

## UNDERSTANDING THE INSTITUTIONAL INFLUENCE ON THE FALLING OF STUDENT ENROLLMENTS IN PRIVATE HIGHER EDUCATION INSTITUTIONS: A CASE OF RWANDA

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### ABSTRACT

This study aimed at investigating the institutional influence on the falling of student enrolments in private higher education institutions in Rwanda. The study was carried out in 6 private universities that were selected using systematic sampling technique. The study was guided by the quantitative research approach adopting the correlational research design. The study employed a sample of 370 undergraduate students. In collecting the data, the researcher used a questionnaire containing 5 point likert scales. Tables, figures, percentages, frequencies, means, standard deviation and regression analysis were used in data analysis. The results of the study indicated a significant influence of institutional variables on the falling of student enrolments in private higher education institutions in Rwanda. Furthermore, it was found that the institutional variables like inflexible and unmarketable programs, high costs, inflexible payment modalities, students' poor living conditions, poor internet connectivity, bad location of the institution and inflexible academic rules and regulations, have a significant influence on the falling of student enrolments in private universities in Rwanda. It was recommended that managers of private higher education institutions in Rwanda should strive to know the institutional variables influencing the falling of student enrolments and develop appropriate strategies to mitigate the issue.

Key words: institutional influence, falling, student enrolments, private, higher, education institutions

### INTRODUCTION

In Rwanda, education is provided in four levels: pre-primary (kindergarten), primary, secondary and tertiary (Ministry of Education [ENEDUC], 2013). MacGregor (2014) reported that higher education in Rwanda was born on 3<sup>rd</sup> November, 1963 with the opening of National University of Rwanda (NUR) in former Butare prefecture which is currently known as Huye District. It was created by the government of Rwanda in conjunction with the Dominicans' Congregation from Canada. The law setting up the first university in Rwanda (NUR) was effective since 12<sup>th</sup> May 1964. At the beginning, the university counted 51 fresher students and 16 teaching staff only. As Tikly *et al.* (cited in Freedman *et al.*, 2006) puts it, by 1994, the university had 1,000 alumnae only (30 years since its establishment).

Since 1994 the number of private universities in Rwanda has been increasing in comparison with the period before. In 2015 (after 9 starting from 1994), there were 44 tertiary institutions in Rwanda (including 12 public as well as 32 private). On the contrary, from 1963 till 1994 there were only 2 universities (MINEDUC, 2015). The proliferation

of tertiary institutions in Rwanda since 1994 has attracted the attention of many Rwandese and felt the willingness of studying in the University. On similar note, a number of people in that period were in search for new jobs and the conditions were to hold a University degree. This is one of the reasons why many people took decisions to acquire University (Senyonga, 2013). On seeing the huge demand for University studies in Rwanda, many people started entering the education business by establishing private tertiary institutions. Since then, the number of private tertiary institutions started swelling and they were established in different parts of the country.

During that time, the public tertiary institutions in Rwanda were not in position of serving the entire population that wanted University education. For that reason, the Rwandan Government gave accreditation to a number of private tertiary institutions to start offering higher education courses to give a hand to the public ones. As Amponsah and Onuoha (2013) highlighted, the central role of private tertiary institution is assisting the government in the funding of education. Today, Rwanda counts 29 tertiary institutions (27 private, 1 public and the Institute of Legal Practice and Development). It is





important to note that, all public tertiary institutions are clustered into one university known as University of Rwanda, established in 2013. In addition, since 2017 till today, the Ministry of Education resorted to stop 8 tertiary institutions because they failed to act in accordance with recommendations that emanated from the government audit, by Higher Education Council (Rwirahira, 2017).

Private tertiary institutions in Rwanda, contribute greatly to the development of the nation by educating its citizen. Amponsah and Onuoha (2013) assert that the major contribution of private tertiary institutions is that of helping the country in funding and providing education to its citizens. The overall functioning of private tertiary institutions 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 and Koryakina, 2011). That means, these institutions should get considerable student enrolments for proper performance and for them to survive.

However, since 2014 the rate of student enrolments in private universities in Rwanda has started decreasing. A survey conducted by the Ministry of education (MINEDUC, 2018) found that Gross enrolment rate (GER) and the university students decreased between 2015 and 2017. Similarly, the same study showed a large disparity in terms of student enrolments per field of study in Rwandan private universities. Higher rate of student enrolment was found in the fields like Business, Administration and Law; a low rate in the fields like Natural Sciences, Mathematics and Statistics and a very low rate in the fields like agriculture and humanities. The report of MINEDUC (2018) indicates that the rate of student enrolment has been shrinking gradually since 2014 till today. The report shows that the student enrolments in private universities 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 %). Regarding the rate of student enrolments, the report shows that the rate decreased from 40.2 % (2010-2013) to 3.1 % (2014-2018).

In fact, one wonders why some programs are stuffed with students while others are experiencing shortages of student enrolments. 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 projects geared towards developing the nation. The closure of some private tertiary institutions 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 initiatives to further their education. Obviously, there is a need to address this issue.

Rwanda is among developing countries whose unemployment rate is still high. This is testified by the report from Trading Economics (2020) which indicates that Rwanda is ranked the 1<sup>st</sup> country in East Africa Community, the 13<sup>th</sup> country in Africa and 23<sup>rd</sup> in the world among the countries with higher unemployment rate. The report indicates that in the 3<sup>rd</sup> quarter of 2019 the unemployment rate in Rwanda was 16 % while in the 4<sup>th</sup> quarter it was 15.4 %. Consequently, many people wonder whether scarcity of jobs among Rwandan university graduates might not be one of the causes of the shrinking of student enrolments in private universities in Rwanda.

The purpose of the study was to investigate the institutional influence on the falling of student enrolments in private Universities in Rwanda. Specifically, the study sought to 1) assess the students' satisfaction with institutional variables in private higher education institutions in Rwanda; 2) find out the shortfalls in student enrolments in private higher education institutions in Rwanda; 3) examine the institutional influence on the falling of student enrolments in private higher education institutions in Rwanda.

We believe that this research would provide insights on institutional influence on the falling of student enrolments in private higher education institutions in Rwanda and the findings of this study would serve as a good tool in improving student enrolments of the institutions.

## MATERIALS AND METHODS

**Study setting:** This study was conducted in January-February 2020, short before the outbreak of Covid-19. It took place in 6 private Universities based 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).

**Population and sample:** There exist 29 private higher institutions operating in Rwanda (HEC, 2019). Given the preferred scope of the study, only those which were 5 years old by the end of 2018-2019 academic year were involved in the study. Furthermore, considering the features of this research, the private higher education institutions offering online courses only were not involved in this research. For that reason, 9 private universities were excluded in the study and there remained 20 private Universities to be involved in the study. This research was conducted in 6 out of 20 private Universities only. The choice was made as per the assumption that at least 30 percent of the entire population is appropriate for a sample (Borg and Gall, 2003). The 6 private universities were selected using systematic sampling technique whereby the institutions were firstly sorted out alphabetically. Then, the researcher used the interval of four numbers to select the ones to be involved in the study. That means, each institution located at the fourth interval on the list was selected for inclusion. The target population of this study comprised of 13902 undergraduate students from which 370 participants (the sample) were chosen by means of the sampling table as elaborated by Krejcie and Morgan (1970) and it is based on the following formula.

$$s = \frac{X^2 NP (1-P)}{d^2 (N-1) + X^2 P (1-P)}$$

Where:

S= required sample size

X<sup>2</sup>= The table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N= the population size

P= the population proportion (assumed to be .50 since this would provide the maximum sample size)

D= The degree of accuracy expressed as a proportion (.05). Similarly, 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). In fact, the researcher divided the undergraduate students into groups (strata) according to the years of study and within each group the researcher used simple random sampling to select those to include in the sample.

**Ethical consideration:** Before collecting data, the researcher sought the authorisation to collect research data from the vice-chancellors of the 6 private universities that were involved in the study. Before collecting the data, the researcher sought the informed consent from the respondents using an appropriate form.

**Data collection:** This study used structured questionnaire to collect primary data from undergraduate students. The study also used documentary review to collect secondary data (from journal articles, books, theses, etc.). The questionnaire contained five point likert scales in two different categories. The first category was like (1=Very Unsatisfied, 2= Unsatisfied, 3=Neutral, 4=Satisfied, 5=Very Satisfied) and the second one was (1=Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree, 5=Strongly Disagree).The questionnaire had to be filled by ticking the appropriate box with regard to their understanding.

To ensure validity and reliability of the questionnaire, a pilot study was done as well as the Cronbach alpha 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 education institution that was randomly selected. However, the selected institution for the pilot study was not involved again in collecting the data for the main study. The data from the questionnaires was entered into SPSS 20 and the Cronbach alphas scored were extracted as shown in the following table.

**Table 1: Reliability Results**

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

**Note:** SSL=Student satisfaction level, SSE= Shortfalls in student's enrolments, IV=Institutional variables

**Source:** Research data



The data analysis was facilitated by SPSS (Statistical package for Social Sciences) version 20 which helped the researcher to make all the due calculations and design all the important tables. According to Frey (2017), SPSS is commercially distributed software suitable for data management and statistical analysis and whose first version was developed by Norman Nie, Dale Bent and C. Hdlai Hull in 1968. The data analyzed data was made up four items containing 15 options each. The first item was about demographic characteristics of respondents, the second was about the extent to which learners in Rwandan private Universities are satisfied with different institutional variables, the third was about shortfalls in the student enrolments in the institutions and the fourth was about institutional influence on the falling of student enrolments in the institutions.

**Data analysis:** The researcher used descriptive statistics (percentages, frequencies, means and standard deviation) and inferential statistics (regression analysis) in analyzing the data.

## RESULTS

The results of this study are probably based on the specific objectives. These are namely: (1) To assess the students satisfaction with institutional variables in private higher education institutions in Rwanda; (2) To find out the shortfalls in student enrolments in private higher education institutions in Rwanda; (3) To examine the institutional influence on the falling of student enrolments in private higher education institutions in Rwanda.

### 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 variables. 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 variables 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 variables, 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 enrolments. In summary, the results in table 2 revealed that the students were unsatisfied with institutional variables in general (M=2.94, SD=1.00).

### Shortfalls in student enrolments in private higher education in Rwanda

With regard to shortfalls in student enrolments in private higher education institutions 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.





**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
<b>Average mean score</b>		<b>2.941793</b>	<b>1.004623</b>

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

**Source: Research data**

The results in table 3 show four highest shortfalls in student enrolments of private universities 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 shortfalls in student enrolments of private universities 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).

Finally, the data in table 2 show the lowest shortfalls in student enrolments of private universities 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).



**Table 3: Mean and standard deviation on the shortfalls 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

**Source: Research data**

The results in table 4 below show 9 institutional variables which influence significantly the falling of student enrolments in private Universities because their p value <0.05. The most important institutional factor influencing the falling of student enrolments are namely(1) Inflexible and unmarketable programs ( $\beta=0.790$  and p value0.000), (2) High costs ( $\beta=0.674$  and p value0.001), (3) inflexible payment modalities( $\beta=0.556$  and p value0.014), (4)Poor living conditions( $\beta=0.512$  and p value0.000), (5) Poor internet connection( $\beta=0.425$  and p value0.000), (6) Bad location( $\beta=0.264$  and p value0.000), (7) Inflexible academic rules and regulations ( $\beta=0.197$  and p value0.009). Other institutional variables with moderate

influence are namely: (8) Bad service delivery ( $\beta=0.51$  and p value0.038), (9) Inadequate teaching aids/materials ( $\beta=.150$ and p value0.022) and (10) Incompetent teaching staff ( $\beta=-.245$ and p value0.026).Note that the above variables are listed from those with the highest influence to those with the lowest influence. However, the results in table 3 revealed other 6 institutional variables which do not significantly influence the falling of student enrolments in private universities in Rwanda. These include: (1) Dissatisfaction with library services, (2) inadequate laboratory equipment, (3) inadequate infrastructures, (4) Inadequate furniture and (5) ineffective leadership styles.



**Institutional variables influencing the decrease of student enrolments in private higher education institutions in Rwanda**

**Table 4: Correlation coefficients for institutional variables and the falling of student enrolments**

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
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: Falling of student enrolment

Source: Research data

**Institutional influence on the falling of student enrolments in private higher education institutions**

**Table 5: Model summary for institutional variable and the falling of student enrollments**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.521 <sup>a</sup>	.272	.216	.798432

a. Predictors: (Constant), Institutional variable

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

The analysis of variance in table 6 below, revealed that institutional variables had a significant relationship (F= 4.854, p value <0.05) with the falling of student enrolment in private universities in Rwanda.



**Table 6: Analysis of variance of institutional variables and the falling of student enrollments**

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.095	1	3.095	4.854	.046 <sup>a</sup>
	Residual	8.287	13	.637		
	Total	11.382	14			

a. Predictors: (Constant), Institutional variables ;

b. Dependent Variable: Falling of student enrolments

**Table 7: Regression coefficient on institutional variables and the falling of student enrollments**

Coefficients <sup>a</sup>						
Model		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.682	1.226		.557	.587
	Institutional variables	.770	.350	.521	2.203	.046

a. Dependent Variable: Falling of student enrolments

The results in table 7 revealed a significant influence of institutional variables ( $\beta=0.770$  and p value  $<0.05$ ) on the falling of student enrolment in private universities in Rwanda. The results came from the following model.

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

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

Where Y= Falling of student enrolments, X=Institutional Variables and  $\epsilon$ = error term

## DISCUSSION

### Students' satisfaction with institutional variables in private higher education institutions in Rwanda

With reference to research question number one, the study found that the students are very unsatisfied with five institutional variables 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 variables 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 *et al.* (2014), while the findings of Moham and Anuar (2014), confirmed that the learners 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 variables (Mean=2.941793, SD= 1.004623). This means that the students' satisfaction with some institutional variables is very low in private universities in Rwanda. This is very dangerous because it may be one of the reasons for the students to drop out. Many private universities are experiencing financial constraints such that it becomes difficult for them to provide all the essential resources to their clients (students). Thus, this might be one of the causes of the students' low satisfaction.

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 in private higher education institutions students are catered for like any other clients. Consequently, managers of these institutions must make sure that the students are always happy with the services rendered to them, because they all know that it is among the best ways to increase student enrolments.

### **Short falls in student enrolments of private higher education institutions in Rwanda**

Regarding the research question number two, the study found that the most important shortfalls in student enrolments in private higher education institutions in Rwanda 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 shortfalls (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 shortfalls are due to the falling of student enrolments in private universities, which started in 2015 and which is the main cause of their financial constraints. Note that the study found other shortfalls in the student enrolments, 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.

### **Institutional variables influencing the falling of student enrolments in private higher education institutions in Rwanda**

Concerning research question number three, the study found that the most important institutional variables influencing the falling of student enrolments (as per order of importance) are notably: (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 enrolments in universities. However, these findings contradict others like Coelli (2009) and Warsh *et al.* (2015), whose studies found no relationship between offered programs and student enrolments in universities. These findings are also similar with those of Helmet and Marcotte (2011) who found that increase in tuition fees influences the decline of student enrolments in universities but oppose those of Kroth (2015) who found no or only little negative effect of increase in tuition on student enrolments in universities.

The study also found that bad service delivery, inadequate teaching aids/materials and incompetent teaching staff influence significantly the falling of student enrolments but at a moderate mean. These findings agree with those of Barrett and Treves (2019), Ombati (2012), Khosravi *et al.* (2013), Matsolo *et al.* (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 falling of student enrolments in universities. In general, the study found that institutional variables jointly have a significant influence ( $p$  value  $<0.05$ ) on the fall of student enrolments in private higher education institutions in Rwanda.

### **CONCLUSION AND RECOMMENDATIONS**

Considering the findings of this study, it was concluded that most of learners in private higher education 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 was also concluded that there are many shortfalls in student enrolments in private higher education institutions in Rwanda and the most important ones are namely: decrease of the number of applicants, merging classes, and not offered accredited programs. Finally, it was concluded that institutional variables significantly influence the falling of student enrolments in private higher education institutions in Rwanda. The most important institutional variables influencing the falling of student enrolment are namely: inflexible and unmarketable programs, high costs,





inflexible payment modalities, poor living conditions and poor internet connection.

The study recommended that:

- 1) The managers of private higher education 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.
- 2) Managers of private higher education institutions should make sure that students' interests are of the first priority in order to increase their students' satisfaction. The managers of private higher education institutions should manage to minimize the shortfalls in the student enrollments as found by this study. In addition, they should also know the variables responsible for the falling 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 education 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.

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#### AUTHORS'S CONTRIBUTIONS

All authors (Cyprien Sikubwabo, Muhirwa André and Philothere Ntawiha) actively participated and equally contributed to all the activities pertaining to the completion of this study.

