developing countries (Hammond, 1986 and Huang, 2017). Some staffs find better options elsewhere; for example, in one creative technology department there is a drift away from academia to more stimulating work environments (Altbach, 1984; Birnbaum, 2004; Carroll, Ruseski, 2011; Chen et al., 2017); Choudhury, 2016 and Collis, 2004). This shortage and non-qualified staff for some cases affect governance in higher learning institutions where required personnel is lacking and with no commitment (Joshi, 2011; Kaneko, 2010; Kinyanjui et al., 1994; Krämer, 2007; Mahajan & Bali, 2012 and Mok & Wu, 2016). To conclude on these assumptions it is very important to focus on which kind of governance and what are keys strategies required to governing boards to overcome such issues barriers.

4 Conclusions and Recommendations
From above reviewed content and related discussions, it is observed that, the development and the sustainability of higher education in developing countries is the main key for the overall development of the countries. As earlier discussed, no country is better that its education system. The higher education have been identified to be influential because it helps countries achieve their vision and targets. Among identified necessities higher education is first to solve all challenges related to social stratification, increased enrolment demand, pressures of cost containment, growing concerns about quality and the powerful, unpredictable impact of electronic technologies. It has been also stated that the higher education system in developing countries is hindered by different constraints such as lack of autonomy, financial constraints, transparency and the way of lecturing staff are recruited. From above reviewed necessities and barriers encountered by higher education in developing countries a number of recommendations were drawn here below:
• Decisions in higher learning institutions should be taken on merit by the universities without any influence from the governmental controls.
• Higher learning institutions should receive a great support from the government so that they can ensure the quality on what they deliver
• The management of university should consider the participation of different colleges, idea of lecturing staffs because they are the feeding sources of the Universities so that a better coordination in their working and activities is very much required.
• The universities should be sure that a complete transparency is maintained in the working of executive/academic staffs and other governing entities of the Universities.
• Never ignore the students’ involvement in the area of university/college governance. The student’ involvement will enable the university to discover all barriers and information within the institutions and this will develop the students’ interest of becoming future good decision makers.
• Political interference in the appointment of university teachers and other technicians should be totally stopped so that the lecturing can be based on merit rather than being politically appointed.

References


