

## FINANCIAL RESOURCES AS A CRITICAL SUCCESS FACTORS FOR BUSINESS PROCESS RE-ENGINEERING TO ACHIEVE ACADEMIC PERFORMANCE. A CASE OF HIGHER EDUCATION INSTITUTIONS IN THE DEMOCRATIC REPUBLIC OF CONGO

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### ABSTRACT

*The paper reviewed financial resources which is a critical factor and component of Business Process Re-engineering in achieving academic performance of higher education institutions in the Democratic Republic of Congo. The objective of the study is to examine whether financial resources can contribute to improving and achieving academic performance of higher education institutions in general and students in particular. The study used a systematic literature review and content analysis was to establish the relationship between financial resources and academic performance. The key findings are grouped in three dimensions: 1) financial resources; 2) budget and funding/financial model; 3) tuitions fees, scholarship and loans provision. The study found consistent evidence to show that there is a significant and positive relationship between financial resources and performance of higher education institutions. The study concluded that higher education sector in the Democratic Republic of Congo needs a radical change and fundamental rethinking in improving educational budget processes to meet the needs of the institutions, provision of scholarship and loans processes to students mainly those from poor background and designing innovative financial/funding model to sustain educational institutions. The study is based on academic capitalism theory. The recommendations were made based on the findings of the study.*

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## INTRODUCTION

Sustainable financial resources for higher education institutions must be a national imperative given the Democratic Republic of Congo's quest to become an industrialized and upper-middle-income country by the end of 2030 Agenda for education (development goal 4, part of the Agenda 2063 a shared strategic framework for inclusive growth and sustainable development (*Minister Senzo Mchunu – Department of Public Service and Administration, 2020*)).

It is currently recognized that sustainable economic development is positively and strongly correlated to the quality of education and training delivered in a country (David Bloom, David Canning, Kevin Chan, 2013). Education helps to build societies and build the work force that will contribute to sustainability agendas (Martin & Jucker, 2005). According to (The International Bank for Reconstruction and Development /The World Bank & Fox, 2015), financing education institutions serves as power houses for the production of progressive work force in a country, hence, prepares citizens to participate in all walks of life.

And yet, according to (Nübler et al., 2014), learning builds up dynamic capabilities which are key drivers of catching up with economic development. Education, also contributes to the development of competitive, integrated and knowledge based progressive societies (von Tunzelmann & Wang, 2007), production of competent civil servants for effective running of the different sectors of life including government responsibility, business management, providing law and justice, banking, etc. Education has been useful in creating awareness on the concept of sustainability (Weiss et al., 2015). In so doing, its role in shaping the way in which future generations will cope with the complexities of economic growth is not disputable. Higher educational institutions also contribute in providing the knowledge required for development.

Controversial issues have been whether Business Process Re-engineering can be applied in higher education sector. That is why the purpose of this study is to find whether Business Process Re-engineering can contribute to the academic performance of higher education institutions in the Democratic Republic of Congo. Whereas the specific objective is to examine whether financial resources as a critical success factor of Business Process Re-engineering has influence on academic performance. The study is based on literature review on funding related issues of higher education and how it can add value in improving academic performance.

The study seeks to examine if Business Process Re-engineering as strategic management tools have been and can be applied to improve the performance of higher education institutions. An investigation on financial resources as a critical success factor and an important component of Business Process Re-engineering to improve the performance higher education institutions is an interesting academic exercise to establish the relationship between the two variables based on the previous studies in the context of the Democratic Republic of Congo

The study seeks to predict the performance of higher education institution by adopting and applying the Business process Re-engineering critical success factor and component which is financial resources to achieve performance.

### Background of the study

Strategic tool for performance improvement like Business Process Re-engineering has been applied to re-engineer business processes to achieve quality products and services in industrial and banking sectors. Nowadays, Business Process Re-engineering is applied at higher educational institutions to improve academic processes from both at the public and private educational sectors in many countries in the world and there have been a positive and significant relationship between Business Process Re-engineering and academic performance (Ahmad et al., 2007; Harb & Abazid, 2018; Olabimtan & Omojaro, 2019).

From the literature review, it has been revealed that the strategic tool for organisational performance of Business Process Re-engineering which has been used in re-engineering higher education processes alone have solved between 60 to 70% of the problems facing organisations in all sectors (Habib, 2013). However, taking into account the critical success and failures factors learned from the previous studies can better improve the results of adopting and implementation Business Process Re-engineering tool to enhance process performance.

The management and governance responsive systems in higher educational institutions around the world are embracing business-like forms of management and governance (Dr. Jadesola E.T. Babatola and Modupe J. Babatola, 2020). The construct changes, reforms, restructuring, quality assurance, reinventing, re-engineering concepts used and applied in higher education are not limited to Europe or the USA only. For example, European countries (30) signed the Bologna agreement to create LMD/BMD (Bachelor, Masters and Doctorates) education system to respond to their needs of having a standard educational system, quality, accreditation and mobility of the students and academic staff. Insert citation here. Countries of other continents are transforming their education systems to meet today's challenges. India, for instance, is setting up more of its premier institutes of technology. To advance towards Universities of the future, Ernst and Young LLP and the Federation of India Chambers of Commerce and Industry uses the analogy of education 3.0 and 4.0. Education 3.0 is the traditional or current status quo of the universities governance and operation, while Education 4.0 is the envisioned university of the future. Insert citation here. The author, recommend for higher education institutions to move to Education 4.0 which has the potential to overcome the constraints of the traditional educational system by targeting the new-age learner cohort. This revolution calls for customizable and flexible program structures delivers across technology, enables and affords platforms and real-time integration with the industry. Insert citation here.

The main objective of Business Process Re-engineering ( BPR) is to help produce high quality service or products for the organisation (Olabimtan & Omojaro, 2019). Many early Business Process Re-engineering (BPR) implementations have reported real benefits, ranging from immediate financial benefits to overall customer satisfaction and growth sustenance. For example, the CIGNA Corporation successfully completed a number of BPR projects in the early 1990s and realized savings of \$ 100 million by improving its customer service and quality while reducing operating expenses (Altinkemer et al., 2011). BPR is normally an expensive project and requires a huge amount of money (Ahmad et al., 2007). In order for BPR to happen successfully, the organization needs to have an adequate amount of funding, sufficient to implement change and to back up unpredictable circumstances. Quality management system (QMS) and BPR have been deployed as drivers to improve competitiveness (Adorjan, 2018). Love and Gunasekaran (1998) mentioned that BPR and QMS can be used jointly, since they have many common features. Ahmad *et al.*, (2007) discussed that employees should be adequately trained to get the required skills in doing tasks assigned to them.

According to (Cohen & Mehta, 2017), the importance of undertaking Business Process Re-engineering initiatives in education sector is to reduce costs, improve services and achieve efficiency and flexibility. Re-engineering for higher education institutions in the Democratic Republic of Congo is recommended and should focus on crucial academic processes at the higher education sector such as teaching, learning, systems, leadership, finances, human resources, structures, procedures, admissions, recruitment and academic infrastructures which is the focus of this study. According to (Ranganathan & Dhaliwal, 2001), lack of financial resources and human resources and insufficient IT infrastructure are main obstruction in success of Business Process Re-engineering along with executive support, vision, inflexible organizational structure.

According to (Ibrahim, 2016) a number of key studies have argued universities are in need of new business models in order to stay relevant and sustainable. Drivers of change such as technology, financial support, industry trends and socio-economic ecosystems are dictating higher education sector to re-

examine its existing business model and value proposition. Public universities all over the world are affected by budget cuts from the increasingly inadequate government funding resulting in increased tuition and fees in countries where they exist and more so imposing them where until now did not exist. Insert citation here. For example, tuition and fees are now enforced in places like Latin America and Europe, previously tuition-free. As a result of the steep rise in the cost of higher education, loan plans have been introduced by several higher education institutions and countries over the years (Acquah, 2021).

From the literature, there are several reasons of organizations to re-engineer their business processes. Orogbu Obiageli Lilian et al (2015) have identified the following needs to re-engineering an organisation. The reasons to re-engineer organisations include: 1) to reinvent the way they do work to satisfy their customers; 2) to be competitive; 3) to cure system process and behavioural problems; 4) to enhance their capability to expand to other industries; 5) to accommodate an era of change; 6) to satisfy their customers, employees, and other stakeholders who want them to be dramatically different and/or to produce different results; 7) to survive and be successful in the long term; and 8) to invent the rules of the game. As higher education institutions in the Democratic Republic of Congo is undergoing a radical change by adopting a new education system based on Licence-Master-Doctoral. Business Process R-engineering is an innovative tool and strategic methodology that can be adopted and implemented contribute to improve the academic performance.

### **Statement of the problem**

The Congolese Government has very limited capacity to deliver public goods and services, with non-state actors playing a major role in the provision of basic services, including education (A. Khan et al., 2020). It can be noted that parents assume financial responsibility for students, the running of higher education institutions in order to make up for the shortfall in financing by the State. On one hand, the Democratic Republic of Congo does not provide scholarship automatically to all students like in Kenya, Uganda, Tanzania, etc. Insert citation her. On the other hand, the tuition fees paid by students at higher education are very low to make any significant contribution to the higher education budget to achieve the needs and the institutional objectives Insert citation here. Thus, the budget from the government in general and the institutional in particular allocated to salaries, infrastructures, teaching and research activities is very limited, thus affect the academic performance. Insufficient financial resources for pedagogical and research activities could lead to a negative impact on the relevance and quality of education that hinder the economic growth of the country. Likewise, there is a training-employment mismatch and the insufficiency of practical training aspects due to lack of financial resources to invest on academic infrastructures (De Herdt & Titeca, 2016; Fund, 2003).

it has been noted by (Batika, 2015; Handjila, 2017; Kilongo & College, 2020; Sommers, 2015; World Bank, 2018) that higher education institutions in the Democratic Republic of Congo is going through many challenges despite the reforms initiated by the Ministry of Higher Education. The main reform which is undergoing is primarily focused on the new educational system (Licence-Master-Doctorate). The problems facing higher education institutions in the Democratic of Congo found their causes from the ongoing conflicts which started over more than two decades and their impact is greatly felt on the education sector Insert citation here.

Many problems that affect the performance of higher education in the Democratic Republic of Congo have been identified from the literature review. They include lack and insufficient financial resources to efficiently and effectively manage educational institutions, lack of skilled and qualified human resources, issues related to leadership/government of higher education. In addition, poor and outdated physical infrastructures, outdated educational system, courses contents/program that mismatched with the needs of industries and the country development goal, poor and outdated teaching and learning facilities including books, laboratories, and libraries among others (De Herdt & Titeca, 2016; Etshim, 2017; Mitonga-Monga & Mayer, 2020; Tamrat & Teferra, 2020; Teferra & Altbach, 2004; World Bank, 2018).

The current study is to find out whether financial resources which is a component of Business Process Re-engineering can predict academic performance of higher education institutions in the Democratic Republic of Congo and fix the problems. The study investigates if financial resources has been identified from the literature as one of the key critical success factors of Business Process Re-engineering. Educational sector has virtually disappeared from the Congolese state budget since the mid-1980s (Etshim, 2017; Poncelet et al., 2015; Teferra & Altbach, 2004). Yet educational sectors have both managed to survive on tuitions and to reproduce the public education sector even though complete privatization would have been a realistic option (De Herdt & Titeca, 2016). According to Cadre Normative du System LMD, en RDC, 2018, as a result of the restructuration and reforms policy in higher education the 2014/2015 statistics revealed that the country had a total of 902 higher education institutions of which 408 are from the public sector and 494 represent the private sector including universities, higher pedagogical institutes and higher technical institutes. Unfortunately, after the quality assurance assessment (viability of higher education institutions), only 21% of these institutions were considered viable, while 79% were classified as intermediate or unsustainable. (Handjila, 2017) conducted a study on Quality assurance in public higher education institutions in the Democratic Republic of Congo. The study found out the following indicators that affect the performance of higher education institutions of the three public institutions in Ilebo (l'ISP, l'ISC et l'ISTM d'Ilebo) : they include: in human resources, governance of resources, governance, financial resources, students, academic activities, mobility of academic and scientific mobility of academic and scientific staff, scientific activities, infrastructure, library and partnership have a negative impact on the level of the quality of education. (Iphigénie, 2020) carried out the study on the Efficiency of Higher Education in the Democratic Republic of the Congo. As methodology of the research, to measure the efficiency of the Congolese higher education. The research concluded that classrooms, enrollment, budgets, undergraduates, teachers and success rates have an impact on the success of Congolese students. Thus, an increase in public spending on higher education will have two effects, namely, improving the efficiency of higher education and improving tax revenues in the long term.

According to the Ministry of higher education of the Democratic Republic of Congo, low internal efficiency is one of the factors affecting the quality of higher education sector. It is characterized by very high level of dropout and repetition rates, particularly in the first years of study at university, varying between 30 and 40% depending on the discipline (Republique & Du, 2018). One of the main factors of the students' dropout and repetitions is lack of financial resources since the government does not provide either loans or scholarships to the students. According to (Etshim, 2017) higher education institutions in the Democratic Republic of Congo rely solely on tuition fees and other Internally Generated Revenue (IGR) from the students to meet their expenditure. Many students are facing financial issues that prevent them to graduate on time and achieve academic performance (grades/Scores). There are no subsidies from the government for the private and public higher education institutions in Democratic Republic of Congo

(Hammer & Champy, 1993) concluded that Business Process Re-engineering is becoming popular strategic tool is that provide a mechanism to make the changes better to fit the competitive environment to which the organizations in general, and higher education institutions must adapt themselves in this new challenges related to the provision of quality education hinders by socio-economic and political challenges. The study seeks to uncover from the literature review whether financial resources which is a critical success component of Business Process Re-engineering can predict the performance of higher education institutions in the Democratic Republic of Congo. There several studies that have been used to establishing Business Process Re-engineering and organizational performance. However, few studies have been used and applied Business Process Re-engineering in achieving academic performance of higher education institutions. In the Democratic Republic of Congo, no studies have been conducted to examine the contribution of financial resources as critical success factor and component of Business Process Re-engineering and performance of higher education institutions.



## **Objective of the study**

The main objective of the study was to find out the contribution of Business Process Re-engineering in improving the academic performance of higher education institutions in the Democratic Republic of Congo. Whereas the specific objective of this study was to examine the contribution of financial resources which is a critical factor and component of Business Process Re-engineering in enhancing academic performance. This study established theoretical, conceptual and contextual gaps by investigating on financial resources factors and to determine their contribution in improving and achieving academic performance in the particular context of the Democratic Republic of Congo.

## **Theoretical Review**

### **Academic Capital Theory**

This section is focused on the theoretical foundation of the study which is academic capital theory developed by Rhoades and colleagues in 2005. The unstoppable forces of decreased financial resources and increased expectations have required higher education institutions around the globe to turn to the philosophy of academic capitalism to produce a cheaper educational product and increase faculty research, fundraising and business/industry activities (Jessop, 2018). Financial resources is a major factor in improving the quality of education in Kenya and how it is taught, as well as who teaches and what materials are used. According to (Mukhwana et al., 2017), demand for tertiary education has risen dramatically, resulting in lower teaching quality. The cost of higher education in Ghana and the U.S., and other countries have risen due to a reduction in federal government funding (Acquah, 2021). According to (Teferra & Altbach, 2004), the central reality for all African higher education systems at the beginning of the twenty-first century is severe financial crisis. Academy everywhere, even in wealthy industrialized nations, faces fiscal problems. The theory of academic capitalism began as a study of public universities in Australia, Canada, the United States, and the United Kingdom between 1970 and 1995. In *Academic Capitalism: Politics, Policies, and the Entrepreneurial University*, Slaughter and Leslie who developed the theory concentrated upon changes to the nature of academic labor in response to the emergence of global markets and reductions in government funding for higher education (McClure, 2014).

Firstly, the academic capitalism theory is applicable in this study on the basis of shedding light on how higher education sector can overcome the burden related to financial resources to provide quality education and achieve performance. Secondly, the academic capitalism theory provides light on higher education institutions can develop entrepreneurial mindset to create and develop income generating activities and innovative courses, programs and degrees to cater the financial needs and challenges facing higher education institutions in the Democratic Republic of Congo. Much like their Europe, Asia and America counterparts, higher education institutions in Africa in general and in the Democratic Republic of Congo in particular were founded to serve as a public good through a commitment to study and solve social, economic and political problems insert citation here. With this goal, the typical characteristics of higher education institution in the 1960s and 1970s were no tuition charges, self-governance through democratic proceedings involving faculty, students, alumni, and staff, full state funding for university operations, autonomy of university governance and academic freedom from political powers. The autonomy from politics allowed public universities to play a central role in transforming society. Therefore, higher education institutions play a role as agents of social change.

According to (Gonzales et al., 2014) since the Worldwide Financial Crisis of 2008, higher education institutions around the world have been forced to change their financial practices to focus on the bottom line. One such approach is academic capitalism theory, the heart of which is the entrepreneurial university which views faculty members as producers of capital (not educators), students as consumers (not learners), and business/industry, accreditors, and NGOs as valued business partners. Academic capitalism theory, is a term developed by (Gonzales et al., 2014). They define academic capitalism as the pursuit of

market and market-like activities to generate external revenue. With the emphasis on generating revenue, academic capitalism forces universities to become more entrepreneurial and corporate; thus, the term entrepreneurial university. In the entrepreneurial university, the emphasis is on generating income and cutting costs. Faculty, staff, and administrators who excel with this approach are rewarded (Gonzales et al., 2014).

The trend toward academic capitalism theory has three major sources. First, it derives from the influence of the 'knowledge-based economy' paradigm in the transition beyond Fordism to new accumulation regimes (Jessop 2004). This paradigm calls on education and research to meet the human capital needs of a changing labor market and economy, provide infrastructure and services to business, and transfer knowledge so that it contributes to capital accumulation. It also recommends that students, faculty, and researchers become enterprising bearers of intellectual capital. Second, neoliberalism has enabled financialization and the rise of finance-dominated economic regimes that extend their logic into education and research. And, third, fiscal-financial crises (often exaggerated) provide reasons for neoliberal state managers to demand public spending cuts in these areas. Such mechanisms lead to growing differentiation between globally competitive research universities and institutions that offer mass credentialization and lifelong learning at local or regional scales. It also deepens the tension between treating knowledge, education, and research as public goods or, alternatively, as private or club goods whose restricted circulation excludes many from their potential benefits.

According to (Jessop & Jessop, 2018) academic capitalism is now tied increasingly to economic and financial goals of the institution. Following Schumpeter, universities may seek to increase revenues, reputation, or rankings by developing: New products, e.g. preparatory courses; new or enhanced programs in higher education, professional training, and research that reflect new disciplines, new economic and political priorities, or major shifts in the cutting-edge and supporting technologies of new waves of economic and social development. New methods of teaching and research such as exploiting new or enhanced information and communication technology infrastructures and 'infostructures', seeking to cut costs and boost efficiency by standardizing learning and commoditizing education, and finding new ways to deliver their 'products'. New markets for their goods and services, for example, validating degrees from other institutions, opening branch campuses, widening the social or geographical bases of student recruitment, developing regional education hubs, etc. New sources of supply of talented students, teachers, and researchers to enhance competitiveness, whether by lowering costs or enhancing revenue, reputation, and rankings, signing international cooperation agreements with top global universities to benefit from knowledge transfer, developing new funding sources, and, in the public sector, partnering with the private sector with a view to reducing costs and boosting competition. New forms of organization in the 'education industry' and scientific research through global differentiation of these sectors, funding challenges to existing global and national hierarchies; and developing new circuits of knowledge.

In contrast to the traditional free, public institutions dedicated to humanistic values and the diffusion of knowledge and academic research. Academic capitalism provides professionalization and training for the growing technology industry, mainly in the Democratic Republic of Congo. The employment crisis and poverty among young people placed additional pressure on higher education institutions to produce graduates with skills for the workforce. This reality supports academic capitalism model should be adopted and adjusted in higher education institutions to achieve performance. The financial model of higher education institutions in the Democratic Republic of Congo towards academic capitalism theory should be created by taking into account the current political and economic challenges and situation of students coming from poor background. Over the last decade, parents pay the school fees for their children from primary up to university levels. Despite this financial model, some scholarships have been provided to some special and specific category of students. Scholarship, loans or grant allocation systems do not exist as a financial model to sustain students to have access to tertiary education.

Furthermore, academic capitalism theory may promote research activities at higher education institutions to focus on publishing articles in highly selective journals and doing research that would generate revenue in the form of grants, contracts and patents. This is one of the ways higher education institutions in Democratic Republic of Congo can find solution to financial resources that prevent them to achieve performance and to boost university's ranking since over the last decade, none of higher education institutions in Congo has been ranked among the top 100 best universities in Africa. Higher education institutions in Democratic republic of Congo can be re-engineer their financial model, resisting the harmful parts of academic capitalism theory while modifying positive elements. This will foster the strong tradition of autonomous public universities that serve the needs of students and community. Even though private higher education institutions pursue different goals and operate in a different context from the public institutions, anthropological aspect of the students should be taken into consideration.

Theory of Academic Capitalism championed by Sheila Slaughter and Gary Roder (Waks, 2005) demonstrates contributes to this study since it states that higher education institutions constantly strive to find new funding sources and revenue to enhance academic performance and higher education in Africa in general and in the Democratic Republic in particular can explore the benefit of this theory and apply it as one of the solutions related to lack or insufficient findings that is a main challenges. For instance, international students contribute nearly \$40 billion dollars to the US economy, with a considerable percentage going directly to higher education institutions in the form of tuition, room and board, and other education-related expenses (Whatley & Castiello-Gutiérrez, 2021) . Academic capitalism theory has a profound impact on the faculty. Gonzales, Martinez et al., 2014 talk of the striving university and the resulting strain on faculty members. A striving university is prestige-seeking, reaching for increased prestige through fundraising, developing selective student admissions, recruiting and rewarding faculty members, making curricular changes, reallocating resources to favor research and the development of a public relations program ("branding") (Gonzales et al., 2014) . The singular goal of the striving university is to advance in the rankings and increase institutional prestige.

## EMPIRICAL REVIEW

### **Re-engineering of higher education**

Re-engineering is a powerful change phenomenon and an approach that has enabled organizations to realize radical process improvements. Re-engineering has its roots in Information Technology management and can bring about radical improvements in any business processes Davenport and Short (1994). Re-engineering in the context of this study involved either the continuous improvement of the existing higher education quality processes or a fundamental rethinking and radical changes in order to fix related students, quality and educational system problems with the help of DMAIC (define, measure, analyze, improve and control). The decision whether to adopt the radical change or the continuous improvement of processes is based after using DMAIC which is a strategic management analytic tool to reduce or eliminate any defect in the processes.

The management and governance responsive systems in higher educational institutions around the world are embracing business-like forms of management and governance (Dr. Jadesola E.T. Babatola and Modupe J. Babatola, 2020).The construct changes, reforms, restructuring, quality assurance, reinventing, re-engineering concepts used and applied in higher education are not limited to Europe or the USA only. For example, European countries (30) signed the Bologna agreement to create LMD/BMD (Bachelor, Masters and Doctorates) education system to respond to their needs of having a standard educational system, quality, accreditation and mobility of the students and academic staff.

Countries of other continents are transforming their education systems to meet today's challenges Insert citation here. India, for instance, is setting up more of its premier institutes of technology. According to (Kessy, 2020), to advance towards Universities of the future, Ernst and Young LLP and the Federation of



India Chambers of Commerce and Industry used the analogy of education 3.0 and 4.0. Education 3.0 is the traditional or current status quo of the universities governance and operation, while Education 4.0 is the envisioned university of the future. (Kessy, 2020) recommended for HEIs to move to Education 4.0 which has the potential to overcome the constraints of the traditional educational system by targeting the new-age learner cohort. This is a fundamental rethinking and change which is part of Business Re-engineering Process calls for customizable and flexible program structures delivers across technology, enables and affords platforms and real-time integration with the industry. This required financial resources to implement new educational vision and best practices in enhancing quality.

Singapore is focusing on university system transformation to become a knowledgeable island Insert citation here. China is doubling the size of the student's population in the last decade and is pouring vast resources into their universities Insert citation here. In the process of reforming higher educational institutions, the countries in Asia and elsewhere are looking for the most successful model, are turning more and more to the American higher education model (Palfreyman & Tapper, 2016). American universities compete for almost everything: talented professors, administrators, students, and, of course, grant funds. Thus, competition in almost all facets of the academic life of the university and funding sets American Universities apart from the rest of the world. Incited by the Shangai's Jiao Tongo University rating, there are 35 American universities in the list of top 50 universities in the worldwide (Palfreyman & Tapper, 2016).

In 1994, Gales found that drastic organizational change is driven by technological opportunity, but Business Process Re-engineering represents not only improvement in higher education but also a total paradigm shift. Strategic management and leadership has been a vital catch phrase in most European higher education reforms over the last past decade, and has in many countries resulted in a strengthening increasingly tasked with the responsibility of turning higher educational institutions into a more active entrepreneurial actors in society, and are in this way required to take on and inhabit the role as strategic managers to a much higher degree than ever before in the higher educational systems (Schneider et al., 2014).

In Benin and Tanzania, the government appoints senior university managers. In Cameroon, the Ministry of Education retains a supervisory position over universities Insert citation here. Angolan law allows universities full autonomy in decision-making, and State encourages the establishment of private educational institutions Insert citation here. In Guinea and Liberia, public institutions have considerable legal autonomy. All Egyptians who graduate from institutions of higher education are guaranteed jobs Insert citation here. Unlike some other developing countries, Egypt has no joblessness among people with degrees, although many of them are not productively employed (David Bloom et al., 2006). Legal environments for higher education in Africa vary widely. Some countries keep public universities under the wing of government. Others grant them freedom to manage their own operations. Still others allow private universities to be established. In many countries in Africa, there are no laws governing higher education (David Bloom et al., 2006).

Although South African higher education institutions are ranked among the best universities in Africa, there are many challenges facing higher education sector. According to (Nukunah et al., 2019) the higher education sector in South Africa is governed by a set rules and policies on which decisions are made and executed. Despite numerous changes made to the higher education process prior to 1994, South African higher education environment is still plagued with many issues. (Nukunah et al., 2019) argued that Some of these issues comprise of persistent inequality (along racial lines) with regard to access; ineffective throughput rates; decreasing funds; the inability to handle an upsurge in higher education demand; the uneven quality of teaching and learning; qualification structures that makes movement between institutions difficult; misalignment of programmes offered; dynamic market with diverse needs; poor research output; and shortage of staff. And yet, in an attempt to cater to the upsurge in the demand of higher education sector in South Africa, expansion and differentiation in the higher education system is

necessary and there is a need to review strategies to ensure quality delivery of higher education. (Badat, 2010)

The Global University Rankings can be used as a useful proxy to assess the performance of higher education institutions from an international viewpoint. International ranking help identify which universities tend to offer high quality teaching with innovative curricula and teaching methods, produce graduates who excel in the global market, and significantly contribute to progress in knowledge through their cutting-edge research. The rank of the top Kenya universities appearing in the Web metrics ranking, together with the rank of the top university in the other sub-Saharan Africa countries, indicating the relatively high position of Kenya among its African peer Insert citation here. From a regional perspective, five Kenya universities appear among the top 100 African universities in the Webometrics ranking, with the University of Nairobi ranked 9 on the continent, right after 8 South African institutions (Webometrics 2019). A number of universities have recently set up teaching and learning support units or centres for excellence in teaching and learning (McCowan, 2018). From a regional perspective, two Ethiopian universities appear among the top 100 African universities, with the University of Addis Ababa ranked 21 on the continent (Webometrics 2019). From a regional perspective, two Ugandan universities appear among the top 100 African universities, with the University of Makerere ranked 11 on the continent (Webometrics 2019: <http://webometrics.info/en>). From a regional perspective, three Tanzanian universities appear among the top 100 African universities, with the University of Dare Es Salaam ranked 11 on the continent (Webometrics 2019). African universities do not fare well in international higher education rankings. For example, in the Times Higher Education 2021 World University Rankings, only 60 African universities are included among the 1,500 listed, led by Egypt with 21, followed by South Africa with 10, Algeria eight, Nigeria six, Morocco and Tunisia five each, and one each for Kenya, Uganda and Ghana (Zezeza et al., 2021).

None of Democratic Republic of Congo universities is ranked among the ranking organizations such as Times Higher Education (world ranking organisation), Webometrics (African ranking universities organisation) and others. This simply means that higher education institutions in the Democratic Republic of Congo do not meet performance requirements related to teaching, human resource, infrastructures, learning, research publication, and therefore cannot achieve its competitive advantage at the regional and global level. Higher education institutions in the Democratic Republic do not meet the needs and the expectations of the stakeholders and the society at large. It cannot compete neither at the regional, continental and global level. Good thing and efforts is happening now, since the current government in the Democratic Republic of Congo via the Ministry of higher education has recommended to re-engineer higher education sector beginning of the academic year 2021-2022 to migrate or adopt Bologna education programme and system which Licence Master Doctorat (Bachelor, Master and Doctorate) despite challenges related to the implementation of this decision. Insert citation here Therefore, re-engineering higher education sector through the critical factors of success known also as Six Sigma and Business Process Re-engineering component such as leadership, human resource, financial resource, infrastructure and educational process which are the basic workflows and processes of any higher education institutions become imperative as proposed solutions.

### **Financial resources as a critical success factor and component of business process re-engineering to improve academic performance.**

G. U. et al. (2018) conducted research on Business Process Re-engineering and Performance of Brewing Firms in Nigeria. The following critical success factors were identified. They include financial resources, human and technological resources. A positive influence was established such that financial resources (63%) has more influence, followed by human resources (20%) and then technological (19%). The use of resource is a veritable strategy to enhance firm performance. Firms that allow the present wave of technological innovations will enhance their competitiveness and survival rate.

Francisca (2015) carried out conceptual research on critical success factors for Business process management for small and medium banks in Nigeria. They investigated on a large-scale survey of organizations in financial sector and applied a rigorous research methodology and carried out five critical success factors of BPM implementation, which are IT investment, volume of financial activities, personal commitment, strong capital base and effective reward system. Among these factors, IT investment, personal commitment and volume of financial activities have significant relationship with overall organizational performance (cost reduction, customer service management and operational efficiency performance) while effective reward system is only.

Ahmad et al. (2007) conducted research on Business Process Re-engineering: critical success factors in higher education, in United Kingdom. Findings of the study identified seven factors were found to be critical to BPR implementation success. They include: teamwork and quality culture, quality management system and satisfactory rewards, effective change management, less bureaucratic and participative, information technology/information system, effective project management and adequate financial resources. Some literature highlighted the importance of leadership and top management support for the Business Process Re-engineering, this factor is viewed as driver for BPR (Ahmad et al., 2007).

Davenport (1993) identified the process in terms of beginning and end points, interfaces, organization units involved, particular the customer unit. Example of processes include: developing a new course program, developing a new educational system, structure; developing a new financial model for higher education. Lack or insufficient financial resources is one of the critical success factors that affect the performance of higher education institutions in the Democratic Republic of Congo. Financial resources has been identified from the literature as one of the key critical success factors or components Business Process Re-engineering. (Tamrat & Teferra, 2020) conducted a study on Private Higher Education in Africa: Old Realities and Emerging Trends. The author posited that the major sources of funding for African private higher education institutions are tuition fees, subsidies from sponsoring organisations, donations, gifts and endowments. Self-financing is not without its challenges. Reliance on student fees not only jeopardizes the very existence of the sector but can favour investment in teaching rather than research that may be regarded as luxury.

Similar study on Higher Education as an Instrument of Economic Growth in Kenya was conducted by (Nyangau, 2014). The purpose of the study was to identify the main challenges facing Kenya's public higher education system. The studies concluded that despite its rapid expansion, Kenya's public higher education system faces serious challenges including; massification, overcrowding; ever-growing demand; insufficient/declining public funding; curriculum that are not responsive to modern -day needs of the labour; declining quality; lack of basic laboratory supplies and equipment; crumbling infrastructure; poorly equipped/stocked lack libraries; poor governance; and rigid structures (Boit & Kipkoech, 2012; Gudo et al., 2011). The promise of substantial financial gain has motivated numerous firms across a wide range initiatives, with some achieving significant benefits (Hussein, 2017).

Furthermore, financial resource as critical factor or component in re-engineering process was identified by another study carried out (Hassan, 2018), on BPR as a Strategic Tool for Performance Improvement of Insurance Limited Kenya. From the study findings it was clear that BPR positively influences organizational performance that can be measured using both financial and non-financial indicators. According to Akan et al, 2018, financial resources (63%) had more influence, followed by human resources (20%) and technological (19%) to enhance firm performance and survival rate. (Habib, 2013) argued that bringing change in organizational through Business Process Re-engineering results in better financial performance, but most of the organizations fail to achieve the objectives. Study conducted on private universities in Uganda: Issues and Challenges by Ochwa-echel & Ph, (2016) stated that funding is an important element in the survival and success of any academic institution. One of the greatest challenges that appear to face most public African universities and other institution of higher learning is

that of underfunding (Teferra & Altbach, 2004). Running higher learning institutions, therefore, requires significant investment in providing and maintaining a basic level of infrastructure-such as laboratories, modern lecture theatres, up to date libraries, staff salaries, office space, students' accommodation and residential housing. Infrastructures, laboratories, office space, lecture theatres are considered as educational process since they contribute to the students' knowledge and skills transferred.

According to (Mulenga, 2020), a number of public universities in Africa have been supported largely by their governments, but these universities have been grossly under-funded and this has invariably led to the quality being adversely affected. No wonder it is not strange to see some of these institutions characterized by dilapidated and old infrastructure, overcrowded lecture theatres, incessant strikes and student unrest.

Many challenges experienced by the institutions of higher education in the Democratic Republic of Congo is also attributed to under-funding and lack of financial resources in improving the quality of education service. In the Democratic Republic of Congo the budget allocated to education has significantly increased from 6% in 2007 to 16.05% in 2014 (Etshim, 2017). According to the Report Submitted to Ruforum (2020) despite recent efforts to improve budget allocation to education, public education has remained underfunded compared to most other countries in the region. Only 10.9 % of the government budget is allocated to education. At the beginning of the eighties, higher education received a high priority within over all budgetary allocations for education and the Congolese university system had an excellent reputation in the region. With just 0.6 percent of the total student population, it received 30 percent of the education budget. In other sub-Saharan countries during the same period, higher education received only 18 percent of the budget.

The unit cost was about \$2500; the pupil-teacher ratio was very favourable at about 1:8; other operating costs were relatively well funded; all students received scholarships, averaging \$1,134 per student, and the share of scholarships in recurrent spending, and the education was 30 percent in 1980; student and staff accommodation was provided universally. Higher education had also external aids (World Bank, 2005). However, education sector has virtually disappeared from the Congolese state budget since the mid-1980s. Yet schools have both managed to survive on school fees and to reproduce the public education sector even though complete privatization would have been a realistic option (De Herdt & Titeca, 2016).

### **Critical failure factors of business process re-engineering**

Many projects simply failed to deliver tangible results in applying Business Process Re-engineering approaches, perspectives, principles, philosophies. Re-engineering experts argued that such poor outcomes could be due to expecting too much too soon (Hammer & Champy, 1993), a lack of partnership between information technology and business (Asher et al., 1995), costs and benefits, and not exactly knowing how to redesign a set of related activities (Barua et al., 1996). BPR is drastic or nothing approach. Opposition to change can be met in the process of implementing BPR. This has to do with the human resources mind-set. The morale of staff can become low due to the change process that is taking place in the organization, it can create disorders and distractions. All in all, there is a challenge in BPR implementation. Gradual and innovative approaches are usually chosen and encouraged. Higher education institutions are encouraged to choose to adopt gradual and innovative approaches which changes are incorporated gradually, slowly and more logically, with a lot of people on Board. There are three critical reasons behind the failure of business process reengineering (BPR) efforts. They include: 1) inadequate business cases with unjustifiable and unreasonable expectations; 2) Lack of robustness, technologies and methodologies in implementing BPR efforts. 3) Failure to implement the required cultural changes within the organization (A. A. Khan et al., 2018).

Harika et al. (2021) identified the following Business Process Re-engineering critical failure factors. These include problems in communication, organizational resistance, resistance to change, lack of

organizational readiness for change, problems related to creating a culture for change, lack of training and education, problems related to commitment, support and leadership, problems related to championship and sponsorship. others include Ineffective BPR teams, problems related to the integration mechanism, job definition, and allocation of responsibilities, problems related to planning and project management, problems related to goals and measures, inadequate focus and objectives, ineffective process redesign, problems related to BPR resources, unrealistic expectations, ineffective use of consultants, miscellaneous problems,, problems related to IT investment and sourcing decisions, improper IS integration, inadequate IS development, ineffective re-engineering of legacy IS.

### **Business process re-engineering and performance**

This section of the study addresses the BPR factors that have influence on performance of the organization. Each organization, regardless of its size, type of product or service, belonging to the public or private sector, strives to achieve performance whether financial or non-financial. One of the prominent challenges for performance measurement is integration of different aspects of organizational performance, which are very different by their nature, are measured by completely different, not comparable indicators Insert citation here. Organizational and individual-level performance indicators, although naturally and organically linked, but, nevertheless, are measured in different dimensions, could serve as an example. Performance is not an objective reality out there waiting to be measured and evaluated. Instead, performance is socially constructed reality that exists in people's mind. Performance should be defined broadly enough to capture the key dimensions of performance that are of interest to important stakeholders (Sudnickas, 2016).

The difference of the performance measurement in the public and private sectors is determined not only by the different nature of these sectors, but also by different historical traditions. Because of the complexity of the public sector organizations' mission, private sector organizations' performance evaluation can be regarded as an isolated case of performance evaluation in public sector organizations Insert citation here. Performance indicators should be clearly distinguished from the factors determining the level of performance, which are no less important, however, are often confused with each other. The first are used to monitor performance, the latter – to improve it. Individual level performance indicators could be more useful in searching the factors determining performance.

Admission criteria is one of the key indicators to predict academic performance for the students. Educationists are interested in identifying key factors which can predict academic performance (Alamoudi et al., 2021) . Several studies (Abdullah & Mirza, 2018; Aidoo-buameh, 2013; Laus, 2021; Myburgh, 2019) concluded that admission criteria constitutes of cognitive and non-cognitive factors. Cognitive variables include aptitude tests, previous academic marks, admission tests, while non-cognitive factors includes gender, previous experience, age, race, personality and ethnicity. Available evidence suggests that a better formulated admission criteria including mix of academic and non-academic factors can predict better academic performance (Article et al., 2019) .Another authors in their study, (Hasan & Fatima, 2018) examined academic performance by three measures. These three measures include grades of high school, cumulative result of first year and status in third semester. These indicators of academic performance of the students should also be considered by higher education institutions to improve the quality of education services. Another research by (Calisir et al., 2016) investigated the factors affecting academic performance of the master's students who are enrolling in the executive engineering management master's programs in Turkey. These factors include admission requirements (entrance examination, undergraduate grade point average, English proficiency) and demographic attributes (gender, concurrent employment while studying).

In order to assess the academic performance of higher education institution either public or private in the context of this study, quantitative and qualitative indicators of academic performance from the students, teachers, administrative and institutional levels are needed in improving the overall quality



of education. Academic and non-academic performance indicators are needed, namely the resources used (Inputs), the activities carried out (Throughput), the quality services provide (Outputs) and the effects achieved (Outcomes) on the beneficiaries and the stakeholders Insert citation here. Also the relationships between the different elements the academic performance, such us financial resources, efficiency, effectiveness, relevance and Cost effectiveness are important too. (Savoie, 2012) introduced relevance (relation between needs and objectives), utility and sustainability (relation between needs and outcomes) and cost effectiveness (relation between input and outcome). When talking about the academic performance of higher education institutions in the Democratic Republic of Congo, the study is referring to the following performance indicators such as: efficiency, effectiveness, relevance, financial resources capacity for operations, utility and sustainability.

Olajide (2020) observed that Business Process Re-engineering is a new practice that replaces ineffective organizational processes. The same idea also is supported by Obalum and Okocha (2018). In the view of (Akinshipe et al., 2021), BPR is a practice that enhances the performance of an organization. This is because BPR challenges conventional processes of an organization and enables an organization to capitalize on substantial developments made in technology and to enhance the capabilities of the employees (Olajide, 2020). Several studies including Abubakar & Palisuri, (2019), banking sub-sector Harb & Abazid, (2018), Akam et al., (2018); Francisca, 2015; G. U et al., (2018b, Haseeb & Ahmad, (2020) and even public sector Irene, (2016) have confirmed the efficacy of Business Process Re-engineering in influencing organizational performance in various sectors like educational sector .Thus, this study deems it fit to see if the integration of Six Sigma and Business Process Re-engineering. Similarly (Olajide, 2020) looked at BPR in the deposit money banks' performance and demonstrated that a significant and positive relationship existed between corporate restructuring and competitive advantage. Previous studies Abubakar, (2016, Akinshipe et al., (2021), Haseeb & Ahmad, (2020) and Ozcelik, (2010) revealed that Business Process Re-engineering has positive and significant effect on organizational performance.

(Nzewi et al., 2015) investigated the effect of BPR on performance of courier service organizations in Anambra State, Nigeria. The study employed descriptive research design. The data collected by the study was analyzed using Principal Component Analysis and Multiple Regression Analysis. The result of the analysis revealed that a significant relationship exist between BPR factors (change management, process redesign, management commitment and IT infrastructure) and overall organizational performance of the selected courier service organization. The study concluded that BPR is a vital model for improvement in firm's operational performance and achievement of long term growth and competitive advantage. The study recommended that IT strategy must be aligned with organization's business strategies, training and education of employees on newly introduced operational processes.

## RESEARCH METHODOLOGY

Qualitative approach was used in this study. A systematic literature review process was undertaken. This step was intended to search electronic databases. A literature review protocol was developed to limit systematic error and bias in the screening of previous studies for review. Documents used included periodicals articles, journals, websites materials, industry published and unpublished publications, government generated resources, the World Bank reports were used and based on their ability to contribute to the themes of financial resources as a critical component and success factor of Business Process Re-engineering in enhancing the performance of higher education. The content analysis used in this paper provided insight on examining and interpreting financial problems that prevent higher education institutions in the Democratic Republic of Congo to achieve academic performance.

## Discussion of the findings if financial resources contributor to the academic performance

The main purpose of the study is to find out how Business Process Re-engineering can contribute to the academic performance of higher education institutions in the Democratic Republic of Congo to achieve academic performance. Whereas, the specific objective of the study is to examine the contribution of financial resources on academic performance. Financial resources in terms of under-funding and lack of financial resources is one of the key factors hindering higher education institutions in the Democratic Republic of Congo to achieve performance. This section presents an in-depth analysis of the research findings as per the specific objectives of the study as follows. The key findings are grouped in the following three dimensions.

### **Financial resources**

From the literature, several studies (Asiago & Gichuhi, 2018; Odide, 2021; Odide et al., 2022; Othoo et al., 2019; Tani et al., 2019) have established the influence of financial resources on improving academic performance of the students and institutions. The issue of poor funding is alarming in Nigeria educational system where accounting education also belong. This is supported by (Romanus & Arowoshegbe, 2014) who stated that tertiary institutions in Nigeria enrolment show a geometrical increase while the government recurrent and capital allocations for education has been on a steady decline. The effect of poor funding is observed in areas such as: dilapidated facilities, irregular payment of salaries at 100% base, no textbooks on accounting education and resource centre, abandonment of projects and lack of physical developments in these institutions which always lead to frequent strike by lecturers and non-teaching staff. (State & Yunusa, 2018).

Research sector is one of the educational sector that is facing many challenging in higher education institutions in the world in general and in the Democratic Republic of Congo in particular. For example in India, according to (Mittal et al., 2020), funding for research one of the most important requirements for research is the availability of adequate funds. We need to explore possibilities of funding for our research at regional, national and international levels through public institutions, private industries, Non-Governmental Organizations (NGOs) as well as through opportunities for public private partnership. According to (Acquah, 2021) stated that over the years, the cost of higher education in Ghana and the U.S., and other countries have risen due to a reduction in federal government funding. This reduction in funds, as a result, puts more higher education cost burden on students and parents, contributing to an increase in student loans. For example, on average, 68% of students in the U.S. higher education graduate with about \$30,000 in loans.

According to (Mukhwana et al., 2020) demand for tertiary education in Kenya has significantly increased and continues to swell against the backdrop of insufficient funding thus affecting the quality of teaching and learning. Funding not only affects what is offered in the curriculum but also how it is offered, who teaches and the resources they utilize for teaching, as well as the teaching related support activities that they engage in. Tasked with teaching and research, the university, for example, requires academic staff to engage in both activities, so that newly generated information can impact on teaching and the assimilation of that information. The financial allocation made to higher education institutions is essential to ensure adequate human and physical resources. Considerations of resources include the total amount available nationally for higher education, as well as effective allocation and equitable distribution between and within institutions. Perception of lack of resources is common to all universities and TVET institutions across the world, and desire for additional resources may indeed be limitless.

Funding for public and private universities is a cumbersome, frustrating and stressful exercise. According to (Etshim, 2017) in Nigeria, the Federal Government is the major funder of public higher education. Funding allocations at the university level have been higher than at other levels of education partly due to the expansion in the number of universities. However, the growth in expenditure has been inconsistent over the years. The funding pattern has not reflected inflation rates and the growing enrolment figures.

### **Budget and financial/funding model to sustain higher education**

According to (Ibrahim, 2016) a number of key studies have argued universities are in need of new business models in order to stay relevant and sustainable. Drivers of change such as technology, financial support, industry trends and socio-economic ecosystems are dictating higher education sector to re-examine its existing business model and value proposition. Public universities all over the world are affected by budget cuts from the increasingly inadequate government funding resulting in increased tuition and fees in countries where they exist and more so imposing them where until now did not exist. Furthermore, the total yearly expenditure for higher education in Africa as a whole does not even come close to the endowments of some of the richest universities in the United States.

The budgets of individual universities in many industrialized countries exceed the entire national budgets for higher education in many African nations. These comparisons clearly illustrate the disparity between the financial situations of higher education institutions in Africa and in industrialized nations. It comes as no surprise, then, that virtually all African universities suffer from the effects of scarce financial resources. Serious shortages of published materials of books and journals, the lack of basic resources for teaching, the absence of simple laboratory equipment and supplies (such as chemicals) to do research and teaching, and, in some countries, delays of salary payments for months are just some of the common problems faced by institutions across the continent (Teferra & Altbach, 2004). According to (Acquah, 2021), in order to generate more income, institutions concentrate more on attracting international students into their programs, which raises their status on the international rankings of schools (Lee, 2010). For example, international students contributed 41 million to the U.S. economy in 2018/2019.

Another finding is that in the Democratic Republic of Congo the budget allocated to education has significantly increased from 6% in 2007 to 16.05% in 2014 (Etshim, 2017) which is insignificant compared to higher education budget in Ethiopia. Ethiopia accounted for 42, 7% of the country's total budget in 2015 (UNESCO), 2017. This makes Ethiopia one of the top spenders on higher education worldwide (Molla & Cuthbert, 2016). According to the Report submitted to Ruforum (2020) despite recent efforts to improve budget allocation to education, public education has remained underfunded compared to most other countries in the region. Only 10.9 % of the government budget is allocated to education. With such low and insignificant budget combined with the identified factors by the study such as leadership, skilled human resources and infrastructures, it is impossible for higher education institutions in the Democratic Republic of Congo to compete at the regional and global level. Another literature review found that Business Process Re-engineering is normally an expensive project and requires a huge amount of money (Ahmad et al., 2007). Higher education institutions in the Democratic Republic of Congo should learn from the enterprises on how to develop and apply financial/funding model that can fit higher education sector to achieve its intended vision, goal, mission and objectives.

According to (Eton et al., 2020), for Africa to provide cost effective equitable quality education and produce skilled youths for the global and local labor markets, in desired quantity, the best option is to adopt technology led open learning and distance education in addition to the conventional delivery mode. Financial model, diversification of sources of funding, business mindset and entrepreneurship are indispensable for higher education institutions to achieve performance.

### **Tuitions fees and scholarship**

Previous studies have established a significant and positive relationship school fees/tuitions and scholarship provision to the needy students and academic performance. The Congolese government does not provide scholarship automatically to all students who have completed their secondary education to join higher education or the students who are undertaking their higher education in the public institutions.

On the other hand, the tuition fees paid by students are low to make any significant contribution to the higher education budget. Literature review on higher education in the Democratic Republic of Congo found that education sector has virtually disappeared from the Congolese state budget since the mid-1980s. Yet universities have both managed to survive on school fees and to reproduce the public education sector even though complete privatization would have been a realistic option.

The unit cost was about \$2500; the pupil-teacher ratio was very favourable at about 1:8; other operating costs were relatively well funded; all students received scholarships, averaging \$1,134 per student, and the share of scholarships in recurrent spending, and the education was 30 percent in 1980; student and staff accommodation was provided universally. Higher education had also external aids (World Bank, 2005).

Michael et al. (2018) observed that students are charged low fees and thus contribute an insignificant proportion of the total income of the institutions. The funding allocations to higher education institutions have been inadequate and the government has been unwilling to increase the fees charged to students to make up for the short fall. In order to survive, public universities have thus relied heavily on government subsidies and are able to operate with minimal tuition and other fees. A direct consequence of this is that the government can control and impose policies the universities, sometimes by whims and caprices while at the same time pursue the populist agenda of making university education available at affordable cost to the citizenry.

In addition, private universities rely solely on tuition fees and other Internally Generated Revenue (IGR) from the students to meet their expenditure. There are no subsidies from the government for the private universities and most of the institutions are not vibrant enough to attract funding from donor agencies. Since the cost of running and sustaining university education is very high, if not prohibitive, and may remain so because of the prevailing economic situation, the tuition and other fees in the private universities will most likely be on the increase because they have a commercial mindset, and thereby serve as a deterrent to many qualified candidates whose parents are too poor to afford the exorbitant school fees. In addition, there is very little financial support from the public to the universities through gifts or endowment funds. Minimal additional income is derived from income generating activities such as farm product sales and consultancy services. There has been actually a decrease in income to institutions from these additional sources. Institutions have recently started paying more attention to income generating activities to supplement their funds (Ibrahim & Dahlan, 2016).

### **Implication of financial resources on academic performance**

This section of the study examines the implications financial resources on academic performance of higher education institutions. Based on the previous studies, financial resources has a positive and significant influence on academic performance and the evidences have been provided by the studies done by (Peter Barrett & Tigran Shmis, Diego Ambasz, 2019) and others. According to (Teferra & Altbach, 2004) African higher education, at the beginning of the new millennium, faces unprecedented challenges. Africa's academic institutions face obstacles in providing the education, research, and service needed if the continent is to advance. The fact is that African universities currently function in very difficult circumstances, both in terms of the social, economic, and political problems facing the continent and in the context of globalization, and the road to future success will not be an easy one.

The central reality for all African higher education systems at the beginning of the twenty-first century is severe financial crisis. Academy everywhere, even in wealthy industrialized nations, faces fiscal problems, but the magnitude of these problems is greater in Africa than anywhere else. The causes are not difficult to discern, and include: 1) the pressures of expansion and "massification" that have added large numbers of students to most African academic institutions and systems, 2) the economic problems facing many African countries that make it difficult, if not impossible, to provide increased funding for higher education, 3) a changed fiscal climate induced by multilateral lending agencies such as the World

Bank and the International Monetary Fund, 4) the inability of students to afford the tuition rates necessary for fiscal stability and in some cases an inability to impose tuition fees due to political or other pressure, 5) misallocation and poor prioritization of available financial resources, such as the tradition of providing free or highly subsidized accommodations and food to students and maintaining a large and cumbersome non-academic personnel and infrastructure, among others. Not all of these elements are, of course, present in every African country, and financial circumstances vary, but overall, funding issues loom very large in any analysis of African higher education.

The implication of the study drawn from the literature review is that financial resources is critical success factors that can either enhance or prevent higher education institutions to achieve academic performance. Higher education institutions should look forward strategies for funding their institutions from local and international levels in order to survive. Thus, the policies by which funding/financial resources, funding model, budget, tuition fees are established are critical success factors both for the very considerable revenue at stake as well as for the potential impact of higher education on performance and the implications to equity and social justice, not to talk of the long term benefit, which is national development.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusion**

The main objective of the study is to find out if Business Process Re-engineering (BPR) can contribute to enhance academic performance of higher education institutions in the Democratic Republic of Congo. The specific objective was to examine whether financial resources which is a critical success factor and component of Business Process Re-engineering can contribute to achieve academic performance. From analysing, discussing, interpreting of the findings from the previous studies from different industries such as educational, banking, public, private sectors, it has been established, confirmed, and concluded that financial resources, institutional budget, financial/funding model tuition fees and loans provision to the students are predictors on academic performance of higher education institutions. In conclusion, the following variables such as institutional financial resources, institutional sufficient/adequate budget, and institutional financial/funding model, payment of the tuition fees, and the provision of scholarship or loans to the students significantly influence the academic performance of higher education institutions.

Insufficient and lack of financial resources are the main challenges that prevent higher education to achieve performance. According to (Cohen & Mehta, 2017), the importance of undertaking Business Process Re-engineering initiatives in educational sector is to reduce costs, improve services and achieve efficiency and flexibility. Research on Business Process Re-engineering for higher education institutions in the Democratic Republic of Congo is an urgent innovative approach to re-engineer the crucial academic processes such as learning, teaching, research, admission, recruitment, examination, evaluation and many other processes to enhance institutional performance.

### **Recommendations**

Based on the findings and conclusion, the study revealed that financial resources as a critical success factor and component of Business Process Re-engineering significantly and positively contributed to the academic performance of the students and institution. In sum, the study makes the following recommendations:

1. Odide et al. (2022) concluded that Students and teachers should be provided with adequate teaching/learning materials; the teachers, heads of departments, finance committee, top management and the principal should treat the students with respect as learners. Therefore, this study recommended that higher education institutions need to have an adequate financial



resource to invest on teachers' salaries, improve physical and non-physical infrastructures to enhance academic performance. If higher education sector has to survive, there is a need that the government invests on higher education by increasing educational budget this is important because education is a key driver for the socio-economic development of the country. (Tamimi et al., 2023) concluded that the government of Kenya should increase its budgetary allocations to the educational sector.

2. It has been concluded by (Odide, 2021) that educational institutions should not dismiss any student from the school due to lack of tuition fees; they should also provide counselling/ social workers departments to check on the students welfare and their mental problems regularly. Furthermore, the government should facilitate, in collaboration with parents, civil society and stakeholders, to provide full scholarship for all the needy students, especially the slum dwellers of Kibera constituency, in order for them not to lose hope in education. Thus, this study recommends that higher educational institutions stakeholders, mainly the government, the institutional management, the private sectors and donors should look at the key focal points, method used to assess and determine the efficiency and relevant of higher education by many university ranking institutions and funding those key focal points on a given period of time. The study encourages the government of the Democratic Republic of Congo to invest on the educational budget to financially support students, mainly vulnerable students to create equity in the country, another budget of higher education sector should be invested on the areas to create jobs for youth to build ICT hubs, digital jobs and the money invest in higher education should add value on human resources to participate in the socio-economic development of the country. Poor students should be given high priority in scholarship and loans in higher learning institutions.
3. Individuals, Government and private organizations are encouraged to establish scholarship and bursary schemes and programs to provide assistance to the needy students. Some of the sources of bursaries and scholarships should cater to the needs of economically disadvantaged students in the Democratic Republic of Congo. For example, the Ministry of Higher Education, Provincial/local Governments, Banking institutions and foundations, Non-Governmental Organizations (NGOs), political leaders, Faith-Based Organizations and philanthropic individuals are encouraged to create framework to generate funds to provide tuition fees, loans and scholarship to the needy students.
4. 4) The research recommended that funding model for higher education institution should be developed to sustain educational sector to improve academic performance since relying on tuition fees only is suicidal. International funding agencies like World Health Organization (WHO), World Trade Organization (WTO), World Bank, United Nations Organization (UNO) etc, need to be approached to support research activities and provide research grants which is the basis for socio-economic and development growth.

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