

## **Public private partnership (PPP) as an aid to tertiary institution support for internally generated revenue (IGR): a case study of yaba college of technology**

DOI: 10.46932/sfjdv3n3-082

Received in: March 22<sup>nd</sup>, 2022

Accepted in: April 21<sup>st</sup>, 2022

### **Toriola-Coker L. O**

PhD, University of Salford United Kingdom  
Institution: Yaba College of Technology  
Address: 2, Hussey Road -Yaba, Lagos, Zip Code: 100252  
E-mail: toriolacoker@aol.co.uk

### **Omokungbe O**

MSc, University of Lagos, Nigeria  
Institution: Yaba College of Technology  
Address: 2, Hussey Road -Yaba, Lagos, Zip Code: 100252  
E-mail: infoector@yahoo.com

### **Obisanya A. A**

MSc, University of Sheffield  
Institution: Yaba College of Technology  
Address: 2, Hussey Road -Yaba, Lagos, Zip Code: 100252  
E-mail: adekunle.obisanya@yabatech.edu.ng

### **Yekini N. A**

MSc, University of Lagos, Nigeria  
Institution: Yaba College of Technology  
Address: 2, Hussey Road -Yaba, Lagos, Zip Code: 100252  
E-mail: nureni.yekini@yabatech.edu.ng

### **Alaka H**

Prof, University of Hertfordshire  
Institution: University of Hertfordshire  
Address: Hatfield, Hertfordshire, UK  
E-mail: h.alaka@herts.ac.uk

### **Ayodele-Oja S**

MSc, Obafemi Awolowo University Osun, Nigeria  
Institution: Yaba College of Technology  
Address: 2, Hussey Road -Yaba, Lagos, Zip Code: 100252  
E-mail: methods\_03@yahoo.com

### **ABSTRACT**

This study is on the contribution of public private partnership (PPP) to education development by generating revenue to sustain the infrastructure and academic decency of Yaba College of Technology, Lagos in Nigeria. Higher Education is a veritable tool for socio-economic development of any country. Training and educating society are the key influence of tertiary institution but they need to be financially sustained to carry out functional duties in terms of resources and development. PPP is seen as a solution to revamping educational sector that is experiencing failure in research and infrastructure growth everyday due to insensitivity on the part of government to finance education by meeting up the minimum

requirement benchmark put forward by the United Nation (UN). The study identified the sources of internally generated revenue (IGR) of Yaba College of Technology, limitation facing these IGRs and investigated key issues affecting attempts to improve the IGR. The survey research strategy was used through questionnaire distribution to academic and non-academic members of staff for data collection. A total 150 questionnaires were returned. Sale of admission forms and Tuition fees and revenue from commercial ventures were revealed as main source of IGR. Analysis of the questionnaires showed key issues with IGR improvement to include performance, marketability, internalization, research and development as the challenges facing the institutional growth of the college. The study therefore recommends that concerted effort should be made by the government and private sectors to providing lasting solution to decline in educational sector of Nigeria.

**Keywords:** public private partnership (PPP), internal generated revenue (IGR), funding, tertiary institution, yaba college of technology, nigeria.

## 1 INTRODUCTION

Tertiary institution development growth in Nigeria has been hindered due to the lack of funding by both state and federal government. Institution with level of awarding degrees has joined the growing list of public sectors seeking innovative solutions in an effort to generate money due the gap created by the governments in terms of funding (Government Accountability Office, 2014). Despite the fact that it is globally acceptable that fund is a key factor in positive transformation of the educational system in which Nigeria is not exempted. The procurement of public infrastructures such as roads, prisons, schools, rails, sewage wastes, power plants in the last two decades through Public Private Partnership (PPP) schemes has gained international recognition (Burke & Demirag, 2017; Jin et al., 2020). Public Private Partnership (PPP) is an infrastructure delivery approach which combines the effective managerial expertise and finance of the private sector with public sector supervisory and regulatory capabilities (Osei-Kyei & Chan, 2015; Toriola-Coker et al., 2020)

The governments have not paid adequate attention to funding of the education industry in Nigeria (Atobatele, 2018). There has been a proposition which advocates for the use of internally generated funds (revenue) (IGR) to boost the infrastructure facilities needed by the institution in order to meet the short fall of extra fund that is not readily available. In response to this, tertiary educational institutions have embarked on several methods of generating funds for extra curricula activities needed to be achieved by the management. (Maslen, 2014) reveals that countries like Australia, the UK, the Netherlands, Canada, the US and New Zealand generates revenue internally through high tuition fees paying program to ensure financial stability of their higher education systems, encouraging high completion rates, intensification of the knowledge economy and increasing access for students. Elizabeth & Wey Amaewhule, (2019) posited that revenue generated by tertiary institution may include receipt from taxation, sales of admission form, tuition fees, hostel accommodation fees, association registration fees, or other interests and returns from loans and investment earning which are not the proceeds of taxation. Although, private tertiary institutions

are tended towards maximizing efficiency through marketization, there is an oval possibility that when public tertiary institutions enter into partnership with private tertiary institutions, they will improve systems efficiency, promote entrepreneurial culture through market-oriented research and broaden access. The Nigerian private tertiary education sector is growing faster than anticipated. Tertiary education is an expensive, capital-intensive social service, and cost-sharing among the service providers and beneficiaries from the system has become an inescapable reality

The policy of Internally Generated Revenue (IGR) was insignificantly known in the Nigerian higher educational sector about two decades ago when the fewer tertiary institution in the country were funded with oil revenue. Operations and development of the tertiary education sector were catered for by the federal government (Adewale & Adhuze, 2017; Akinsanya & Olusanya, 2017). Then came the recent escalation in the number of universities and polytechnics which have remarkably grown over the years. According World Education News Review (2017) the number of recognized universities in Nigeria has grown tenfold from 16 to 152 between 1980 and 2017, and in fact to 171 as reported on the Nigerian Universities Portal of the National Universities Commission; (National Universities Commission, 2020) and 140 polytechnics displayed on National Board for Technical Education; (National Board for Technical Education, 2020) website and given the huge economic catastrophe facing the government made worse by the recent global financial crisis, inadequate funding has clearly revealed itself to be a great challenge.

In 1999 a former executive secretary of NUC Okojie, in 1999 states that the federal government through the National Universities Commission (NUC) has advised all federal tertiary institutions to set up means of generating revenues internally to solve their finances related problems so as to enable the managements not to depend almost entirely on the government when financial needs arise. Again Famurewa, (2014) revealed that as a result of the Internally Generated Revenue (IGR) funding policy, a minimum of 10% of total annual fund sources for federal tertiary institutions, comes from Internally Generated Revenue (IGR). Onuoha (2013) explains that the IGR theory means that the central government should not have to accept the burden of providing funding for every expenditure item of public universities. The following researchers (Baro et al., 2017; Famurewa, 2014; Khaemba et al., 2014; Ogungbenle & Edogiawerie, 2016) agreed with the observation that some tertiary institutions across the globe have done reasonably well in their drive for substantial IGR and have used it to positively change the landscape of the institutions while some were yet to catch up with the vision.

Therefore, the administration of Yaba College of Technology (Yabatech), Lagos, looked inward for better IGR in 2018 by revealing plans to launch aggressive moves to raise the institution's IGR and make its graduate self-reliant in different entrepreneurial programmes emphasising the drives as topmost because they sought to strengthen the institutions financial standing. Ngwenya, (2019); Ofoegbu et al., (2016); Umar & Current, (2016) also emphasised the significance of IGR of institutions through the Public

Private Partnership (PPP) initiatives with a clearly defined active role to be played by tertiary institutions as the right ingredient to ensuring the success of a country's economic development. The general experience is that services provided by private sectors are delivered more efficiently and accurately. The thinking behind this study is that involving the private sector would help in achieving and securing higher levels of funding without pressurizing the government during financial crisis.

This will revitalize the tertiary institutions system and improve the quality of education. In view of the previous discussion, the topic is aimed to accurately determine the possibility of improving the IGR of Yaba College of Technology through Public-Private Partnership considering the challenges the college is facing on infrastructural development within the campus premises. Academically, the findings of this study would be beneficial to the management and staff of Yaba College of Technology and other tertiary institutions within and outside Nigeria. It will also provide measurable and reliable knowledge in serving as a reference for stakeholders in other sector trying to seek alternate sources for boosting their revenue. The involvement of private sector in public infrastructure financing has been accomplished for decades in the form of Public Private Partnership (PPP). However, the implementation is also more often for economic infrastructure, but some countries have started to implement PPP for social infrastructure (education, healthcare, care of the elderly, etc.) when they think to add human capital and improve quality of life.

## **2 LITERATURE REVIEW**

It is not only in Africa that tertiary education face challenges of funding. Funding challenges are also faced by universities in the United Kingdom (Sellgren, 2013). Particularly in England the report examined the challenges for government and the tertiary institutions in funding any expansion of student numbers as against current funding restraints. Dotsey & Esi, (2018) reveals that UK tertiary institutions have been facing financial challenges over years following changes to funding to the recruitment of overseas students. This source indicates that United Kingdom's government policy change to higher or tertiary education could have serious impact on its skilled workforce and economic growth. This holds for all other countries particularly developing nations such as Ghana. The above makes it very essential, the report by Institute for Fiscal Studies [IFS], that calls for consideration of funding options that are sustainable and that could also ensure that higher education continues to be accessible to all applicants. Okuwa & Campbell, (2017); Olayiwola, (2012) on their part suggested that, in the light of numerous challenges facing African governments, it is critical for tertiary institutions to diversify their sources of income to include mobilizing more funds from business entities, households and development partners and this would include PPP. Consequently, the universities should also ensure more efficient and effective use of resources available to them.

Additionally, it is being suggested that the quality of a given academic program and research output alongside unit cost should be factored in deciding on the level of government funding extended to universities (Gikonyo, 2020; Hodge & Greve, 2018; Wang & Ma M, 2020). Besides, how effective and efficient the resources of the universities are utilized should also be assessed in allocating public funds to universities. This can be done by providing targeted funding support to the poor and vulnerable students from the underserved regions of the country. There should also be attractive incentives to attract the participation of private sector into the funding of the higher education and these could be in the form of establishing and well managing of the philanthropic and endowment funds, an incentive for partnering the government in supporting tuition, research and development in higher educational institution (Hodge & Greve, 2018; Leydesdorff & Bornmann, 2018; Wang & Ma M, 2020)

Adding to the view expressed earlier (Gikonyo, 2020) urged public universities in Kenya and other African countries to decouple themselves from businesses that are not core to their operations such as students' catering, security, cleaning and transportation by out-sourcing those services. On the same score the public tertiary institutions should open up and maximize returns from the array of assets and investment opportunities available to them by engaging the services of professionally competent investment managers to manage their assets and investments. Universities are also to be at the forefront in the creation of partnerships with the private sector in the development as well as making it national union catalogue, science parks and instrument centres for joint usage.

Akintoye et al., (2015); Akintoye & Beck, (2015) depicts public private partnerships (PPP) as a long-term contractual agreement and relationship between the public authorities and private sector companies and concluded that PPP is a delivery method aimed at financing, designing, implementing and operating public sector facilities and services. In other word, PPP defined as private-sector investment in public infrastructure have peculiar characteristics (Yescombe, 2018) including being a long-term contract (PPP Contract) between a public-sector party and a private-sector party; for the design, construction, financing, and operation of public infrastructure (Facility) by the private-sector party; with payments over the life of the PPP Contract to the private-sector party for the use of the Facility, made either by the public-sector party or by the public as users of the Facility; and with the Facility remaining in public-sector ownership, or reverting to public-sector ownership at the end of the PPP Contract.

The traditional funding sources for the Nigerian tertiary education vary somewhat from point of view of the founding and proprietorship of the institutions. The federal tertiary institutions are funded by the federal government via grants for personnel costs, research funding and capital expenditures (Agunbiade & Dawud, 2017; Gebreyes, 2015; Nyeh & Kpee, 2019; Onuoha, 2013). It is on statutory note that federal tertiary institutions do not charge any tuition fees (Okojie, 2009) and it could be considered a serious violation for any federal tertiary institutions to impose tuition fees on the students or their parents

(Ijaduola. K, 2011). This is similar to the funding pattern in Japan except that the Japanese tertiary institutions enjoy greater flexibility than the Nigerian tertiary institutions in the application of the subsidy between budget periods (Yamamoto, 2016)

The state tertiary institutions charge affordable tuition fees and other long list of charges for registration, library fees, departmental fees, IT dues, and several manners of levies (Agunbiade & Dawud, 2017). The State tertiary institutions are primarily funded by the state governments who established them. Since the arrival of the first stream of state tertiary institutions in 1999, school fees have proved their most traditional funding source with little support from the proprietors. Some state tertiary institutions have also explored generating IGR through fund raising. But these have yielded little as the giving culture does not appear to be an African thing. These sources are considered very important as any increases of funding to schools could make a difference in school quality as measured by academic achievement (Dotsey & Esi, 2018). Another parameter is the low staff morale that accompanies inadequate funding of the institutions.(Ijaduola. K, 2011) declares: “Experience and evidence abound that worker work less or even refuse to work when salaries and fringe benefits are not forthcoming regularly. This is an incidence which may make national productivity to decline.”

Considering the foregoing, (Okuwa & Campbell, 2017) suggested other means of improving higher education funding in Nigeria which include:

**Education Tax:** Public resources for education could be raised from taxation. Resources raised therefore are used for the general purposes of government and funds for education are shared from a general pool of public revenue. In 1994, the government of Nigeria set up the Education Trust Fund in which companies operating in Nigeria were made to pay 2 per cent of their annual profits as Education Tax. The resources garnered therefrom were distributed among all levels of education in the country. However, the fund has since been transformed into tertiary Education Trust Fund (TETFUND), meant specifically for the tertiary institutions. Since 2009 the Fund (TETFUND) has made several interventions to improve the quality of teaching and research in higher education.

**Contributions from Users of Education:** The need for adequate funding of the tertiary institutions in the face of falling public resource allocation necessitated the recourse to the users of education-(students) to contribute towards the funding of their institutions. This could be in form of payment of school fees, development levy, caution fee (against the possibility of damage to school property), admission, and registration and examination fees.

**External Support:** This always comes in the form of technical assistance, grants, credits and loans. Due to paucity of funds for tertiary institutions the Nigerian government has often sourced for loans/grants from foreign and international development partners. These are largely in form of bilateral and multi-lateral loans. As regards foreign grants, it is nowadays largely confined to the offer of scholarships for

specialized training particularly at the graduate level outside the country. Sometimes it takes the form of technical assistance.

***Internal Generated Revenue (IGR):*** The individual tertiary institutions could supplement their funding stream through the establishment of revenue yielding ventures/project. Such projects/venture like bookshops, hotel and catering services, printing press, consultancy service, etc., are veritable means of raising funds needed to enhance their service delivery.

Olayiwola, (2012) explored information on the alternative strategies for improving the internally generated revenue of Ebonyi State University in Nigeria and concluded that it is imperative to note that financial capacity of the universities would reduce the over dependency for State and Federal Government funding. It is also imperative to note that the financial activities of the tertiary institutions are the major source of revenue of the tertiary institution. This study therefore concluded that teaching and learning require an enabling environment which calls for adequate funding for the maintenance of facilities as well as addressing staff and student welfare matters, developmental issues and research. For this to take place, the University managers must utilize Public Private Partnership (PPP) and any of the strategies suggested by the study to ensure revenue generation and mobilization. Leydesdorff & Bornmann, (2018) also explained that in developing countries, the government which has limited budget for public infrastructure development should choose which infrastructure should be developed.

Most countries decided to build more economic infrastructure than social infrastructure because former have direct economic impact for society. The involvement of private sector in public infrastructure financing has been accomplished for decades in the form of Public Private Partnership (PPP). However, the implementation is also more often for economic infrastructure, but some countries have started to implement PPP for social infrastructure (education, healthcare, care of the elderly, etc.) when they think to add human capital and improve quality of life.

### **3 METHODOLOGY**

The descriptive survey design was used for this study by gathering information about the present and existing condition within the campus. This design produces a snap shot of a population at a particular point in time. This design was aimed at determining the strategies for improving the Internally Generated Revenue of Yaba College of Technology through Public Private Partnership (PPP). This has collated quantitative degree of accuracy based on the opinions of professionals from different fields within and around the campus. The estimated population of this study is Two Hundred and Fifty (250) respondents which comprises of academic staffs which includes the Deans, Directors, Heads of Department and Staff of the Internal Quality Assurance Unit (IQA) and the non-academic staffs such as the bursary staffs, audit and finance sections of the institution. A total of One Hundred and Fifty (150) were realized and used to

analyse the data collected. It must be recalled that the Deans, Directors and HODs are the spending officers of the College and that the staff of the Finance and IQA sections see to the proper accounting of the finances. Hence, each of them is well placed to contribute meaningfully to the issue under discussion. The researcher used the Judgement (or purposive) sampling technique to select the respondents for the study. This was to give the opportunity of equal representation to all the staff members, both academic and non-academic members. Primary method of data collection was used to collect necessary data that was used for the analysis of this study using questionnaire. Data were generated through a field survey and questionnaire was administered to the respondents at their respective offices to source for relevant data needed to evaluate the subject matter. The instrument was made up of four sections. The first section was used to gather the demographic data of the respondents. The second section has twelve items, which are questions concerned with the sources of internally generated fund (IGR) for Yaba College of Technology. With these, respondents are supposed to indicate the extent each of them constitutes an IGR source for the College. In this research, descriptive statistics was used to present the demographic data of the respondent’s characteristics, in line with modern trends in social and educational research. The data obtained from the questionnaire were in numerical form. These data were checked for consistency and organized in tables according to research questions.

#### 4 RESULTS AND DATA ANALYSES

The demographic questions asked the respondents include their gender, level of education and staff division (whether academic or non-academic).

Table 1: Respondents’ Gender

Gender	Count	Percentage (%)
Male	70	47
Female	80	53
Total	150	100

Figure 1. Respondents’ Gender status

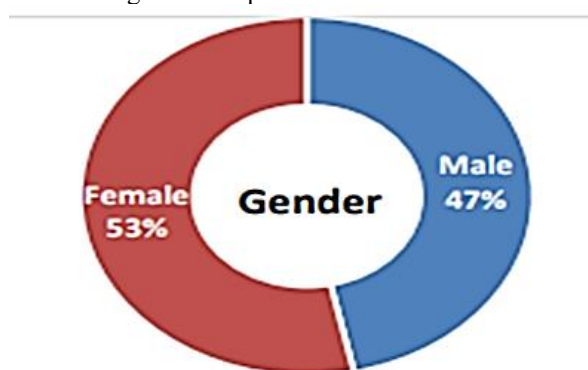




Table 1 and Figure 1 describes the gender distribution of the respondents, about 53% are female while 47% are male, this almost equal distribution enables this survey to achieve a gender unbiased response from the respondents.

Table 2: Respondents' Education Level

Respondent Educational Level	Count	Percentage (%)
PhD	7	5
Masters	59	39
BSc	42	28
HND	36	24
ND	6	4
<b>Total</b>	<b>150</b>	<b>100</b>

Figure 2. Respondents' Education Level

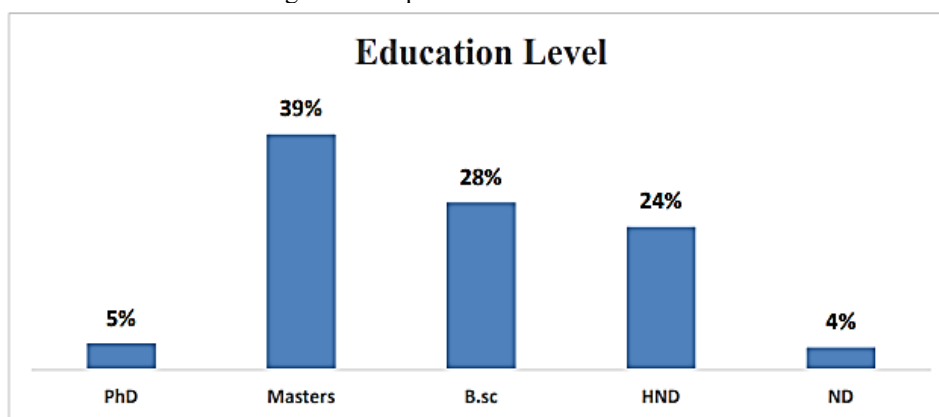


Table 2 and Figure 2, showed 67% of the respondents having either a BSc or Masters, 44% have above BSc, while 96% of the respondents have above ND level qualification and 5% are PhD holders.

Table 3 Respondents' Education Level

Staff Division	Count	Percentage
Academic	73	49%
Non-Academic	77	51%
<b>Total</b>	<b>150</b>	<b>100%</b>

Figure 3. Respondents' Education Level

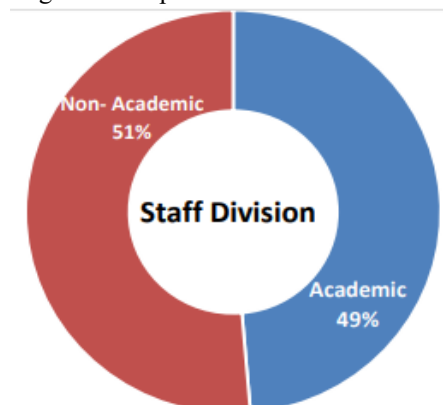


Table 3 and Figure 3 showed the staff classification of the respondents, about 51% are non-academic while 49% are academic. This survey distribution just like in the case of gender helps to even out bias that may result from data collection. It is assumed that apart from the academic staffs who may have much knowledge about revenue and spending in the academia, non-academic staffs also have pivotal roles in the process, in fact they are mostly in charge of the revenue generation and expenditure budgeting processes. In summary, the demographic feature of the data collected is carefully monitored to ensure that responses are not skewed to a gender or to a class of education level or even staff division. Gender and staff level distribution are almost shared in halves to ensure data fairness and randomness.

### 5 RELIABILITY AND VALIDITY TEST OF THE DATA

The table below shows the normal Cronbach alpha reliability test of dimensions used in measuring the improvement of Internally Generated Revenue (IGR) of the college through public-private partnership. Twelve (12) variables were tested using Cronbach alpha method via SPSS, IBM version 23.

**Reliability Statistics**

Cronbach's Alpha	No of Items
.762	12

According to Pallant (2020) , reliability score greater than 0.70 are acceptable and reliable value for Cronbach’s Alpha and value lower than 0.70 are substantially lower and it indicates unreliable scale. Twelve (12) dimensions measuring IGR being generated by the college were subjected to Reliability and validity test using Cronbach Alpha method. The result of the test divulged that all the dimensions as stated in the questionnaire shown an Alpha co-efficient that is above the standard guideline of 0.70, the scale are suitable for the analysis with acceptable reliability. Cronbach Alpha score of 0.762 was obtained for all the variables. This implies that there is internal consistency of the entire variables scale and the construct exhibited strong internal reliability. The result therefore, confirmed that the instrument used for this study had satisfactory construct validity.

### 6 DISCUSSION

In streamlining the questions about sources of internally generated funds for Yaba College of Technology, we try to draw from experience of the respondent from the questionnaires administered where we draw the 12 basic sources of these IGRs. This includes:

1. Sale of admission forms and Tuition fees
2. Residential, academic user facility fees paid by full-time students and fees paid by part-time students
3. Penalty charged for late registration of courses
4. Commercial ventures (e.g.; Cybercafés, Bookshops, built up shops for rent, etc.)
5. Research and Consultant services
6. Manufacturing and processing
7. Alumni relations and Associations
8. Hiring of auditorium, conference facilities, etc.
9. Grants and Private contributors
10. Community efforts and donations
11. Procurement of certificate
12. TET-Fund

Respondents were asked to describe the extent to which they agree that each of these sources are important for Yaba college of technology’s IGR.

Table 4: Sources of IGR for Yaba College of Technology

		1	2	3
<b>Source of Revenue</b>		To a lesser extent	To some Extent	To a larger extent
1	Sale of admission forms and Tuition fees	11%	36%	53%
2	Residential, academic user facility fees paid by full-time students and fees paid by part-time students	27%	45%	28%
3	Penalty charged for late registration of courses	49%	37%	13%
4	Commercial ventures (e.g.; Cybercafés, Bookshops, built up shops for rent, etc.)	24%	60%	16%
5	Research and Consultant services	47%	39%	13%
6	Manufacturing and processing	60%	25%	15%
7	Alumni relations and Associations	47%	38%	15%
8	Hiring of auditorium, conference facilities, etc.	20%	45%	35%
9	Grants and Private contributors	55%	40%	5%
10	Community efforts and donations	69%	30%	1%
11	Procurement of certificate	46%	47%	7%
12	TET-Fund	8%	31%	61%

On the first IGR sources; Sale of admission forms and Tuition fees recorded 53% of the respondent affirming that to a very large extent while 36% says to some extent thus, it is an important source of IGR. Residential, academic user facility fees paid by full-time students and fees paid by part-time students, 45% of the respondents agree that it is to some extent an important source of IGR, while about quarter of the respondent thinks it is to a large extent an important contributor to IGR. Penalty charged for late registration of courses is also considered and 86% readily agreed that it is only important to a less or to some extent, while only 14% sees its impact as being significant thus, less important on IGR. On revenue from commercial ventures (e.g.; Cybercafés, Bookshops, built up shops for rent, etc.), 60% agree that this source is important to some extent with 16% believes it is important to a very large extent.

Furthermore, research and Consultant services is considered less important with 47% while 40% are just in between. Also, the pattern experienced on manufacturing and processing as source of IGR is that about 60% responding that it is less important, 15% says to a large extent while about 25% are also in between. Alumni relations and associations has only 15% of the respondents agreeing that it is an important source of revenue while the remaining 85% believe it only important to a less or some extent. Hiring of auditorium and conference facilities also contributes to IGR but only 35% thinks it is highly important while remaining 65% simply think it is less or to some extent important. More so, grants and private contributors are ranked as less important or to some extent important by about 95% of the respondent while only 5% agreed it is important to a large extent. From Table 4, community efforts and donations are far less important, only 1% of the respondents think community efforts and donations are significant to generating IGR to a large extent, 99% thinks it is less important or to some extent important. Procurement of certificate is also considered as largely significant on IGR by 7% of the respondents, 46% believe it is less significant while 47% thinks it significant to some extent. Finally, Tetfund seems to be the most important to a large extent as 61%) of the respondents agree that it is a significant source of IGR to a very large extent, 31% agreed to some extent while only 8% thinks it is less important.

## 7 FACTOR ANALYSIS

Factor analysis was also used to substantiate the factors that contributed immensely to the increase in the Yaba College of technology internally generated revenue. Factor analysis is a statistical method used to describe variability among observed variables, correlated variables in terms of a potentially lower number of unobserved variables called factors (Spearman, 1950). It is a statistical data reduction and analytical technique that strives to explain correlations among multiple outcomes as the result of one or more underlying explanations, or factor. The technique involves data reduction, as it attempts to represent a set of variables by a smaller number. Principal components analysis was used in analysing the research question above, because it usually revealed the kind of relationship that exist between variables through correlation analysis, it provides eigen values (variance) of each component variables and revealed the variables that is/are the best for the subject matter under consideration. It also revealed co-variance relationship of the variables and the extent to which one variable is superior to other variables as well as the order of superiority of each variable. The various source of internally generated revenue (IGR) was highlighted below with their coding;

- Sales of Admission form and tuition fees = ATF
- Residential, academic user facility = RAUF
- Penalty charged for late registration of courses = LRC
- Commercial ventures (e.g.; Cybercafés, Bookshops, built up shops for rent, etc.) = CV

- Research and Consultant services = RCS
- Manufacturing and processing = MPS
- Alumni relations and Associations = ARA
- Hiring of auditorium, conference facilities, etc.= HACV
- Grants and Private contributors =GPC
- Community efforts and donations = CED
- Procurement of certificate = POC
- TETFUND = Tetfund.

Table 5: Communalities

	Initial	Extraction
ATF	1.000	0.560
RAUF	1.000	0.455
LRC	1.000	0.619
CV	1.000	0.571
RCS	1.000	0.443
MPS	1.000	0.632
ARA	1.000	0.572
HACV	1.000	0.421
GPC	1.000	0.661
CED	1.000	0.590
POC	1.000	0.600
Tetfund	1.000	0.793

## 8 EXTRACTION METHOD: PRINCIPAL COMPONENT ANALYSIS

The Table 5 explained the proportion of variable’s variance, the sum of squared factor loading. It gives true picture of latent variables. The analysis revealed nine communalities that are tends to 1 which are Tetfund, Grants and Private contributors (GPC), Manufacturing and processing (MPS), Penalty charged for late registration of courses (LRC), Procurement of certificate (POC), Community efforts 25 and donations (CED), Alumni relations and Associations (ARA), Commercial ventures e.g.; Cybercafés, Bookshops, built up shops for rent, etc. (CV) and Sales of Admission form and tuition fees (ATF). From the extraction column, it was divulged that Tetfund, GPC, MPS, LRC and POC with the extract values of 0.793, 0.661, 0.632, 0.619 and 0.600 representing 79.3%, 66.1% 63.2%, 61.9% and 60% respectively are the major factors that contributed tremendously to the IGR of the institution for the period under consideration. However, the table also revealed that ATF, CV, CED and ARA extracted value also contributed to the increase in the institution IGR but as not significant relative to what the institution is getting from Tetfund, GPC, MPS, LRC and POC respectively.

Table 6: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative	Total	% of Variance	Cumulative	Total
			%			%	
1	3.009	25.076	25.076	2.400	20.000	20.000	1.856
2	1.443	12.022	37.099	.934	7.784	27.785	1.960
3	1.285	10.709	47.808	.741	6.175	33.960	.744
4	1.180	9.832	57.640	.487	4.060	38.020	.825
5	.913	7.606	65.246				
6	.882	7.352	72.598				
7	.735	6.123	78.721				
8	.678	5.646	84.367				
9	.599	4.994	89.361				
10	.525	4.371	93.732				
11	.442	3.685	97.417				
12	.310	2.583	100.000				

From the Table 6, the study considered twelve variables (Sources of internally Generated Revenue) which represent component factors that were used in determining which sources of IGR have a substantial contribution to the institution revenue. Furthermore, the eigen values (variance of the principal component analysis =1) which explained the variability that exists among the various principal components under consideration revealed that factor 1 to 4 are the factors that gave eigen value that are equal to 1 or more. This indicates that they revealed 26 acceptable variances of principal component i.e., they have significant contribution to the IGR of the institution as at the period of this study. This was substantiated in the cumulative % column and extracted sum of square loading as the number of rows reproduced on the right side of the table is determined by the number of principal components who’s eigen –value is 1 or greater than 1. Hence, afore-mentioned factors contributed significantly to the IGR of the institution.

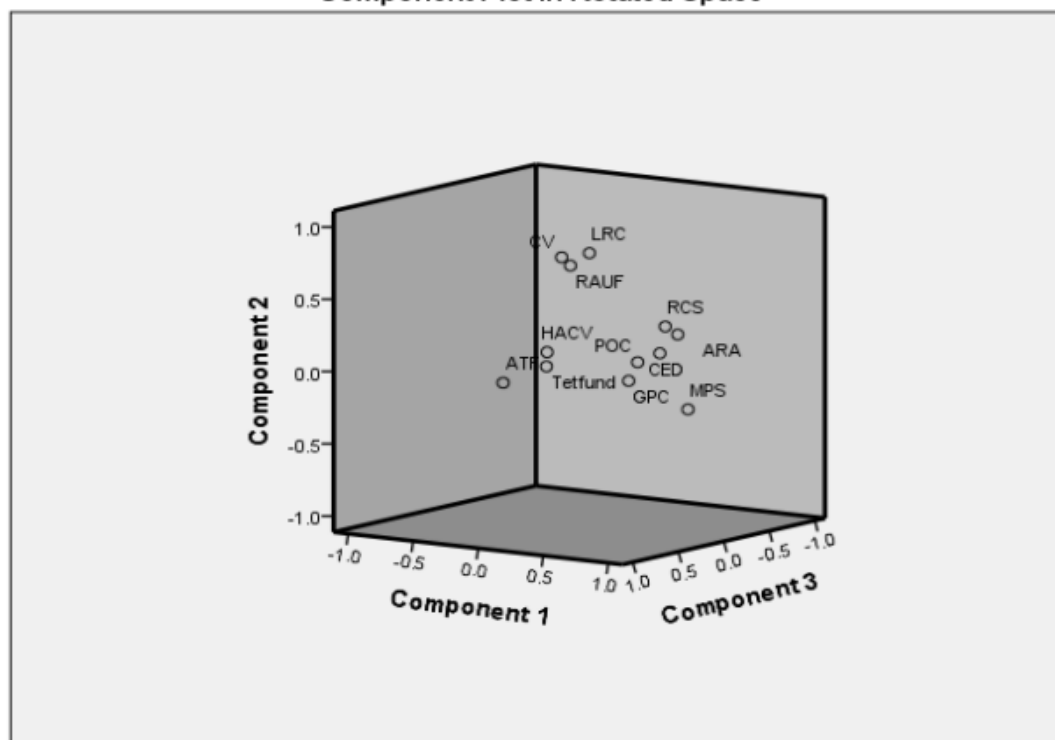
Table 7: Component Matrix<sup>a</sup>

	Component			
	1	2	3	4
ATF	- 0.078	0.484	0.499	0.265
RAUF	0.435	0.377	-0.336	0.103
LRC	0.578	0.307	-0.420	0.000
CV	0.439	0.532	-0.308	0.009
RCS	0.530	-0.273	-0.273	-0.115
MPS	0.569	-0.347	0.000	-0.214
ARA	0.691	-0.116	-0.039	-0.281
HACV	0.245	0.468	0.363	0.100
GPC	0.577	0.179	0.000	-0.149
CED	0.733	-0.147	0.166	0.062
POC	0.516	-0.396	0.010	0.420
Tetfund	0.000	-0.224	0.025	0.000

The Table 7 contained component loading, which are correlations between the variables (components extracted) and the components. From the footnote of the table above, 4 components were extracted indicating that there are 4 factors that are substantially contributing to the IGR of the institution based on their eigen values that are greater than or equal to 1. However, it was revealed from the table that there is a moderate direct relationship between LRC, RCS, MPS, GPC, POC and Tetfund (1) sources of IGR, similarly, it was divulged that strong relationship exist between ARA, CED and Tetfund (1). Furthermore, the table also revealed relationship that subsist between GPC and other principal components variables, it was observed that there is moderate but positive relationship between GPC and CV, and weak positive relationship between GPC and ATF, RAUF and LRC while others components variables revealed weak inverse relationship. In considering relationship that exist between MPS and other principal components variables, it was discovered that there is moderate positive relationship between MPS and GPC, while there is weak positive relationship between ATF and MPS, HACV and MPS, Tetfund and MPS, there is inverse relationship between RAUF, LRC, CV, RCS, ARA and MPS.

Similarly, it was revealed that there is weak positive relationship between LRC and ATF and also, relationship exist between LRC and POC as it revealed the weak positive relationship. It was obvious, from the table that inverse relationship between LRC and RPS, MPS, ARA and GPC. This implies that as LRC generating increase in IGR, other variables are not generating more IGR.

Figure 4, Component Plot  
**Component Plot in Rotated Space**



The diagram above explained the component rotational analysis of all the components variables under consideration. It revealed the level of significant of each variable based on the height attained in the box. It also explained the cluster relationship between the explanatory variables. From the table it can be deduced that LRC, CV RAUF are the major dimensions that contribute significant improvement to the college IGR as their eigen- value are within 1 and 0.50. Similarly, GP, MPS, TETFUND, CED, POC, HACV and ATF clustered together, indicates that though they are not contributing huge amount to IGR of the college but they have similar contribution to the increase in the institution IGR as they all fall within 0.5 and 0. Similarly, LRC, RAUF and CV clustered together in the diagrammatical representation above which explained that the three variables are also contributing in the same or similar manner to the development of IGR in the institution. It was also observed that their contribution is not as significant relative to the contribution of TETFUND, GPC, MPS and LRC respectively.

After identifying the various sources of IGR with help of the respondents, and determining from their responses the most significant, less significant and average sources of IGR for Yaba college of technology, it is important to investigate the challenges that hinder the functionality of these sources in order to have a holistic view of their importance and difficulties. The following were identified by the respondents as most significant challenges. 1. Government policies/control on school fees increases and other charges does not allow for charging full cost recovery fees. 2. Lack of management total commitment to switching from the tradition core duties of research/teaching and learning to commercializing some of its activities 3. Low enrolment of Students 4. Delays in payment of levies imposed on traders on various campuses 5. Staff (manpower) capacity.

Table 9: Challenges Encountered During the generation of IGR in Yaba College of Technology

		1	2	3	4
	<b>Revenue Generation Challenges</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1	Government policies/control on school fees increases and other charges does not allow for charging full cost recovery fees	3%	19%	55%	23%
2	Lack of management total commitment to switching from the tradition core duties of research/teaching and learning to commercializing some of its activities	3%	27%	51%	20%
3	Low enrolment of Students	27%	29%	33%	11%
4	Delays in payment of levies imposed on traders on various campuses	17%	31%	40%	12%
5	Staff (manpower) capacity	26%	25%	29%	19%



Table 9 has indicated the challenges facing the growth and development of Yabatech in terms of revenue generation which has postulated the need for private investors involvement

## **9 RECOMMENDATIONS AND CONCLUSION**

The following recommendations are made based on the data collected and analysed in the previous chapters & also based on the suggestions proffered by some of the respondents.

1. Yaba college of technology as an institution and citadel of learning need to use its research and development strength to improve its IGR as it worth noting that the academia must institute a better relationship with the corporate world for research funding, this will not only boost IGR for the company, it will also ensure that researches are directed towards resolving immediate realistic corporate problems.
2. The Management of Yaba college of technology should put in place effective measures that would ensure every IGR sources that contributes at least some amount of revenue on the activities of the college are efficiently managed and improved on significantly to ensure longterm sustainability.
3. The government should provide financial support through scholarships to those students with poor financial background while management on its part allow for flexible terms of payment for such students to avoid pilling up of student's debts (resulting from full cost recovery policy) that would in effect reduce the Internally Generated Revenue.
4. The research also recommend that public-private partnership in the area of manufacturing and processing, transportation services and accommodation services will go a long way in boosting the internally generated revenue of the college and also serve the purpose of its existence. This was substantiated in the previous chapter of this study under factor Analysis where it was discovered from the respondents' analysis that Manufacturing and processing (MPS) has contributed little/nothing to the IGR of the institution.
5. The management of the institution should put in place measures to enforce payment of levies on commercialize traders and workspace occupants to improve upon the contribution of such Internally Generate Revenue sources.
6. The research outcome also recommend that the management of the institution should manage these major areas of IGR; TETFund, Sales of admission form (ATF), Hiring of auditorium & conference facilities (HACV), Residential, academic user facility fees paid by full-time students and fees paid by part-time students (RAUF) very well and ensure that nothing should serve as a stubbing block prevent it from getting revenue. If there is proper monitoring and control strategies in the following sources aforementioned then the sky is the limit for tremendous increase in IGR

for the institution. This can be substantiated from the factor 35 analysis conducted on which sources of IGR gives more revenue and it was divulged that From the extraction column, it was divulged that Tetfund, Sales of admission form (ATF), Hiring of auditorium & conference facilities (HACV), Residential, academic user facility fees paid by full-time students and fees paid by part-time students (RAUF) respectively are the major factors that contributed tremendously to the IGR of the institution for the period under consideration.

In conclusion, the study might open up the avenue for further research in this field of interest. The study focused on one federal institution in Lagos state, future research in this area may focus on more than one federal institution in the state and how localization/commercialization features environment can be of advantage for them in increasing their IGR via diversification. The research serves as a reference to both under-graduate and post-graduate student. This study serves as a eyes-opener to the management of Yaba college of Technology, Yaba on areas that gives more IGR and potential areas of focus in increasing the IGR of the college. The study informs the management the importance and significance of each source of IGR and how public-private partnership can be used to increase internally generated revenue of the institution. The study also provides needed strategies that would enhance and improve the present IGR of the college.

## REFERENCES

- Adewale, P. O., & Adhuze, O. O. (2017). Factors Affecting Polytechnic Students' Perception of Building-Based Vocational Skills. *International Journal of Vocational Education and Training Research*, 3(4), 29–35. <https://doi.org/10.11648/j.ijvetr.20170304.11>
- Agunbiade, A., & Dawud, A. (2017). On the Use of Double Sampling Method in Analysing Internally Generated Revenue: A Case Study of Olabisi Onabanjo University. *Journals.Ouagoiwoye.Edu.Ng*, 2(1), 16–23.
- Akinsanya, P. O., & Olusanya, J. O. (2017). Tertiary education trust fund interventions and tertiary institution capacity building in South-West, Nigeria. *Journalog Educational Thought*, 6(2), 123–141.
- Akintoye, A., & Beck, M. (2015). Public Private Partnership in Switzerland JENNIFER FIRMENICH. *Taylorfrancis.Com*, 393–316.
- Akintoye, A., Beck, M., & Kumaraswamy, M. (2015). *Public private partnerships: a global review*.
- Atobatele, A. J. (2018). Contribution of Public Private Partnership to Educational Development in Nigeria Impact of Good Governance and Entrepreneurship in Nigeria View project Impact of Public Private Partnership on Infrastructure Development of Nigeria View project. *International Journal of Research in Arts and Social Science*, 11(2), 121–128.
- Baro, E. E., Bosah, G. E., & Obi, I. C. (2017). Research funding opportunities and challenges: A survey of academic staff members in Nigerian tertiary institutions. *Bottom Line*, 30(1), 47–64. <https://doi.org/10.1108/BL-07-2016-0027/FULL/HTML>
- Burke, R., & Demirag, I. (2017). Risk transfer and stakeholder relationships in public private partnerships. *Elsevier*, 41(1), 28–43.
- Dotsey, G., & Esi, N. (2018). *Funding higher education at College of Agriculture Education in Mampong: the role of internally generated Fund*. University of Cape Coast.
- Elizabeth, U. O., & Wey Amaewhule. (2019). Stakeholders' Participation In The Funding And Curriculum Development In The Attainment Of Sustainable Development Goals Of Universal Basic Education In Rivers State Stakeholders' Participation In The Funding And Curriculum Development In The Attainment Of. *Think India Journal*, 22(14), 14708–14716.
- Famurewa, I. O. (2014). Inadequate Funding as the Bane of Tertiary Education in Nigeria. *Greener Journal of Economics and Accountancy*, 3(2), 20–25.
- Gebreyes, F. M. (2015). *Revenue generation strategies in sub-Saharan African universities*. University of Twente.
- Gikonyo, S. B. (2020). *Public Private Partnership Strategy and Performance of Parastatals in Kenya*. University of Nairobi.
- Government Accountability Office. (2014). *Standards for Internal Control in the Federal Government*.
- Hodge, G., & Greve, C. (2018). Contemporary public–private partnership: Towards a global research agenda. *Financial Accountability and Management*, 34(1), 3–16. <https://doi.org/10.1111/FAAM.12132>
- Ijaduola. K. (2011). Driving policy of higher education in Nigeria towards relevance. *Scholars.Fhsu.Edu*, 9(1).
- Jin, L., Zhang, Z., & Song, J. (2020). Profit Allocation and Subsidy Mechanism for Public–Private

Partnership Toll Road Projects. *Journal of Management in Engineering*, 36(3), 04020011. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000766](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000766)

Khaemba, B. W., Sakwa, D. M., & Wachilonga, L. W. (2014). Relationship between Education Financing and Human Capital Investment: a survey of Public secondary schools in Kimilili-Bungoma Sub- County. *International Journal of Academic Research in Business and Social Sciences*, 4(4). <https://doi.org/10.6007/IJARBSS/V4-I4/772>

Leydesdorff, L., & Bornmann, L. (2018). The relative influences of government funding and international collaboration on citation impact. *Wiley Online Library*, 70(2), 198–201. <https://doi.org/10.1002/asi.24109>

Maslen, G. (2014, October 24). *Tuition fees differ markedly between nations*. University World News. <https://www.universityworldnews.com/post.php?story=20141023143034110>

National Board for Technical Education. (2020). *TVET Institutions*. [https://net.nbte.gov.ng/Federal Polytechnics](https://net.nbte.gov.ng/FederalPolytechnics)

National Universities Commission. (2020). *Federal Universities*. Nigerian Universities. <https://www.nuc.edu.ng/nigerian-universities/federal-universities/>

Ngwenya, A. (2019). *Towards financial guidelines for sustainable quality service delivery for B-Class municipalities in the West Rand, Gauteng*. North West University.

Nyeh, C., & Kpee, G. (2019). Generating and allocating internal revenue for public secondary school administration in Cross River State. *Pdfs.Semanticscholar.Org*, 6(10), 249–260.

Ofoegbu, G., Akwu, D., & Oliver O. (2016). Empirical analysis of effect of tax revenue on economic development of Nigeria. *International Journal of Asian Social Science*, 6(10), 2226–5139. <https://doi.org/10.18488/journal.1/2016.6.10/1.10.604.613>

OGUNGBENLE, S. K., & EDOGIWERIE, M. N. (2016). BUDGETARY ALLOCATION AND DEVELOPMENT IN NIGERIA. *Igbinedion University Journal of Accounting*, 2, 377–407.

Okojie, J. (2009, June). Innovative funding in the Nigerian university system - Google Scholar. *24th AVCNU Conference, UNILORIN*.

Okuwa, O., & Campbell, O. (2017). Financing higher education in nigeria: A demand perspective. *Brill.Com*, 159–171.

Olayiwola, S. (2012). Alternative perspective to funding public universities in Nigeria. *Books.Google.Com*, 27–38.

Onuoha, L. (2013). Financing higher education in Nigeria: The role of internally generated revenues and how university managements can maximize the sources. *Flr-Journal.Org*, 9(1), 9–14. <https://doi.org/10.3968/j.css.1923669720130901.1956>

Osei-Kyei, R., & Chan, A. (2015). Review of studies on the Critical Success Factors for Public–Private Partnership (PPP) projects from 1990 to 2013. *Elsevier*, 33(6), 1335–1346.

Pallant, J. (2020). *SPSS Survival Manual : A Step by Step Guide to Data Analysis using IBM SPSS* (6th ed.). Routledge. <https://doi.org/10.4324/9781003117407>

Sellgren, K. (2013, June 5). Universities “face financial challenges ahead” - BBC News. *BBC News*. <https://www.bbc.com/news/education-22765607>

Toriola-Coker, L. O., Alaka, H., Agbali, M., Bello, W. A., Pathirage, C., & Oyedele, L. (2020).

Marginalization of end-user stakeholder's in public private partnership road projects in Nigeria. *International Journal of Construction Management*, 1–10. <https://doi.org/10.1080/15623599.2020.1766189>

Umar, H., & Current, B. T. (2016). Public-private partnership as an imperative in Nigerian education. *International Journal of Current Multidisciplinary Studies*, 2(5), 175–181.

Wang, N., & Ma M. (2020). Public–private partnership as a tool for sustainable development–What literatures say? *Wiley Online Library*, 29(1), 243–258. <https://doi.org/10.1002/sd.2127>

World Education News Review. (2017, March 7). *Education in Nigeria*. Education System Profile. <https://wenr.wes.org/2017/03/education-in-nigeria>

Yamamoto, B. (2016). Diversifying admissions through top-down entrance examination reform in Japanese elite universities: what is happening on the ground? *Books.Google.Com*, 230–245.

Yescombe, E. (2018). *Public-private partnerships for infrastructure: Principles of policy and finance*. Butterworth-Heinemann.