



**AN INVESTIGATION OF INSTITUTIONAL FACTORS
INFLUENCING THE DECREASE OF STUDENT ENROLLMENTS
IN SELECTED PRIVATE HIGHER LEARNING
INSTITUTIONS IN RWANDA**

Cyprien Sikubwabo¹ⁱ,

André Muhirwa²,

Philothère Ntawiha³

¹University of Kigali,

School of Education,

Department of Education,

P.O Box: 2611 Kigali, Rwanda

²Senior Lecturer,

University of Rwanda,

College of Education,

P.O Box: 0000 Kigali, Rwanda

³Lecturer,

University of Rwanda,

College of education,

P.O Box 0000: Kigali, Rwanda

Abstract:

This study adds on the available literature on higher education with regard to student enrollments. The purpose of the study was to find out institutional factors influencing the decrease of student enrollments in 6 selected private higher learning institutions in Rwanda. This study adopted a quantitative research design. The study used a sample of 370 undergraduate students that were selected using stratified sampling technique. The data was collected using a structured questionnaire in the form of likert scales. The data was analyzed using descriptive statistics (percentages, frequencies, means and standard deviation) and inferential statistics (simple linear regression). The findings revealed that institutional factors have a significant influence on the decrease of student enrollments in private higher learning institutions in Rwanda. Seven institutional factors were found to be the most influencing. These are namely: (1) inflexible and unmarketable programs, (2) high costs, (3) inflexible payment modalities, (4) students' poor living conditions, (5) poor internet connection, (6) institutional bad location and (7) inflexible academic rules and regulations. The study recommended that managers of private higher learning institutions in Rwanda should be aware of the factors influencing the decrease of student

ⁱ Correspondence: email cyprianov@gmail.com

enrollments and devise sound strategies to improve on them. The study also recommended that managers of these institutions should make sure that a survey on students' satisfaction level is conducted regularly in order to identify the students' problems and solve them accordingly.

Keywords: institutional factors, student enrollments, higher learning institutions, decrease, private

1. Introduction

In Rwanda, private higher learning institutions (PHLIs) contribute copiously to the development of the nation by educating its citizen. Amponsah and Onuoha (2013) assert that the major contribution of private universities is that of helping the country in funding and providing education to its citizens. The overall functioning of PHLIs in Rwanda depends significantly on the number of enrolled students. The main reason is that tuition is almost taken as the sole means of generating funds for these institutions (Teixeira & Koryakina, 2011). That means, these institutions should get considerable student enrollments for proper performance and for them to survive.

The education system of Rwanda counts four main levels such as pre-primary (kindergarten), primary, secondary and tertiary (MINEDUC, 2013). According to MacGregor (2014), higher education in Rwanda started with the official opening of National University of Rwanda (NUR) in Butare (today known as Huye District) on 3rd November 1963. It was established by the government of Rwanda in cooperation with the Congregation of the Dominicans from the Province of Quebec, Canada and the law establishing NUR came into force on 12th May 1964. When it started it had 51 students and 16 lecturers only. Tikly et al. (cited in Freedman, Weinstein & Longman, 2006) report that by 1994 the National University of Rwanda had produced only 1,000 graduates only (after 30 years).

Since 1994 up today Rwanda has been experiencing a rapid increase in the number of higher learning institutions compared to the previous period. By 2015 (after 9 years since 1994) Rwanda had 44 tertiary educational institutions (12 public and 32 private). Conversely, Rwanda had only two higher learning institutions (one private and one public) since 1963 till 1994 (MINEDUC, 2015). The increase in the number of higher learning institutions in Rwanda after 1994 has prompted the demand for higher education of that time. That means, as the number of higher learning institutions increased many people in Rwanda wanted to go to university. Similarly, labor market conditions are among the most important reasons why the demand for higher education grew up in that period (Senyonga, 2013). The higher demand for higher education in Rwanda has stimulated many people from the private sector to invest in higher education. From 1994 till today Rwanda has been experiencing many private higher learning institutions mushrooming in different corners of the country.

The public higher learning institutions in Rwanda of the time were not capable to absorb the big demand for higher education by Rwandese. Therefore, the government of Rwanda has authorized many private higher learning institutions to start their operations to supplement the public ones in absorbing the huge demand for higher education of the time. This is emphasized by Amponsah and Onuoha (2013) who assert that the principal role of private universities is that of being a partner with the government in the financing of education. Nowadays, there are 32 higher learning institutions (30 private, 1 public and the Institute of Legal Practice and Development). Note that, all public higher learning institutions are grouped into one university (University of Rwanda) created in 2013. In 2017, Higher Education Council (HEC) decided to close 5 universities due to failure to comply with the recommendations of the government audit (Rwirahira, 2017).

Reports of the Ministry of education (from 2014 to 2019 on higher education statistics) revealed a decline in the rate of student enrollments in private higher learning institutions. Since 2014 the rate of student enrollments in PHLIs in Rwanda has started decreasing. A survey conducted by MINEDUC (2018) found that Gross enrolment rate (GER) and the university students decreased between 2015 and 2017. Similarly, the same study testifies a large disparity in terms student enrollments per field of study in Rwandan private universities. Higher rate of student enrollment was found in the fields like Business, Administration and Law, low rate in the fields like Arts and Humanities, Natural Sciences, Mathematics and Statistics while very low rate was found in the fields like agriculture and humanities. The report of MINEDUC (2018) indicate that the enrollment in PHLIs increased from 21948 students in 2006 to 28909 students in 2009 (31.7%); from 31170 students in 2010 to 43717 students in 2013 (40.2%) and from 49254 students in 2014 to 50822 students in 2018 (3.1%).

In fact, one wonders why some programs are stuffed with students while others are experiencing shortages of student enrollments. Once this problem persists, the affected institutions will be forced to close their doors, and this will magnify the problem of unemployment in Rwanda. Similarly, the problem may result in the shortages of manpower in Rwanda in some domains and this can inhibit successful achievement of the country's 2063 vision, EDPRS III and other projects geared to develop the nation. The closure of some PHLIs will also hinder successful achievement of "Education for All" policy in Rwanda since it will be difficult for some Rwandese to find nearby universities in which they can study, and this may make them stop their initiative to further their education. Obviously, there is a need to address this issue.

Due to the above situation we found it crucial to conduct a study with the purpose of investigating institutional factors influencing the decrease of student enrollments in PHLIs in Rwanda. Consequently, this study aims at answering the following research question: To what extent are students satisfied with institutional variables in selected private higher learning institutions in Rwanda? What are the loopholes in student enrollments in selected private higher learning institutions in Rwanda? What are institutional variables influencing the decrease of student enrollments in selected private higher learning institutions in Rwanda?

This study provided insights on institutional factors influencing the decrease of students' enrollments in PHLIs in Rwanda. We believe that the findings of the study will serve as an informative tool in improving student enrollments in those higher educational institutions.

2. Literature review

Research has revealed various institutional factors influencing the decrease of student enrollments in higher learning institutions. This section discusses the most important ones such as poor-quality service, unmarketable degree programs, high costs, inadequate instructional facilities, inadequate and insufficient qualified lecturers, poor living conditions of students, bad location of the institutions.

2.1 Poor quality service

Service quality has extensively been talked about since 20th century and this topic remains significant to help nowadays institutions in making differences as well as obtaining competitive advantage during the period of unlimited globalization (Ali, et al. cited in Azman & Yusrizal, 2016). Brady and Cronin (2001) assert that good service quality consists of two vital aspects, such as technical quality (What customers obtain from the rendered services) and functional quality (how the service is rendered). For them, delivering quality service is considered to be crucial mechanism for success in nowadays environment of competition. It is believed that firms that deliver better service gain more profitability through greater market share and being capable of offer best prices. Thus, tertiary education should be taken as a part of service units as the major focus of higher learning institutions would be to ensure quality learning experiences to learners (Anim & Mensah, 2015).

There are various researches on the effect of service quality on student enrollments. For instance, Onditi & Wechuli (2017) studied how service quality is related to student satisfaction in tertiary institutions. The study used a variety of instruments to assess service quality in tertiary institutions. Various instruments have been discussed in brief and a summary of the measurement tools and their dimensions has been provided. The study found that service quality affects significantly learners' satisfaction in tertiary institutions. Hence, universities must set up ways of gathering opinions from students so that they can find out the service quality aspects interesting their students. This will help them in making the needed improvements on the current service quality aspects.

According to Boyd (2012), universities are facing shrinking revenues and looking for strategies to address the issue. For the author, one of the best strategies for the institutions to achieve this objective is to focus on finding out ways of satisfying or maximizing the expectations and desires of their learners. His study further revealed that universities that strive to magnetize and keep the customers (students) abreast can perform well in student enrollments. Danjuma, Shasi and Hauwa (2014) investigated whether there is a close association between customer service and student enrollment in

one of the most important private universities in Nigeria, and the willingness of the registered learners to recommend their university to other prospective students. The findings revealed that service delivery positively correlates with choices of university. In addition, it was found that poor quality customer service influence decrease of student enrollments. That means, offering quality service to students is undoubtedly one of sound mechanism to boost student enrollments in private higher learning institutions.

2.2 Unmarketable degree programs

From the time immemorial till today people's lives have been reliant on cash, therefore most of the people who enter university education are salary or money oriented. When selecting higher learning institutions, majority of students and parents put money into consideration. Past experiences have shown that the more marketable a specific field of study is, the higher number of enrolled students (Sithole, et al., 2017). Nowadays, students are focusing on their employment expectations in college choice. According to Irfan, Wasim, Rana and Nadeem (2013), choice as well as decision making in tertiary education has become more and more important and has turned out to be more of competition and market-oriented. These authors also noted that learners' choice of university is influenced by factors like desired program, course and university reputation, institutional reputation and distance from home.

Weerasinghe and Fernando (2018) conducted a study aiming at explaining critical factors influencing learner's satisfaction status in some public university in Sri Lanka. The findings revealed that degree program as issued by a university significantly correlates with students' satisfaction. In fact, it has been found that student lack of satisfaction may lead to decrease of student enrollments. On contrary, Coelli (2009) found that offered programs have no effect on student enrollments.

However, Warsh, Moorhouse, Dunnet and Barry (2015) found different results in a longitudinal study of university choice in England. The students were first of all investigated during their application into university and when they were about to start learning in the respect courses of their choice. The results from the first category established a high degree of uniformity with the findings of the first category. Hence, the findings revealed that courses or programs offered by a university do not affect student's choices. These findings simply mean that whatever courses or programs and whether marketable or not, they can't affect student enrollment.

2.3 High costs

High costs have been confirmed to be one the factors impeding enrollments in universities as it was confirmed by some studies. Lang, Chan, Pask-Aube and Switift (2009) argue that university costs and availability of financial aids influence students' retention. That means, high costs or lack of financial support may make students leave a university.

Kim, D. & Kim, S. (2018) conducted a study to find out the dynamics of student dropout. The study used nonlinear panel data models basing on four main categories: learners, resources, teaching staff, and institutional variables. The study showed that prices and students' problems, monetary resources, number and quality of lecturers significantly affect student dropout in different higher learning institutions. Helmet and Marcotte (2011) investigated current raises in tuition at public universities and made estimation on its effect on student enrollment in United States of America. The study used data from public 4-year colleges and universities from 1991 to 2006. The study found a drastic increase in tuition at the beginning of the decade. Then, the study analyzed the effect of the increase in tuition on student enrollments as per each type of institution. The findings indicated that increasing the costs has caused a decrease of enrollments of about 0.25 percent.

However, the study of Kroth (2015) found no or only little negative effect of increase in tuition on student's enrollment choices in England and Germany. They argue that the pecuniary profits of a university degree surpass greatly the pecuniary and non-pecuniary university costs in these countries such that introduction of minimal increase in tuition would not considerably impact on students' enrollment decisions irrespective of their socioeconomic attributes. Neill (2009) and Coelli (2009) undertook a study aiming at measuring the effect of university costs on enrollments in Canadian University. The findings from this study indicated that university costs impact negatively on the enrollments in Canadian universities. Denny (2014) found however that the abolition of tuition fees in the nineties has not raised the likelihood of not going to university just because they belong to low socio-economic classes and Bruckmeierer al. (2013) does not find a negative impact as well.

2.4 Inadequate instructional facilities

Lack of teaching and learning materials has been found to influence decrease of student enrollments. Some studies have confirmed this. For example, the study of Matzdorf and Suckley (2003) concluded that in many universities where instructional resources are available to a high quality, are said to have significant impact on students' choice of university. That's, institutions with inadequate facilities are likely to face poor student enrollments. The study of Weerasinghe and Fernando (2018) attempted to find out determinants of student satisfaction in Sri Lanka. The findings revealed that factors like qualified lecturers, instructional resources, offered courses, non-teaching staff, institutional location and institutional reputation significantly affect students' satisfaction levels. That means, inadequate instructional facilities influence decrease of students' satisfaction which leads to lower student enrollments. Barrett and Treves (2019) studied the effect of school infrastructure on learning process. The findings revealed that inadequate allocation of instructional facilities causes student dissatisfaction and resentment which mostly leads to student dropouts. In fact, provision of adequate instructional resources could contribute greatly in equity improvement, increased student enrollment rates, and enhancing student retention.

However, the study of Lavy and Nixon (2017) found different results. They examined whether building age and building status have an influence on attracting applications, enrollment, attendance, and student academic achievement measures. The study involved a sample of 28 pupils that were randomly selected in elementary schools (kindergartens). The study used multiple regressions in data analysis. The findings revealed that building age and status had no evident influence on student applications into universities, student enrollment, or student attendance.

2.5 Inadequate and insufficient qualified lecturers

Lecturers contribute tremendously to education activities of a nation. It has been found that the number of qualified lecturers in a university may influence student enrollments. Le, Dobele and Robinson (2019) conducted a study to determine prominent factors affecting university choice and examined which choice factors are related to word-of-mouth information sources. The findings found that the quality and competence of teaching staff are among the most important factors affecting student enrollments in higher learning institutions. Moreover, the study concluded that poor quality teaching influences the decrease of university enrollments. This is due to the fact that in choosing universities, students focus on those having qualified and competent lecturers.

The study of Kola (2013) explored factors responsible for poor student enrollments in science options in secondary schools. It was found that inadequate competent science teaching staff, inadequate instructional materials; nature of courses, students' low satisfaction and motivation and so on influence poor student enrollments in science. Ombati (2012) examined factors influencing student enrolment in Christian religious education (CRE) subject in Kenya. It was found that teachers' qualification affects student enrollments into CRE, hence a correlation between teachers' qualification and student enrolment in CRE. These findings simply show that shortage of qualified lecturers by a university influences decrease of student enrollments.

Sang, Choi, Zaiton and Tan (2013) examined the effect of faculty member's quality on learners' satisfaction in a private college in Malaysia. It was found that variables like content mastery, clear explanations, communication with learners, creativity in teaching, clear learning outcomes, classroom activities and provision of handouts significantly affect students' satisfaction. Considering these findings, it could be understood that incompetent lecturers influence students' dissatisfaction, which probably leads to decrease of student enrollments.

2.6 Poor living conditions of students

Student leaving conditions have been found to have influence on student enrollments. This has been established by some studies. For example, Kara, Tanui, Kalai (2016) conducted a study to find out whether service quality influences students' satisfaction in Kenyan public universities. The results of the study indicated that good welfare services influence students' satisfaction. Indeed, poor living conditions or welfare services influence students' dissatisfaction which leads to decrease of student enrollments. Kwun,

Emily & Choi (2013) explored the effect of food services, institutional reputation and customer satisfaction on word-of-mouth (WOM) communication. It was found that quality and cost of food, good service delivery and food varieties positively correlate with WOM. However, it was found that the foodservice aspects seemed to have some influence on reputation, students' satisfaction and intention to speak for the university to the public and high school peers or friends.

According to Miller (cited in Frazier, 2009), university hostels have great influence on the student enrollments and enough instructional facilities influence the students' desire to go on learning in the same university. The kind of life learners have at university can influence their decision to either to continue living in or quit the institution. If the learners have had good experiences in the university, they will inform others about the experiences and will motivate them to seize the same opportunities (Ulyani, Aini & Nazirah, 2011). The study of Khosravi, Poushaneh, Roozegar and Shrabifard (2013) examined factors influencing students' satisfaction of Islamic Azad University. The study used Varimax rotation method as well as exploratory factor analyses in data collection. The findings confirmed that university support services to students, university life and students' safety are amongst the factors influencing students' satisfaction. Therefore, these findings imply that poor living conditions among students influence decrease of enrollments.

2.7 Bad location of the institutions

Location of a university can affect student enrollments as testified by various studies. For example, Hoyt and Brown (2003) confirmed that the major factors influencing university choice are namely institutional image, quality teaching staff and mode of delivery, institutional premises or location, costs, scholarship grants, financial support and job prospects. From the findings of this study one directly finds that bad location of a university influences decreases of student enrollment. In fact, when a university is located in remote areas, many students are not motivated to go there because of a number of reasons. The most important one is that of much spending a lot of money on transport while commuting to the campus. Kioko (2012) examines the determinants of student enrollments in Bachelor of Education (B.Ed.) in Arts programs in distance learning at the University of Nairobi. The findings revealed that flexibility of distance learning programs raised the student enrolment rates. In addition, affordability was also found among the factors affecting the students' decision to register in the program. Matsolo, Ningpuanyeh and Susuman (2018) investigated factors influencing university enrollments in South Africa. The findings have shown that distance from home to the campus influences university enrollments. The study further confirmed that bad location of a university influences decreases of student enrollments.

However, the study of Hossler, Bean and Associates (1990) found that small distance from home to a university has no influence on the rate of student enrollments. The findings of the study show that it is possible for some learners to attend the university other than the one which is near their homes. Therefore, the study confirmed that

whether the university is near of far from the home, this does not influence the students' decision to study at particular university.

3. Methodology

This study was conducted in January-February 2020, short before the outbreak of Covid-19. It was carried out in 6 private higher learning institutions operating in Rwanda. These include: Adventist University of Central Africa (AUCA), Christian University of Rwanda (CHUR), Institut Supérieur de Ruhengeri (INES-RUHENGERI), KIM University, Protestant Institute of Arts and Social Sciences (PIASS) and University of Tourism Technology and Business Studies (UTB). The choice of these universities was made bearing in mind that this is a good number to represent all 29 PHLIs operating in Rwanda (HEC, 2019). The 6 PHLIs were selected using systematic sampling technique whereby the institutions were firstly sorted out alphabetically, and then the interval of four numbers was used to select the ones to be involved in the study. The target population of this study comprised of 13902 undergraduate students from which a sample of 370 undergraduate students was chosen using the sampling table as elaborated by Krejcie and Morgan (1970). In addition, stratified (probability) sampling technique was used in selecting the undergraduate students. By this technique, the researcher divides (stratifies) the population into sub-groups having the same characteristic, and then from each group a particular sample is randomly chosen (Creswell, 2012).

This study used structured questionnaire to collect primary data from undergraduate students in the 6 sampled PHLIs. The study also used documentary review to collect secondary data (from journal articles, books, theses, etc.). The questionnaire contained close-ended questions only in the form of two likert scales. The first one is (1=Very Unsatisfied, 2= Unsatisfied, 3=Neutral, 4=Satisfied, 5=Very Satisfied) and the second one is (1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree). The respondents had to tick the appropriate box with regard to their understanding. Before collecting data, the researcher sought the authorization to collect research data from the vice-chancellors of the 6 PHLIs of the involved sample. Before collecting the data, the researcher sought the informed consent from the respondents using an appropriate form. Before collecting the data, a pilot study was conducted to ensure the validity and reliability of the instruments and this was made using Cronbach's alphas analysis. The pilot study was done by having 15 undergraduate students to fill the questionnaire and giving their feedback on it. This exercise was conducted in one private higher learning institution that was randomly selected. However, the selected institution for pilot study was not involved again in collecting the real data. The data was extracted from the questionnaires and entered into SPSS 20. The Cronbach's alphas scored were extracted as shown in the table below.

Table 1: Reliability Results

Variables	Number of items	Cronbach's Alpha	Comments
SSL	15	0.952	Accepted
LHSE	15	0.944	Accepted
IV	15	0.959	Accepted

Note: SSL=Student satisfaction level, LHSE= Loopholes in student's enrolments, IV=Institutional variables

The Cronbach's alphas were above 90%. This indicated that most items in this questionnaire had high squared multiple correlations an indication that the questionnaire passes reliability test. Cronbach's alpha above 0.7 is regarded as satisfactory (George & Mallery, 2003). This meant that the tool was adequate in measuring how students' satisfaction with institutional variables, loopholes in student enrollments and institutional variables influencing the decrease of students' enrollments in private higher learning institutions. The data was analyzed using SPSS version 20, descriptive statistics (percentages and frequencies) and inferential statistics (simple linear regression).

4. Results

This study provided responses to the following research questions:

- 1) To what extent are students satisfied with institutional variables in selected private higher learning institutions in Rwanda?
- 2) What are the loopholes in student enrollments in selected private higher learning institutions in Rwanda?
- 3) What are institutional variables influencing the decrease of student enrollments in selected private higher learning institutions in Rwanda?

4.1 Students' satisfaction with the institutional variables

With regard to Students' satisfaction, the following variables were investigated and interpreted: affordability of the costs, payment modalities, service delivery, offered programs, academic rules and regulations, quality of lecturers, available teaching aids/materials, available libraries, available laboratories, available internet connection, available infrastructures, available furniture, location of the institution, students' living conditions, and leadership styles

With reference to the data in table 2 show that students were very unsatisfied with five institutional factors. These are affordable costs (M=1.88, SD=1.00), payment modalities (M=1.67, SD=.90), Available libraries (M=1.71, SD=.98), available internet connection (M=1.73, SD=) and students' living conditions (M= SD=1.08). The data in table 1 also show that the students are not satisfied with other two factors such as Available laboratories (M=2.00, SD=1.16) and Available teaching aids/materials (M=2.28, SD=1.06). Among the remaining institutional factors, three of them are satisfactorily to students. These are namely Service delivery (M=4.13, SD=.89), available furniture (M=4.10, SD=.84) and Leadership styles (M=4.02, SD=.75). The service delivery and leadership styles in private higher learning in Rwanda are usually good. This is because these institutions are

private and they must render good services and adopt good leadership styles in order to increase potential student enrollments. Overall, the results in table 2 show that the students were unsatisfied with institutional factors in general (M=2.94, SD=1.00).

Table 2: Mean and standard deviation
 for the student's satisfaction with the institutional variables

Items	N	Mean	Std. Deviation
Affordability of the costs	370	1.8892	1.00467
Payment modalities	370	1.6730	.90681
Service delivery	370	4.1324	.89641
Offered programs	370	3.8405	1.00889
Academic rules and regulations	370	3.7459	1.09212
Quality of lecturers	370	3.7514	.94442
Available teaching aids/materials	370	2.2838	1.06331
Available libraries	370	1.7162	.98113
Available laboratories	370	2.0027	1.16753
Available internet connection	370	1.7351	.85863
Available Infrastructures	370	3.5865	1.31875
Available furniture	370	4.1081	.84532
Location of the institution	370	3.8324	1.08152
Students' living conditions	370	1.8054	1.14763
Leadership styles	370	4.0243	.75220
Average mean score		2.941793	1.004623

Note: very unsatisfied= [1-2]= **very low mean**; unsatisfied=[2-3]=**low mean**; neutral=[3-4]=**moderated mean**; satisfied= [4-5]=**high mean** very satisfied = [5-]= **very high mean**

4.2 Loopholes in student enrollments in private higher learning in Rwanda

With regard to Loopholes in student enrollments in private higher learning in Rwanda, the following indicators were investigated and interpreted: decrease in the number of applicants; decrease in the number of graduates, increase in the dropout rate; merged classes; merged campuses, failure to start accredited programs, the number of students graduates which is bigger than the one of the applicants, closed programs, failure to clear debts due to low revenue; postponed graduation ceremonies; and the increase of the interuniversity transfer rate.

The results in table 3 show four highest loopholes in student enrollments of private higher learning institutions in Rwanda. These are namely decrease in the number of applicants over the last five years (M=4.08, SD=1.03), decrease in the number of graduates (M=4.15, SD=0.76), merging classes (M=4.33, SD=0.56), accredited programs which have not been offered (M=4.33, SD=0.56). In addition, the data in table 2 show six moderate loopholes in student enrollments of private higher learning institutions in Rwanda. These are namely: decreased number of graduates (M=3.99, SD=1.05), increased dropouts (M=3.95, SD =1.06), closing some programs (M=3.79, SD=0.76), not being able to clear some debts because of low revenue (M=3.80, SD=0.72), not being able to undertake investments due to low number of students (M= 3.63, SD=1.21) and reduced rented space (M=3.00, SD=1.45).

Table 3: Mean and standard deviation for loopholes in student enrollments

STATEMENT	N	Mean	SD
The number of applicants in this university has decreased over the last five years	370	4.0892	1.03077
The number of graduates in this university has decreased over the last five years	370	3.9973	1.05280
In the last five years the dropout rate has increased in this university	370	3.9595	1.06990
In the last five years this university has merged some of its classes	370	4.3378	.56254
In the last five years this university has merged some of its campuses	370	2.0703	1.22328
In the last five years some of the accredited programs of this university did not start till now	370	4.3378	.56254
In the last five years the number of students who graduate each year has been bigger than the one of the students who register in this university annually.	370	4.1595	.76437
This university has closed some of its programs in the last five years	370	3.7946	.96608
In the last five years, this university has not been able to clear some debts because of low revenue.	370	3.8054	.72879
In the last five years, graduation ceremonies have been postponed to wait for more student to complete in this university	370	2.0000	1.01746
In the last five years, this university has not been able to undertake investments due to low number of students.	370	3.6378	1.21806
Some campuses or learning centers have been closed down over the last five years by this university	370	2.0162	1.04103
Staff have been rendered jobless due student decrease over the last five years in this university	370	2.6730	1.32050
Rented space have been reduced over the last five years due to low number of students in this university	370	3.0000	1.45390
In the last five years the interuniversity transfer rate in this university has increased	370	2.2865	1.14247

Note: Very unsatisfied= [1-2]= **Very Low mean**; Unsatisfied=[2-3]=**Low mean**; Neutral=[3-4]=**moderated mean**; Satisfied=[4-5]=**High mean** Very satisfied =[5-]= **very high mean**

Finally, the data in table 2 show the lowest loopholes in student enrollments of private higher learning institutions in Rwanda. These are namely: merging campuses (M=2.07, SD=1.22), postponing graduation ceremonies to wait for more students to complete their studies (M=2.00, SD=1.01), closure of some campuses or learning centers (M=2.01, SD=1.04), staff's loss of jobs due to decrease of students (M=2.67, SD=1.32) and increased interuniversity transfer (M=2.28, SD=1.14).

4.3 Institutional factors influencing the decrease of student enrollments in private higher learning institutions in Rwanda

The results in table 4, revealed 9 institutional factors having a significant influence on decrease of student enrollments in private higher learning institutions because their p value <0.05. The most important institutional factor influencing the decrease of student enrollments are namely (1) inflexible and unmarketable programs ($\beta=0.790$ and p value 0.000), (2) High costs ($\beta=0.674$ and p value 0.001), (3) inflexible payment modalities ($\beta=0.556$ and p value 0.014), (4) poor living conditions ($\beta=0.512$ and p value 0.000), (5) poor internet connection ($\beta=0.425$ and p value 0.000), (6) bad location ($\beta=0.264$ and p value 0.000), (7) inflexible academic rules and regulations ($\beta=0.197$ and p value 0.009). Other institutional factors with moderate influence are namely: (8) bad service delivery ($\beta=0.51$ and p value 0.038), (9) inadequate teaching aids/materials ($\beta=-.150$ and p value

0.022) and (10) incompetent teaching staff ($\beta = -.245$ and p value 0.026). Note that the above factors are listed from those with the highest influence to those with the lowest influence. However, the results in table 3 revealed other 6 institutional factors with no significant influence on student enrollments in private higher learning institutions in Rwanda. These include: (1) dissatisfaction with library services, (2) inadequate laboratory equipment, (3) inadequate infrastructures, (4) Inadequate furniture and (5) ineffective leadership styles.

Table 4: Correlation coefficients for institutional variables and decrease of student enrollments

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
High costs	.674	.055	.667	-.762	.001
inflexible payment modalities	.556	.053	.549	-1.060	.014
Bad service delivery	.051	.059	.054	.875	.038
Inflexible and unmarketable programs	.790	.091	.581	8.675	.000
Inflexible academic rules and regulations	.197	.075	.225	2.622	.009
Incompetent teaching staff	-.245	.110	-.222	-2.228	.026
Inadequate teaching aids/materials	-.150	.065	-.151	-2.302	.022
Dissatisfaction with library services	-.099	.078	-.111	-1.278	.202
Inadequate laboratory equipment	.136	.071	.167	1.900	.058
Poor internet connection	.425	.085	.370	5.004	.000
Inadequate infrastructures	-.089	.062	-.093	-1.445	.149
Inadequate furniture	.197	.057	.188	3.446	.167
Bad location	.264	.140	.116	1.880	.031
Students' poor living conditions	.512	.097	.481	-7.333	.000
Ineffective leadership styles	-.283	.096	-.237	-2.940	.073

a. Dependent Variable: Decrease of student enrollments

4.4 Influence of institutional factors on the decrease of student enrollments in private higher learning institutions

Table 5: Model summary for institutional factors and the decrease of student enrollments

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.521 ^a	.272	.216	.798432

a. Predictors: (Constant), Institutional variables

Results in table 5 showed that 27.2% of the variation in the dependent variable (decrease of student enrollments) can be explained by institutional factors and the remaining percentages can be attributed to other factors which are not contained in the model.

Table 6: Analysis of variance of institutional variables and decrease of student enrollments

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.095	1	3.095	4.854	.046 ^a
	Residual	8.287	13	.637		
	Total	11.382	14			
a. Predictors: (Constant), Institutional variables						
b. Dependent Variable: Decrease of student enrollments						

The analysis of variance in table 6 revealed that institutional variables had a significant relationship (F= 4.854, p value <0.05) with the decrease of student enrollment in private higher learning institutions in Rwanda.

Table 7: Regression coefficient on institutional variables and decrease of student enrollments

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.682	1.226		.557	.587
	Institutional variables	.770	.350	.521	2.203	.046
a. Dependent Variable: Decrease of student enrollments						

The results in table 7 revealed a significant influence of institutional factors ($\beta=0.770$ and p value <0.05) on the decrease of student enrollment in private higher learning institutions in Rwanda. The results were dependent on the following model.

$$\hat{Y} = \alpha + \beta x + \varepsilon$$

$$Y=0.682 + .770X + \epsilon$$

Where:

Y= decrease of student enrollments,

X=institutional variables, and

ϵ = error term.

5. Discussion

As earlier mentioned, this study aimed at answering three research questions such as: (1) to what extent are students satisfied with different institutional variables in selected private higher learning institutions in Rwanda? (2) what are the loopholes in student enrollments in selected private higher learning institutions in Rwanda? What are institutional variables influencing the decrease of student enrollments in selected private higher learning institutions in Rwanda? Based on these research questions, the following are the findings of the study.

A. Students' satisfaction with institutional variables in selected private higher learning institutions in Rwanda

With reference to research question number one, the study found that the students are very unsatisfied with five institutional factors such as the institutional costs, payment modalities, library services, internet connection and students' life conditions. It was also found that the students are not satisfied with other two factors such as: Available laboratories and Available teaching aids/materials. However, the study found that the students are satisfied with service delivery, available furniture and Leadership styles. These findings are similar to those of Mahmood (2014) whose findings revealed that the students were satisfied with the services of their universities in Malaysia.

In general, the study found that the students are not satisfied with the suggested institutional factors (Mean=2.941793, SD=1.004623). This means that the students' satisfaction with some institutional variables is very low in private institutions of higher learning in Rwanda. This is very dangerous because it may be one of the reasons for the students to drop out. The low level of student satisfaction is due to the fact that many private higher learning institutions are facing financial constraints such that it becomes difficult for them to provide all the essential resources to their clients (students).

On the same note, majority of the students are not satisfied with costs (tuition fees and other charges) and payment modalities. This goes hand in hand with the financial hardships among a number of families. For that reasons, students always wish to study in the universities where costs are not high. It was also found that majority of the students are satisfied with services rendered to them and leadership styles adopted by the managers of these institutions. This is because students in private higher learning institutions students are considered as any other clients. Consequently, managers of these institutions must ensure that the students are always satisfied with the services given to them, because they all know that it is among the best ways to increase student enrollments.

B. Loopholes in student enrollments in selected private higher learning institutions in Rwanda

Regarding the research question number two, the study found that the most important loopholes in student enrollments in private higher learning institutions are namely: Decrease in the number of applicants over the last five years, merging classes, and accredited programs which have not been offered or launched. Other loopholes (but moderate ones) are namely: decreased in the number of graduates, increased dropout rate, closure of some programs, not being able to clear some debts because of low revenue, not being able to undertake investments due to low number of students and reduced rented spaces.

The findings revealed that in 4 institutions (75%) out of 6, the number of applicants have reduced over the last five years; in all of the six institutions (100%) classes are merged and in 3 (50%) institutions some accredited programs were not offered due to little number of students. All of these loopholes are due to decrease of student

enrollments in PHLIs, which started in 2015 and which is the main cause of their financial constraints. Note that the study found other loopholes in the student enrollments, but which are not significant. These include merging campuses, postponing graduation ceremonies to wait for more students to complete their studies, closure of some campuses or learning centers, staff's loss of jobs due to decrease of students and increased interuniversity transfer.

C. Institutional variables influencing the decrease of student enrollments in selected private higher learning institutions in Rwanda

Concerning research question number three, the study found that the most important institutional factors influencing the decrease of student enrollments (as per order of importance) are namely: (1) inflexible and unmarketable programs (2) high costs (3) inflexible payment modalities (4) poor living conditions (5) poor internet connection (6) bad location of the institution and (7) inflexible academic rules and regulations. These findings agree with others such as Weerasinghe and Fernando (2018) who found that the types of programs offered by a university may have effect on student enrollments in higher learning institutions. However, these findings contradict others like Coelli (2009), Warsh, Moorhouse, Dunnet and Barry (2015) whose studies found no relationship between offered programs and student enrollments in higher learning institutions. These findings are also similar with those of Helmet and Marcotte (2011) who found that increase in tuition fees influences the decrease of student enrollments in universities but oppose those of Kroth (2015) who found no or only little negative effect of increase in tuition on student enrollments in universities.

The study also found that bad service delivery, inadequate teaching aids/materials and incompetent teaching staff has a significant influence on the decrease of student enrollments but at a moderate level. These findings agree with those of Barrett and Treves (2019), Ombati (2012), Khosravi, Poushaneh, Roozegar and Shrabifard (2013), Matsolo, Ningpuanyeh and Susuman (2018) who found that inadequate instructional materials, shortage of qualified lecturers, bad living conditions of students and bad location of a university respectively have an influence on the decrease of student enrollments in universities. In general, the study found that institutional variables have a significant influence (p value <0.05) on the decrease of student enrollments in private higher learning institutions.

6. Conclusion and recommendations

Considering the findings of the study, it is concluded that majority of students in private higher learning institutions are not satisfied with many institutional variables and the most crucial are namely the institutional costs, payment modalities, library services, internet connection and students' life conditions. It is also concluded that there are many loopholes in student enrollments in private higher learning institutions in Rwanda and the most important ones are namely: decrease in the number of applicants, merging

classes, and not offered accredited programs. Finally, it is concluded that institutional variables have a significant influence on the decrease of student enrollments in private higher learning institutions in Rwanda. The most important institutional factors influencing the decrease of student enrollment are namely: inflexible and unmarketable programs, high costs, inflexible payment modalities, poor living conditions and poor internet connection.

Based on the findings of this study, it is recommended that:

- 1) The managers of private higher learning institutions should work hard to increase the students' satisfaction with different institutional variables in order to keep them abreast and recruit a good number of new ones. The managers of these institutions should make sure that a survey on students' satisfaction level is conducted regularly in order to identify the students' problems and solve them accordingly.
- 2) Managers of private higher learning institution should ensure that students' interests are of the first priority in order to increase their students' satisfaction. The managers of private higher learning institutions should manage to minimize the loopholes in the student enrollments as found by this study. In addition, they should also be aware of the factors influencing the decrease of student enrollments as highlighted by this study, and then find sound strategies to improve on their student enrollments.
- 3) The managers of private higher learning institutions in Rwanda should look for other sources of funds other than tuition fees from the students. This can be done through initiating other income generating projects that can bring about additional funds and help in reducing costs in a bid to attract more student enrollments.
- 4) Finally, the study found a big gap in the literature related to student enrollments in higher learning institutions. Therefore, the study suggested that further research on the same area would be done in order to fill the gap. More importantly, further research would be carried out to find out effective strategies do be adopted by private higher learning in Rwanda, in order to increase their student enrollment.

About Author

Sikubwabo Cyprien has great experience in teaching at both secondary and tertiary levels. He is currently a full-time lecturer at University of Kigali (in Rwanda), the position he got since 2016. At this university, he teaches education related courses, management related courses and English language. In addition, he exercised different functions in the same university including marketing officer, examination officer and coordinator of Postgraduate programs. Before joining University of Kigali, Sikubwabo had been a part-time lecturer in different universities including Mount Kenya University (2012- 2016), INES-Ruhengeri (2014-2015) and Mahatma Ghandi University (2014-2016). He holds a secondary school certificate in Languages (English, French, Kiswahili and Kinyarwanda), a Bachelor of Arts in English with Education, a Master's Degree in educational planning,

management and administration, a Master's Degree of Arts in English (Linguistics and Literature). Finally, he is currently a PhD candidate in Educational management from University of Rwanda-College of education.

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