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Re-Thinking and an In-Depth Exploration of Alternative Sources of Funding Higher Education in Nigeria

Victor F. Peretomode^{1*}, Favour O. Atubi², Anthonia N. Obed-Chukwuka³ ^{1 & 3}Department of Educational Management & Foundations, Delta State University, Abraka, Nigeria ²Department of Social Sciences Education, Delta State University, Abraka, Nigeria

ABSTRACT

Nigeria currently has 274 universities comprising 62 federal, 64 state, and 118 private universities that accommodate only approximately 10 percent of the total admitted university student population of less than 700,000 in a year. These universities are funded and controlled principally by their proprietors. The public universities are funded by the federal or state governments, and those private ones are funded by their proprietors. One common denominator among these institutions is inadequate funding by their owners and the reliance on these sources for funding university activities. This paucity of funds has also adversely affected provision of infrastructure, teaching and learning facilities, research, staff development, essential travels, broadband internet services, quality staffing, the quality of education, accessibility, and the products of these higher educational institutions. The operations of universities are capital intensive and their sustainability cannot be dependent on proprietors funding alone. It is, therefore, imperative that managers of universities must have to diversify their sources of funding taking a clue from their successful counterparts overseas. This paper, therefore, did a re-think and made an in-depth exploration of ten alternative sources of funding which Nigerian universities can draw from to generate adequate revenue to compliment proprietors' funding in order to address the funding challenges. This will enable them to work to achieve excellence in teaching, research and innovations, extension services and contribute meaningfully to the socio-economic development of the nation. This analytical paper is based on several years of university teaching and research, extensive review of the relevant scholarly literature, and secondary data from the Times Higher Education (THE), US Newsweek, data bases of world statistics, and official government documents and data sources in Nigeria.

Keywords: alternative sources of funding, alumni associations, cost sharing, crowdfunding, higher education, international students

INTRODUCTION

Higher education is an inclusive term used to refer to education and training beyond secondary education. It comprises monotechnics, schools of health technologies, and colleges of education, nursing schools and colleges of nursing sciences, polytechnics, and universities. This level of educational institutions can be categorised into two: public and private. Public institutions are owned and controlled by the federal or state governments, while the private are owned by either individuals, communities, faith based or corporations in Nigeria. The owners or proprietors are the major sources of funding their institutions. Public tertiary institutions, for example, rely solely on government source of funding, and the private proprietors are the main sources of funding private universities, relying mainly on school fees.

The three prong missions of a university, namely, teaching and learning, research and innovations, and extension services, involve building infrastructures, utilities and facilities, relationships between and among higher education institutions within the country, across

^{*} Corresponding Author

nations and continents. It also involves acquisition of smart and complex technologies, qualified human capital and recurrent expenditure for the payment of salaries and allowances, accreditation exercises, staff development programmes, organisation of conferences, seminars and workshops, travels, maintenance of infrastructure and utilities and maintaining peace and security on campus. All these activities involve huge sum of money. In short, the business of university management and administration is a very expensive venture; it is capital intensive, and funding issues and poor administration have been found to be further compounding the numerous challenges facing universities in Nigeria (George, 2024).

From the foregoing analysis, for the sustenance of universities and performance of their enormous responsibilities, they must not rely solely on the funding by their proprietors. The reason is not farfetched; such a dependence could be dangerous because when the proprietor suffers a decline in revenue and there is a reduction in funds allocated to the universities, the latter's activities also suffer. To avoid this ugly situation, universities must work to diversify their sources of revenue and reduce its reliance on traditional funding methods – funding by the proprietor. One way to do this is to explore innovative and alternative sources of funding university activities.

In Nigeria, especially the managers of these institutions and majority of policy formulators, because of other competing sectors of the economy, have come to recognise that government alone cannot fund quality education, and private proprietors cannot rely solely on increasing fees to generate adequate funds to operate their universities. This is because when fees are too high enrolment will decline to such a level that these private institutions may go out of business. With increasing austerity the world over, with dwindling government revenue, indiscriminate establishment of universities, both public and private, with increasing enrolment in public universities because of their relative affordability compared to the private institutions and increasing cost of materials, it has become imperative that universities in Nigeria must take more seriously the need to re-think and explore more in- depth alternative sources of revenue to help fund their activities.

Statement of the Problem

As at 20th August 2024, Nigeria has established 274 universities. These include 62 Federal, 64 States, and 148 private Universities. One of the significant challenges facing university education in Nigeria is the gross underfunding due to the reliance, majorly on the proprietors' financial allocations or provisions which has been on the decline. This has adversely affected not only the quality of education, research, and the products of these universities, but also accessibility and equal opportunities for qualified intakes. The reliance on traditional methods of funding has become antiquated and inadequate in generating enough funds for the vital and numerous university activities. Diversifying funding sources, no doubt, can reduce dependence on proprietors' funding; promote sustainability, academic excellence and accessibility. By exploring alternative sources of funding, higher education institutions can raise adequate funds that can help to revitalise the university sector and contribute and drive socio-economic development of the country. But what are some of these alternative sources that could be meaningfully explored to enrich universities' funding in Nigeria? This paper identifies and xrays in detail some of these important alternative sources of funding.

Purpose of the Study

The purpose of the study is to explore in depth, with examples from international countries, some critical alternative sources of funding university education in Nigeria. Specifically, the objectives are to discuss the following sources fairly in detail: crowd funding, equity capital and debt financing, national and international partnership and consortium arrangement, attracting international students, cost-sharing, university collaborations with

industries; research and development funding, mobilization of alumni associations and philanthropists, and endowments.

METHODOLOGY AND DATA DISCUSSION

This analytical theoretical paper is based on the lead author's over thirty years as a university faculty and chief executive and interactions with colleagues in conferences and workshops, and the co-authors as colleagues in a faculty of education over the past five years. It involved an extensive review of the relevant scholarly literature, secondary data from the Times Higher Education (THE), US Newsweek, databases of world statistics and other research documents. Effort was made to draw from what obtains in the US, UK, and Nigeria to do a comparative analysis.

RESULTS AND DISCUSSION

The presentation and discussion that followed is according to the alternative resources that have been earlier highlighted:

1. Crowdfunding

A crowd refers to a large number of people considered together. Crowdfunding in higher education, also called **soft funding**, refers to the process of obtaining small amount of money from a large number of individuals to undertake specific projects, initiatives, programmes or mega ventures in a university. Usually, the crowdfunding process takes place through online platforms like kick-starter and can raise several millions of dollars in the process to finance specific educational projects (Meyer, 2018; Palmer, 2019; Abreu & Andreassi, 2019; Bakar & Suki, 2020).

A number of universities have at different times successfully used crowdfunding campaigns to raise money to finance various projects. For example, between 2014 and 2018, Harvard University raised \$1.35 million for the Harvard college fund and the Harvard innovation laboratory, and research and social impact projects. In 2015, University of Oxford raised over \$1.5 million for the Oxford student scholarship fund and in 2018 also using the crowdfunding method raised \$3.30 million for the Oxford Said Business School's Entrepreneurship centre (Oxford University Development office, 2015, 2017; Oxford Said Business School, 2017). The University of California, Berkeley, used crowd funding campaign to raise \$1.3 million for the university in 2013 and again in 2016 raised another \$200,000 for the Berkeley student start-up fund (Liu, 2015; UC Berkeley, 2015). Similarly, the NYU in 2015 raised \$1.1 million and again in 2018 raised \$250,000 for NYU innovation fund and NYU Entrepreneurial institute, respectively in 30days (Fried, 2014). The University of Melbourne in Australia used the crowdfunding method to raise \$37,000 within 60 days for cancer research. Imperial College in London, University of Toronto in Canada, University of Cambridge in UK, and the Massachusetts Institute of Technology (MIT) and Stanford University in USA are few among the other Universities that have successfully used the crowdfunding campaign method over the years to raise funds to finance specific innovative projects.

2. Equity Capital and Debt financing

Equity capital and debt financing are two options that exist when it comes to raising capital for higher education institutions. Though both are different and there are distinct advantages to each, some institutions use a combination of both. Equity financing involves raising capital through the sales of shares to investors to become shareholders. The investor owns a certain percentage of the organisation and therefore has a voice in all important decisions going forward. The beauty of equity financing is that there is no obligation to repay the money acquired with any interest charges to a shareholder. As a result, there is no additional

financial burden on the university. However, the shareholders or investors would want the institution to be successful so that they could get a good return on their investment. One disadvantage is sharing profits among all shareholders on the long term, and another is forfeiting some level of control of the organisation because ownership is shared (CFI Team, 2023; Maverick, 2024; Banton, 2024).

Debt financing, unlike equity financing which entails selling a portion of equity in an organisation, involves borrowing money and paying it back with interest on a fixed schedule. The advantages of debt financing include the fact that the lender has no control over your business or your institution once you pay the loan back. Besides, your relationship with the financier ends with the repayment, and your ownership control remains intact. In addition, the interest you pay is tax deductible and this implies that you can deduct from your taxable income to lower the amount of taxes you owe (and pay) (CFI Team, 2023; Maverick, 2024; Kagan; 2024).

Equity financing and debt financing are used by various universities and in various ways. For example, Harvard University and Stanford University have used equity financing to support scholarships, research, and innovative programmes, and Stanford University has invested such funds in start-ups. The university of California, Berkeley, New York University and the University of Michigan have used debt capital in the form of raised bonds to finance construction projects, expansion plans, specific initiatives and student housing projects (Harvard Graduate School of Education, 2020; the American Council on Education (ACE), 2020; the National Association of Bond Lawyers (NABL)' 2023; the National Centre for Education Statistics (NCES), 2020). Universities in Nigeria can borrow a leaf from these universities by exploring these alternative sources to generate additional revenue in several million naira to compliment the funding of essential activities in higher education institutions.

3. National and International Partnership and Consortium Arrangement

This involves establishing active and workable partnership with both domestic and foreign universities. These authors are aware of several partnerships entered into between local universities that are dead on arrival in Nigeria. If a partnership is not active, a consortium cannot be formed and its benefits cannot be gained. A consortium is an association of institutions for the purpose of improved and expanded economic collaboration to achieve mutually beneficial goals. Such collaborations include cooperatively establishing smart research laboratories and workshops for experimentation and innovation, cooperatively running rare academic programs and conducting research projects that can attract huge sum of money would have been difficult for an individual institution to raise. Pooled resources, such as libraries, research activities, professors and researchers from such a consortium, share ideas among members of the group to the benefit of their students (Konton, Estevez & Reeves, 2022) and their institutions.

4. Attracting International Students

International students bring foreign currency, and a lot of it, to an institution and a country. In order to attract such students into universities in Nigeria, there need to be fewer and lesser prolonged industrial strikes, stable academic calendar, and creating meaningful curriculum, developing decent infrastructure, and intolerance for sex for good grades and internal corruption of all forms. The environment must be safe and conducive for foreign students to live in and study.

There are very few international students in Nigerian universities. Most do not even have one international student in any of the levels, either in undergraduate or graduate degree programmes. For instance, Tolu-Kolawole (2024) reported that data obtained recently from the

Federal Ministry of Education, Abuja, revealed that only a total of 709 international students were admitted into Nigerian Universities, polytechnics and other higher institutions in six years, between 2017 and 2023 academic sessions. A further analysis of the data showed that a total of 127 foreign students were admitted in the 2017/2018 academic sessions; 110 in the 2018/2019; 161 during the 2019/2020; 197 during the 2020/2021; 78 during the 2021/2022, and 36 during the 2022/23 academic sessions. According to the author, the data further showed that 616 of the international students during the period under review were admitted into the universities, 64 to polytechnics, and 29 to colleges of education.

The admission of international students into the 274 Nigerian Universities was not much better than the previous seven years. In 2022/2023 academic session, only 127 foreign students were admitted, with university of Ilorin, Ilorin, Kwara State admitting 70 in first position; Ahmadu Bello University, Zaria, 18 in second position; and Nile University of Nigeria, Abuja admitted 12 in third position (Table 1). From the foregoing, it could be argued that Nigerian universities are local in nature – lacking foreign professors and students. This is very much unlike in the 1960s to the early 1990s when universities of Ibadan, Lagos, Zaria and University of Nigeria, Nsukka, had quite a number of foreign professors and students.

Table 1: Institution Admission of International Students in Nigerian Universities
2022/2023 as at 10 th May 2024

S/N	INSTITUTION NAME	TOTAL
1	University of Ilorin, Kwara State	70
2	Ahmadu Bello University, Zaria, Kaduna State	18
3	University of Maiduguri, Borno State	12
4	Nile University of Nigeria, Abuja, FCT	5
5	Ebonyi State University, Abakaliki, Ebonyi State	3
6	Afe Babalola University, Ado-Ekiti, Ekiti State	2
7	Bayero University, Kano, Kano State	2
8	Bingham University, Karu, Nasarawa State	2
9	Dominican University, Ibadan, Oyo State	2
10	Federal University of Technology, Owerri, Imo State	2
11	Ajayi Crowther University, Oyo, Oyo State	1
12	Alex Ekwueme Federal University, Ndufu-Alike, Ebonyi	1
	State	
13	Bowen University, Iwo, Osun State	1
14	Kaduna State University, Kaduna, Kaduna State	1
15	Metallurgical Training Institute, Onitsha, Anambra State	1
16	Nnamdi Azikiwe University, Awka, Anambra State	1
17	Osun State College of Technology, Esa Oke, Osun State	1
18	University of Benin, Benin City, Edo State	1
19	Yaba College of Technology, Yaba, Lagos State	1

Source: JAMB BULLETIN (https://jamb.gov.ng/Bulletin/2024/JAMBulletin_15-07-2024.pdf)

It is important to compare what is obtaining in Nigeria with respect to the diversity of student body which enriches learning experiences with oversee countries such as the US. For instance, in 2022/2023 academic session, New York University had a student enrolment of 61,650 with 24,496 being international learners from more than 140 countries. Each international student paid tuition fees of \$37,442 per academic session. That gives the university a total sum from foreign students of approximately one billion dollars (\$1billion USD) for one academic session. In addition to New York University, there were more 12 other

universities that earned over half- a billion USD (over 500 million USD) from international student enrolment in one session (Table 2). Similarly, several universities in Canada, UK, Australia, and other European Countries, and even in Ghana, have large enrolment of foreign students. When you multiply the tuition paid by the number of students in dollars, you cannot but be amazed by the revenue generated in dollars or pounds to the universities. Nigerian universities can benefit greatly if they are revitalised, have stable calendar and are able to attract international students who pay their fees in dollars like universities in Ghana.

Tuition Fees – Cost Sharing

Tuition fees refer to money charged for formal education and all other expenses charged following a general decline in the funding of education by governments worldwide. There has been quite strong a call and discussions concerning the need for domestic or home students to pay tuition fees or increase tuition fees for home students. Cost Sharing is a scheme for funding higher education through students, their parents and sponsors. This is a shift in the burden of higher education costs from being borne exclusively by Governments to being shared with parents and students (Johnstone, 2004; Masaraure & Tshabalala, 2022). As described by Johnstone (2002, 2003, 2004), cost of sharing may take the form of tuition either being introduced where it did not hitherto exist, or being rapidly increased where it did. It could also be user charges for hostel, books, accommodation and others formally been covered mainly by government. It may also involve even a freezing of student's grants or loans.

States in 2022/2023 Academic SessionRankUniversityTotalNo. ofFees inTotal (USD)					
University	Total	No. of	Fees in	Total (USD)	
	population	international	USD	Amount in	
	of students	students		Millions	
New York Univ. NY	61,950	24,496	37,442	917,179,232	
North eastern Univ.	37,000	20,637	37,750	779,046,750	
Boston, M					
Columbia Univ. NY	34,782	19,001	39,170	744,269,170	
Arizona State Univ.	74,878 (120	17,981	37,120	667,454,720	
Temple, AZ	foreign				
_	countries)				
Univ. of Southern	48,945	17,264	56,988	638,526,307	
California, CA					
Univ. of Illinois Urbana	56,403	14,680	35,862	539,636,800	
– Champaign, IL					
Boston Univ., MA	37,557	13,281	66,670	885,444,270	
Purdue Univ. – West	52,211	11,872	28,794	341,842,368	
Lafayette, IN		38.290?			
Univ. of California –	45,307	11,719	48,018	562,722,942	
Berkeley, CA					
Univ. of California –	43,381	10,431	34,200	356,740,200	
San Diego, CA					
Univ. of Michigan –	51,225	10,411	58,072	604,587,592	
Ann Arbor, MI					
Univ. of Washington,	52,319	10,198	57,776	587,199,648	
WA					
Univ. Of California Los	46,430	9,725	42,954	417,727,650	
Angeles, LA					
	University New York Univ. NY North eastern Univ. Boston, M Columbia Univ. NY Arizona State Univ. Temple, AZ Univ. of Southern California, CA Univ. of Southern California, CA Univ. of Illinois Urbana – Champaign, IL Boston Univ., MA Purdue Univ. – West Lafayette, IN Univ. of California – Berkeley, CA Univ. of California – San Diego, CA Univ. of Michigan – Ann Arbor, MI Univ. of Washington, WA Univ. Of California Los	UniversityTotal population of studentsNew York Univ. NY61,950North eastern Univ. Boston, M37,000Columbia Univ. NY34,782Arizona State Univ. Temple, AZ74,878 (120 foreign countries)Univ. of Southern California, CA48,945Univ. of Illinois Urbana - Champaign, IL56,403Boston Univ., MA37,557Purdue Univ. – West Lafayette, IN52,211Univ. of California – Berkeley, CA43,381Univ. of Michigan – Ann Arbor, MI51,225Ann Arbor, MI1Univ. of Washington, WA52,319WA46,430	UniversityTotal population of studentsNo. of international studentsNew York Univ. NY61,95024,496North eastern Univ. Boston, M37,00020,637Columbia Univ. NY34,78219,001Arizona State Univ. Temple, AZ74,878 (120 foreign countries)17,981Univ. of Southern California, CA48,94517,264Univ. of Illinois Urbana - Champaign, IL56,40314,680Boston Univ., MA37,55713,281Purdue Univ. – West Lafayette, IN52,21111,872 38.290?Univ. of California – Univ. of California – Ann Arbor, MI51,22510,411Univ. of Washington, WA52,31910,198WA46,4309,725	UniversityTotal population of studentsNo. of international studentsFees in USDNew York Univ. NY $61,950$ $24,496$ $37,442$ North eastern Univ. $37,000$ $20,637$ $37,750$ Boston, M $20,637$ $37,750$ $39,170$ Columbia Univ. NY $34,782$ $19,001$ $39,170$ Arizona State Univ. $74,878$ (120 foreign countries) $17,981$ $37,120$ Univ. of Southern California, CA $48,945$ $17,264$ $56,988$ Univ. of Illinois Urbana - Champaign, IL $56,403$ $14,680$ $35,862$ Boston Univ., MA $37,557$ $13,281$ $66,670$ Purdue Univ. – West Lafayette, IN $52,211$ $11,872$ $38.290?$ $28,794$ Univ. of California – Sun Diego, CA $43,381$ $10,431$ $34,200$ Univ. of Michigan – Ann Arbor, MI $52,319$ $10,198$ $57,776$ WA $46,430$ $9,725$ $42,954$	

 Table 2: Top 20 Universities Hosting the Most International students in the United

 States in 2022/2023 Academic Session

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14.	Univ. of Texas, Dallas, TX	30,885	9,582	44,812	429,388,684
15.	John Hopkins Univ., MD	30,549	9,322	64,730	603,413,060
16.	Pennsylvania State University Park, PA	41,745	9,161	42,312	387,620,232
17.	Carnegie Mellon Univ., PA	16,335	9,009	64,459	580,711,131
18.	Univ. of California – Irvine, CA	36,000	8,984	45,096	405,142,464
19.	Univ. of Pennsylvania PA	28,201	8,614	58,620	504,952,680
20.	Univ. of Wisconsin – Madison, WI	49,886	8,567	843,102	369,254,834

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Source: Statista.com (2024)

In Europe, Canada and America, the imposition of more than a nominal tuition fees on home students is a major source of revenue. In Nigeria, however, it remained an untapped source of revenue in most Universities and other tertiary institutions until very recently (2022/2023) when students in public Universities (Federal and State) are being requested to pay fees as had never been done before. This delay was due to the resistance by students union and the Academic Staff Union of Universities (ASUU) in Nigeria who threatened to shut down the university system if the federal government dared. However, with the dwindled national income from oil and gas and the resultant gross underfunding of education, it has become clear that governments alone cannot fund quality education in Nigeria. The result is that managements of tertiary institutions and their governing councils have been compelled to introduce reasonable fees with little resistance to help cushion the effects of inadequate funds from proprietors and its negative impact on the operations of higher educational institutions.

6. Universities Research Collaborations with Industries

Times Higher Education World University Rankings 2023 data revealed the 20 best institutions in the World based on *private – sector investment in academic*. A university's ability to help industry with knowledge transfer, innovations, or consultancy has become a core mission of contemporary global tertiary institutions of learning. The median industry research income of the top 200 World University Rankings (WUR) 2021 was USD 36,000 per member of academic staff in the United Kingdom (UK). The University of Oxford reported an average research income from industry of USD 57,000 per academic staff. Germany's LMU Munich secured almost \$400,000 per academic in 2021 and thus in #1position in the world. The US Duke University took second position with a figure of \$290,000 and Korea Advanced Institute of Science and Technology (KAIST) third with \$254,700. Mobilization of Intellectual Property and research income from industry and commerce can go a long way to boost University funding.

Nigerian Universities are yet to make significant impact in this area as to significantly benefit financially from such University industry collaborations. While there are several benefits accruing to both sides, there are concerns about whatever deal that is arrived at. Therefore, universities and industries require patience in order to develop mutually beneficial and acceptable strategies for their cooperation (university industry) to succeed.

	Table 3: Industry Income per Academic (PPP & U), 2022				
Rank	Institution	Country	Industry income per academic (PPP & US)		
1.	LMU Munich	Germany	392,800		
2.	Duke University	US	287,000		
3.	Korea advanced Institute of Science and Technology (KAIST)	South Korea	254,700		
4.	Johns Hopkins University	US	249,900		
5.	Anadolu University	Turkey	242,500		
6.	Wageningen University an Research Center	Netherlands	242,500		
7.	China University of Petroleum (Beijing)	China	227,600		
8.	Pontifical Catholic University of Rio de Janeiro (PUC-Rio)	Brazil	204,600		
9.	Istanbul University	Turkey	202,000		
10.	University of Freiburg	Germany	201,700		
11.	Peking University	China	198,800		
12.	National Cheng Kung University	Taiwan	182,100		
13.	Pohang University of Science and Technology	South Korea	172,800		
14.	KU Leuven	Belgiun	163,700		
15.	Stellenbosch University	South Africa	156,600		
16.	Tianjin University	China	152,800		
17.	Tsinghua University	China	152,200		
18.	Delft University of Technology	Netherlands	148,700		
19.	Swedish University Of Agricultural Sciences	Sweden	144,200		
20.	University of Basel	Switzerland	139,000		

Table 3: Industry Income per Academic (PPP & U), 2022	Table 3: Industry	v Income pe	r Academic (PPP &	U), 2022
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7. Research and Development Funding

The ability of a university to attract funds from governments, its agencies and companies and spend same for research and development is a major source of revenue for universities. Nigerian universities need to pay emphasis on this art. With the ability to attract huge funding, the students of such universities can be granted numerous opportunities to expand their knowledge and skills outside the classrooms as they are engaged in independent research in science, medicine, the humanities and social sciences. John Hopkins University, Baltimore, for example, spent more than \$3.42 billion and \$3.18 billion per year on R & D in 2022/2023 sessions (Table 4). University of California, San Francisco, with R & D expenditure of \$1.806b, University of Pennsylvania with R & D expenditure of \$1.701b, and University of Michigan, Ann Arbor, with R & D of \$1.771billion marked second, third and fourth positions respectively.

Source: The data @timeshighereducation.com, 2023

Table 4: Top US Universities' Rankings by total R & D Expenditures not less than One
billion (1b) USD in 2022

S/N	Institutions	2022		
		USD in Billion		
		Rank	Percentile	R & D
				Expenditures
	Total R & D expenditures			97,836,406B
1.	Johns Hopkins University, Baltimore	1	100.0	3,420,312
2.	U. California, San Francisco	2	99.9	1,805,950
3.	U. Pennsylvania	3	99.8	1,791,311
4.	U. Michigan, Ann Arbor	4	99.7	1,770,708
5.	U. Washington, Seattle	5	99.6	1,559,708
6.	U. California, Los Angeles	6	99.4	1,536,197
7.	U. California, San Diego	7	99.3	1,533,357
8.	U. Wisconsin-Madison	8	99.2	1,523,513
9.	Duke University, Durham, NC.	9	99.1	1,390,538
10.	Stanford University, Stanford, CA.	10	99.0	1,384,555
11.	Ohio State University, Columbus	11	98.9	1,363,388
12.	U. North Carolina. The, Chapel Hill	12	98.8	1,361,028
13.	Harvard University, Cambridge, Mass.	13	98.7	1,308,458
14.	Cornell University, Ithaca, NY.	14	98.6	1,300,357
15.	New York U.	15	98.4	1,276,038
16.	U. Pittsburgh, Pittsburgh	16	98.3	1,251,998
17.	Georgia Institute of Technology	17	98.2	1,231,485
18.	Columbia U. in the city of New York	18	98.1	1,230,924
19.	U. Maryland, College Park, MD	19	98.0	1,228,550
20.	U. Minnesota, Twin Cities	20	97.9	1,202,084
21.	Yale University, New Haven, CT.	21	97.8	1,191,201
22.	U. Texas M.D. Anderson Cancer Center	22	97.7	1,182,536
23.	Texas A&M U., College Station and	23	97.6	1,152,666
	Health Science Center			
24.	Vanderbilt University. Medical Center	24	97.4	1,086,223
25.	U. Florida	25	97.3	1,085,834
26.	Washington U. Saint Louis	26	97.2	1,047,098
27.	U. Southern California	27	97.1	1,039,905
28.	Pennsylvania State U., The University Park and Hershey	28	97.0	1,019,940
29.	North Western University	29	96.9	1,000,695

Source: US National Centre for Science & Engineering Statistics, Higher Education R & D Survey, 2023 (ncsesdata.nsf.gov, 2023)

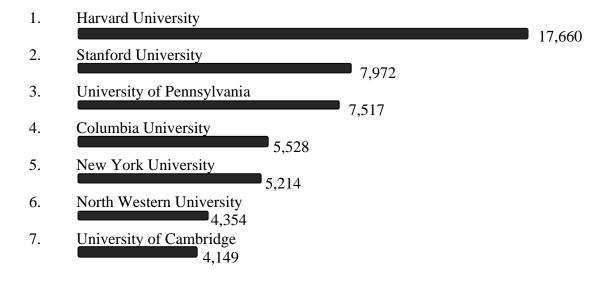
Twenty five other universities individually spent amount ranging from one billion (\$1 billion) to \$1.56 billion U.S. dollars in R & D in 2022/2023 academic session. The ability of these tertiary institutions to raise this huge revenue annually no doubt gave a lot of benefits to the students, academic staff and researchers, and the institution. They therefore do not have to depend on government grants that may be late in coming, even if approved. These funds for R & D came from the U.S. government, the States, districts, businesses, non – profit organizations and other donors.

8. Mobilization of Alumni Associations/Philanthropist

Alumnus is a graduate or former student of a particular college or University. Alumni or alumnae association is an association of graduates or of former students of a college or University promoting alumni engagement and supporting institutional goals through donations (Wikipedia 2024; Schulz, 2018). Alumni contributions are basically directed at funding specific needs and intended to have immediate impact and in various ways boost the institution's overall success.

In America and Europe, most universities are funded through gifts from the community, philanthropists and especially alumni associations. As rightly observed by Donadel (2023), alumni in these continents love their institutions and they regularly show it by contributing greatly to their alma mater fundraising campaigns. Turner and Simpson (2019) pointed out those alumni associations as former graduates imbibe this philosophy of giving back to their institutions during their college years so also the importance of alumni and their interest in the growth and development of their University. Their experience of the University continuing engagement with students, concern for their welfare and academic progress are of particular interest to them. These positive characteristics are contrary to what obtains in most universities in Nigeria, characterized by student's missing scores, sexual harassment, extortion for monetary gains, delay in releasing results and official transcripts, and unsuitable student accommodation and classrooms. The University themselves do little or nothing to increase the number of engaged alumni. In fact, most students perceive their University experience as hostile and tortuous. The result is that when they managed to graduate, they just walk away and decide not to have anything to do with their alma mater.

Altrata's (2022) report provides insights on the wealthy and influential alumni with net worth of minimum of \$30m+ and who can contribute several million dollars to their alma mater. The report also ranked universities on the basis of the number of wealthy and influential alumni in 2022. Harvard University with 17,660 wealthy and influential alumni as defined above in 2022 was ranked #1 in the world. The Stanford University with 7,972 and University of Pennsylvania with 7517 came in second and third positions respectively (Figure 1). Michael Bloomberg, for example, a businessman and former Mayor of New York City, in 2018, donated a whopping \$1.8 billion (i.e. approximately 2.88 Trillion Naira) to his former alma mater, John Hopkins University, Maryland, to fund financial aid for admitted low and middle income families. Bloomberg also gave \$600m as gift to multiple historically back medical schools across the U.S. to help reduce debt for enrolled students and to prop up their medical colleges in July 2024 (Svrluga, 2024).



8.	Massachusetts Institute of Technology
9.	Yale University 3.654
10.	National University of 3,653
11.	University of Southern California
12.	University of Chicago 3,588
13.	University of Oxford 3,356
14.	INSEAD 2.625
15.	London School of Economics
16.	University of Toronto
17.	University of Mumbai
18.	Peking University 1,101
19.	Tsinghua University
20.	1,100 University of Delhi 1,027
Figure	1. Ton Universities by Estimated Number

Figure 1: Top Universities by Estimated Number of the Wealthy and Influential Global Alumni

9. Endowments

Endowments refer to donation of money or assets to a college or University to support academic, research, and operational activities. Gupta (2024) emphasized the crucial point that endowments are generally funds that are limited indefinitely. In most situations, the principal amount of an endowment cannot be spent; it is typically invested and only a certain percentage of the interest or returns on investment may be paid yearly and used to support general and specified requirements or purposes such as scholarship, research initiatives, professorial chairs, new academic programmes, projects and University infrastructure and facilities. In other words, there are limitations on how the interest can be used. Endowment funds rely on donations as their primary funding source. Thus, the principal remain untouched, only investment income is used for activities. The funds have specific policies concerning investments, withdrawals, and usage. The funds are designed such that they will live in perpetuity. A part of the return is spent on the operations of the University, and the rest is allowed to grow over time (Gupta, 2024; Investopecha, 2024).

There are four types of endowment fund: restricted, unrestricted, quasi-endowment, and term endowment funds. *Restricted* endowment is funds donated to be used for a specific purpose by the donor only. In other words, limitations are placed by the donor for the proceeds of the donation for a specific purpose. *Unrestricted* funds, as the name suggests, has no limitation or restriction for usage of the fund. They are used at the University's discretion to meet its objectives. *Quasi-endowment* funds face restrictions, not from the donors but from the governing council of the University, and are intended to generate income for a long time. The

restrictions regarding the utilization of the principal and income portions of the funds are per instructions of the governing body. Finally, the **term endowment funds** contain a condition that the principal amount or part of it can be used only after the expiration of a certain time or the happening of a certain event, as decided by the donor (Gupta, 2024; Tierney, 2017; Massey, 2017).

It has been noted that endowments provide a stable source of funding, allowing universities to weather financial storms, invest in long-term initiatives, maintain academic excellence, supporting student success, while maintaining the principal amount for future generations (Table 5). Endowments can come from various sources, including: alumni donations, corporate gifts, foundation grants, government funding, and estate bequests (Simpson & Sarah, 2019; Tierney, 2017; Berman, 2011; Merton, 2013; Massy & Nowak, 2017a, Massy & Nowak, 2017b). Harvard University is #1 with an endowment of approximately 51 billion US dollars that is more than the annual budget of some countries in West Africa.

Rank	Institution Name	FY23 Endowment	Change%
		Market Value	-
1.	Harvard University	\$50.90 billion	0.1
2.	University of Texas System	\$44,967,186	5.4
3.	Yale University	\$40,746,900	-1.5
4.	Stanford University	\$36,495,000	0.4
5.	The Trustees of Princeton University	\$34,058,774	-4.8
6.	Massachusetts Institute of Technology	\$23,453,446	-5.2
7.	Trustees of the University Pennsylvania	\$20,962,965	1.2
8.	The Texas A&M University System &	\$19,285,472	5.7
	Related Foundations		
9.	University of Michigan	\$17,875,691	3.0
10.	The Regents of the University of California	\$17,689,324	14.7
11.	University of Notre Dame	\$16,616,524	-0.7
12.	North western University	\$13,699,895	-3.0
13.	Trustees of Columbia University	\$13,642,667	2.7
14.	Duke University	\$13,237,963	9.3
15.	Washington University	\$11,467,279	-6.4
16.	The Johns Hopkins University	\$10,538,865	27.8
17.	Emory University	\$10,239,776	2.4
18.	Cornell University	\$10,035,558	2.0
19.	The University of Chicago	\$9,869,725	-0.5
20.	University of Virginia	\$9,799,870	-0.6

CONCLUSION

In this twenty first century characterized with knowledge explosion, world knowledge economy, and global institutional competitiveness, any University in Nigeria that depends solely on ownership funding could be said to be moving towards self-destruction. Universities in Nigeria, like most of their counterparts in the African Continent, must therefore embrace diversified alternative sources geared towards generating adequate funds to finance their numerous actives in order to achieve their vision and mission statements. A proper and indepth exploration of the ten sources presented and discussed in this article could go a long way to not only bring about less reliance on proprietor's funds but enable universities to benefit tremendously from each of the alternative sources if and when adequately explored.

Importantly, proprietors – public and private, need to urgently revitalize these institutions, and ASUU need to avoid its incessant and prolonged industrial strikes so as to be able to attract foreign students.

Universities also need to establish robust mechanisms whereby they treat their students during their school years with love and engage their alumni constructively. That would be investing positively in the future of these institutions as those who would hold high positions at the appropriate time in the future would willingly contribute and donate generously to their endowment funds. The power of alumni associations is unimaginable and could contribute greatly to the administration of a university running seamlessly in their efforts to fulfil their local, national and international obligations.

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