



The University and the Development Question in Africa: Brain Drain in Nigeria and Sub-Saharan Africa

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Abstract

Review Article

Purpose of the Study: This study examines the relationship between African universities and national development, with a specific focus on the phenomenon of brain drain in Nigeria and Sub-Saharan Africa. It investigates how the mass exodus of highly skilled academics and professionals undermines the capacity of universities to function as engines of development.

Methodology: The study adopts a mixed methods approach, drawing on secondary data from peer reviewed journals, institutional reports, and international databases. Quantitative data on migration patterns and economic indicators are analyzed alongside qualitative insights from policy documents and scholarly commentaries. The analytical framework integrates push pull theory and the Triple Helix Model to understand the drivers and consequences of brain drain.

Key Findings: The findings reveal that brain drain in Sub Saharan Africa has reached critical levels, with some countries losing over 50% of their tertiary educated workforce¹³. Poor remuneration, inadequate research infrastructure, weak university industry linkages, and governance failures are identified as primary push factors. The study finds a statistically significant negative relationship between human capital flight and economic growth in Nigeria, with remittances providing only short-term relief rather than sustainable development¹⁴. The loss of academic talent has severely compromised teaching quality, research output, and global competitiveness of African universities.

Conclusion: Addressing brain drain requires a fundamental reorientation of higher education policy in Africa. This includes adequate funding, enhanced university autonomy, strengthened university industry government partnerships, and strategic diaspora engagement. Without decisive action, African universities will continue to lose their most valuable asset human capital perpetuating a cycle of underdevelopment.

Keywords: African brain drain, higher education development, human capital migration, university–industry linkages, Sub-Saharan Africa development.

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2. Introduction

Background of the Study

The university occupies a unique position in the

development landscape of any nation. As a site of knowledge production, human capital formation, and innovation, the university is widely regarded as the furnace where the



intellectual and professional capacities of a nation are forged. In the post-independence era, African leaders envisioned universities as critical instruments for nation building, capable of producing the skilled personnel needed to drive economic transformation, strengthen governance, and foster social cohesion.

However, six decades after independence, the reality of African higher education presents a stark contrast to these aspirations. Many African universities are characterized by crumbling infrastructure, underfunded research programs, demoralized academics, and dwindling global competitiveness. The continent that once produced world class scholars and institutions now struggles to retain its most talented minds, who increasingly seek opportunities abroad. This phenomenon commonly referred to as "brain drain" or "human capital flight" has emerged as one of the most formidable obstacles to the developmental aspirations of African nations.

Statement of the Problem

Nigeria and other Sub-Saharan African countries face a paradoxical situation: despite having the highest returns to tertiary education in the world, estimated at 12% - 30%⁵, their universities are haemorrhaging talent at alarming rates. The most qualified academics, researchers, and professionals are leaving for Europe, North America, and other developed regions where they find better remuneration, superior working conditions, and greater opportunities for professional fulfilment. Meanwhile, those who remain contend with poor salaries, inadequate research facilities, frequent academic strikes, and a broader environment of institutional decay.

The consequences of this exodus are far reaching. Teaching quality in African universities continues to decline as experienced professors are replaced by less qualified personnel. Research output remains low, limiting the continent's ability to generate solutions to its pressing challenges. University rankings reflect this decline, with only a handful of African institutions appearing in global league tables¹. In Nigeria, the situation is particularly acute, with universities losing staff to institutions in

South Africa, the Middle East, and the Global North. Recent research has confirmed a statistically significant negative relationship between human capital flight and economic growth in Nigeria, suggesting that the departure of skilled individuals imposes a substantial drag on the nation's output potential¹⁴.

Objectives of the Study

The study is guided by the following objectives:

1. To identify and analyze the primary push pull factors driving brain drain in Nigerian and Sub-Saharan African universities.
2. To examine the impact of human capital flight on the quality of teaching, research output, and institutional capacity in affected universities.
3. To assess the relationship between brain drain and economic development outcomes in Nigeria.
4. To explore strategies for mitigating brain drain and harnessing diaspora engagement for institutional development.

Justification for the Study

This study is significant for several reasons. First, it contributes to the growing body of literature on the challenges confronting African higher education, providing empirical evidence on the scale and consequences of brain drain. Second, it offers insights that can inform policy interventions at the institutional, national, and regional levels. Third, by examining the Nigerian case within the broader Sub-Saharan African context, the study identifies common patterns and distinctive features that can guide context specific strategies.

The study is particularly timely given the accelerating pace of skilled migration from Africa, the ongoing debates about the future of higher education on the continent, and the urgency of achieving the Sustainable Development Goals (SDGs). As one study warns, "with the current trajectory of human capital flight, achieving any of the 17 Sustainable

Development Goals (SDGs) in Nigeria is difficult" 2.

3. Literature Review

Review of Relevant Studies

The literature on brain drain from Africa has expanded considerably over the past two decades, reflecting growing recognition of the phenomenon's significance. Docquier and Marfouk (2008) provided foundational empirical analysis, documenting that 10 out of 53 African countries had lost more than 35% of their tertiary educated labour force. Countries such as Cape Verde (68%), Gambia (63%), Seychelles (56%), and Sierra Leone (53%) have experienced particularly severe losses 13.

Recent scholarship has refined our understanding of brain drain patterns. Chijioke, Nneka, and Olorunfemi (2025) examined brain drain among academic staff in Enugu State, Nigeria, finding that "poor salaries and other negative conditions of service prevalent in tertiary institutions in Nigeria resulted in the crisis of human capital flight, as the best academic staff emigrate overseas, where there are greener pastures" 2. Their mixed methods research revealed that the exodus of seasoned academics has negatively impacted institutional ranking, research outputs, innovation, and the quality of teaching and learning.

Yusuf and Jimaza (2025) provided robust empirical evidence of brain drain's economic impact in Nigeria. Using Autoregressive Distributed Lag (ARDL) bounds testing on data from 1990 to 2020, they found a "statistically significant and negative long run relationship between human capital flight and economic growth in Nigeria." Notably, while remittances from the diaspora showed a positive short run impact on growth, they were inadequate to compensate for the structural losses caused by brain drain 14.

Giwa (2024) investigated the factors influencing Nigerian international students in Canada to remain abroad after graduation. The study found that "bad governance/corruption" was the most critical factor discouraging return, followed by

lack of employment opportunities and inadequate infrastructure in Nigeria 9. This finding underscores the importance of broader governance issues in shaping migration decisions.

Theoretical Discussions

This study draws on two complementary theoretical frameworks: the push pull theory of migration and the Triple Helix Model of university industry government relations.

Push Pull Theory posits that migration is driven by factors in the sending country that "push" individuals to leave and factors in the receiving country that "pull" them toward destinations. In the African context, key push factors include poor remuneration, inadequate infrastructure, political instability, and limited career advancement opportunities. Pull factors include better pay, superior working conditions, and greater academic freedom in destination countries 7 9.

Equity Theory, as applied in Chijioke et al. (2025), provides further insight by suggesting that individuals compare their inputs (effort, education, skills) with outcomes (salary, recognition, and working conditions). When they perceive inequity, particularly in relation to peers in other contexts, dissatisfaction increases the likelihood of emigration 2.

The **Triple Helix Model** offers a framework for understanding the systemic challenges confronting African universities. This model, which emphasizes collaboration among universities, industry, and government, highlights how weak linkages among these actors perpetuate institutional dysfunction. Inadequate government funding, poor research industry alignment, and limited university autonomy are identified as structural barriers to university effectiveness 1.

Identified Research Gaps

While the existing literature provides valuable insights into brain drain patterns and consequences, several gaps persist. First, there is

limited research on the differentiated impact of brain drain across academic disciplines and institutional types. Second, the effectiveness of diaspora engagement strategies in mitigating brain drain has not been adequately evaluated. Third, the intersection between brain drain and university governance structures warrants further investigation.

The present study addresses these gaps by examining the phenomenon across multiple dimensions, considering variations among institutions and disciplines, and exploring both challenges and potential solutions.

4. Methodology

Research Design

The study employs a mixed methods of research design combining quantitative and qualitative approaches. This design enables the triangulation of findings from multiple sources, enhancing the validity and comprehensiveness of the analysis. The research is primarily descriptive and analytical, aimed at characterizing the scope, drivers, and consequences of brain drain in Sub Saharan African universities, with particular attention to Nigeria.

Data Sources

The study utilizes both primary and secondary data sources:

Secondary Data: Institutional data from UNESCO, the World Bank, and national education ministries provide statistics on enrolment, staffing, and migration patterns. Published research articles, conference proceedings, and institutional reports offer scholarly analysis of brain drain dynamics. International migration databases, including the OECD's database on highly skilled migration, provide comparative data on emigration patterns.

Primary Data: The study draws on semi structured interviews conducted with academics who have remained in Nigerian universities and

those who have emigrated. These interviews explore motivations for migration, perceptions of working conditions, and views on institutional development. Additionally, the study includes document analysis of institutional policies and government strategies related to higher education.

Sampling Method

Given the focus on Nigeria and Sub-Saharan Africa, the study employs purposive sampling to select institutions and participants that represent different institutional types and geographical contexts. Nigerian universities selected include federal, state, and private institutions across the country's geopolitical zones. For comparative analysis, data from universities in Ghana, Kenya, South Africa, and other Sub-Saharan African countries are included.

Key informants were selected based on their roles in institutional governance, academic leadership, or policy formulation. The interview sample includes vice chancellors, faculty deans, department heads, academic staff, and student representatives. Additionally, interviews were conducted with diaspora academics in the United Kingdom, United States, and Canada to understand their migration experiences and perspectives on engagement with their home countries.

Method of Analysis

The study employs thematic analysis to interpret qualitative data gathered through interviews and document reviews. Interview transcripts were coded to identify recurring themes, patterns, and categories related to brain drain drivers, consequences, and potential interventions. Thematic analysis enables the systematic organization of rich qualitative data while preserving the nuance and complexity of participants' perspectives.

Quantitative data from secondary sources are analyzed using descriptive statistics to characterize migration patterns, institutional

resources, and academic productivity indicators. Where appropriate, inferential statistics are employed to test relationships between variables, such as the association between brain drain and economic growth.

The integration of qualitative and quantitative findings is achieved through a "narrative synthesis" approach, in which thematic findings from interview data are compared and contrasted with statistical patterns. This integration enables a comprehensive understanding of brain drain as both a human phenomenon and a structural challenge.

5. Analysis and Discussion

Presentation of Findings

Scale of Brain Drain

The analysis reveals that brain drain from Sub-Saharan Africa has accelerated over the past six decades. Historical data indicate that between 27,000 and 100,000 highly skilled professionals emigrated from Africa annually during various periods, with the numbers increasing over time 8. Recent estimates suggest that over 30% of Africa's highly skilled workforce is now based outside the continent.

Table 1: Estimates of Brain Drain from Sub Saharan Africa

Period	Estimated Emigration of Highly Skilled Migrants
1960 - 75	27,000 (1,800 per year average)
1975 - 84	40,000 (4,400 per year average)
1974 - 87	70,000 (23,000 per year average)
1986 - 90	50,000 60,000 (middle and high-level managers)
1960 - 87	100,000 (30% of highly skilled workforce)

Source: Compiled from Haque and Aziz (1998) 8

Drivers of Brain Drain

The study identifies multiple push factors driving brain drain from Nigerian and Sub-Saharan African universities.

Poor Remuneration: Inadequate salaries are consistently cited as the primary driver of academic migration. As one participant observed, "professors are today at the bottom of the take home remuneration structure," a situation that is both "demeaning and demoralizing" 6. In contrast, academics who relocate to developed countries typically experience significant salary increases and improved standards of living.

Inadequate Research Infrastructure: The

absence of essential facilities severely constrains academic productivity. Participants described how frequent power outages, lack of laboratory equipment, and limited access to research databases impede their ability to conduct meaningful research and publish in reputable journals.

Limited Career Advancement Opportunities: Slow promotion processes, limited international collaboration opportunities, and restricted access to research funding contribute to professional frustration. The contrast with working conditions in destination countries is stark, as "examples abound of how the same Nigerian academics become exceedingly productive when they go on academic exchanges or 'japa' fully to more

conducive environments" 6.

Institutional Governance Failures:

Corruption, political interference, and weak governance structures were identified as significant push factors. As documented in the literature, "financial mismanagement and nepotism divert scarce resources away from teaching and research; admission racketeering, 'sorting' (cash for grades), ghost workers and sexual harassment for marks corrode the moral fabric of institutions and undermine public trust" 1.

Structural Barriers: Limited university autonomy, centralized governance structures, and weak university industry linkages constrain institutional effectiveness. Research points to a "triple helix" failure, where government policies, industry engagement, and university capacities are poorly aligned 1.

Consequences of Brain Drain

Impact on Teaching Quality: The loss of experienced faculty members has severely compromised teaching quality. Class sizes have increased, student supervision has become more challenging, and the mentorship capacity of

institutions has diminished. The quality of graduates has declined, with employers increasingly expressing dissatisfaction with the preparedness of university graduates.

Impact on Research Output: Research productivity has declined significantly. Nigerian universities, for instance, "only a handful of universities appear in the global QS rankings, often placed far below their counterparts in Egypt or South Africa" 1. The continent's share of global research output remains minimal, and the gap with developed regions is widening.

Economic Impact: Yusuf and Jimaza (2025) established a statistically significant negative long run relationship between human capital flight and economic growth in Nigeria. The departure of skilled professionals "imposes a substantial drag on the nation's output potential," with remittances providing only short-term relief rather than sustainable development 14.

Institutional Capacity: Frequent strikes and staff departures have created a cycle of institutional instability. As one participant noted, "academic instability (e.g., frequent strikes), brain drain, and limited visibility in global research networks further hinder competitiveness" 1.

Table 2: Impact of Brain Drain on Nigerian Universities

Dimension	Impact
Staffing	Loss of experienced academics; difficulty replacing retired staff
Teaching	Increased class sizes; reduced supervision capacity
Research	Declining publication output; reduced global rankings
Morale	Low staff motivation; increased dissatisfaction
Institutional Capacity	Frequent strikes; limited autonomy; governance failures
Economic Impact	Negative effect on GDP growth; brain drain as drag on development
International Standing	Poor global rankings; limited visibility

Sources: Compiled from research findings 1 2 14

Interpretation of Results

The findings paint a troubling picture of the state of African universities, and the consequences of brain drain. The exodus of talent is not merely a problem of individual ambition; it reflects a systemic failure that encompasses inadequate funding, governance weaknesses, and missed opportunities for development.

The persistence of brain drain despite growing awareness of its consequences suggests that the determinants are deeply embedded in the political economy of African nations. As Giwa's (2024) study revealed, "bad governance/corruption" is the "most critical factor that discourages these Nigerians from going back to their country" 9. Addressing brain drain therefore requires addressing the broader governance challenges that make it difficult for individuals to see a future in their home countries.

The finding that remittances provide only short-term economic stimulus, rather than sustainable development, challenges the optimistic narrative that brain drain can be offset by diaspora financial flows 14. While remittances may support household consumption and provide some economic cushion, they cannot replace the productive capacity lost when skilled professionals leave.

Link to Literature and Objectives

The findings align with and extend the existing literature on African brain drain. The push pull framework effectively explains the migration decisions of African academics, who are responding both to adverse conditions at home and attractive opportunities abroad. The Triple Helix Model helps situate the problem within broader institutional dynamics, highlighting how weak linkages among universities, industry, and government perpetuate dysfunction.

The study confirms the importance of governance and institutional factors identified in previous research. The findings support the argument that addressing brain drain requires "immediate upgrade of teaching and learning

facilities in tertiary institutions, reasonable increment in employees' salaries, timely promotion, and improvement in welfare and other conditions of service" 2. However, the study also suggests that these measures, while necessary, may be insufficient without broader governance reforms and economic stabilization.

The research also contributes new insights on the institutional differentiation of brain drain patterns, revealing that federal universities may be particularly vulnerable due to centralization and political interference. Private institutions, while not immune to brain drain, may benefit from greater flexibility in compensation and governance.

6. Recommendations and Conclusion

Summary of Key Findings

This study has examined the phenomenon of brain drain in Nigerian and Sub-Saharan African universities, revealing a crisis of considerable magnitude. The key findings are:

1. **Brain drain is severe and accelerating:** Some African countries have lost over 50% of their tertiary educated workforce, with the pace of emigration increasing over time 13.
2. **Push factors are systemic:** Poor remuneration, inadequate infrastructure, weak governance, limited career opportunities, and institutional instability combine to drive academics abroad 2 6.
3. **The consequences are profound:** Brain drain has negatively impacted teaching quality, research output, institutional capacity, and economic growth. There is a statistically significant negative relationship between human capital flight and economic growth in Nigeria 14.
4. **Remittances are insufficient compensation:** While diaspora remittances provide some economic benefits, they cannot offset the structural losses caused by brain drain 14.
5. **Governance is central:** Bad governance and corruption emerge as critical factors in

the decision to emigrate and to remain abroad after study 9.

Implications

The findings have significant implications for policy and practice:

For National Governments: The evidence suggests that piecemeal interventions are unlikely to stem the tide of brain drain. What is required is a comprehensive approach that addresses the root causes: poor governance, inadequate funding, weak infrastructure, and limited professional opportunities. Governments must demonstrate through action that higher education is a priority and that academics are valued.

For University Administrations: Universities must be empowered to manage their own affairs, including staffing decisions, compensation structures, and resource allocation. Greater autonomy would enable institutions to respond more effectively to the professional needs of their staff and to compete for talent.

For International Partners: Development partners should consider how their interventions can support retention rather than facilitating further emigration. This might include funding research collaborations that build institutional capacity, supporting academic exchange programs that ensure return, and investing in infrastructure that makes academic work more feasible.

For the Academic Community: Academics in the diaspora have a role to play in supporting their home institutions through collaboration, mentorship, and knowledge exchange. However, this engagement must be recognized and valued by both home institutions and host countries.

Practical or Policy Suggestions

Based on the findings, the following recommendations are offered:

1. Increase and Sustain Funding for Higher Education

Governments must increase investment in higher education as a percentage of national budgets.

This funding should go beyond salary payments to include investment in infrastructure, research facilities, digital libraries, and innovation hubs. As one commentator observed, "if the university is truly the furnace where nations are forged, then it must be funded like the arsenal of national survival" 1.

2. Improve Remuneration and Working Conditions

Salaries for academics must be increased to levels that are competitive with the private sector and with institutions in other countries. This should be accompanied by improved working conditions, including better offices, research support, and opportunities for professional development.

3. Strengthen University Autonomy

Public universities should be granted greater autonomy in governance, finance, and personnel matters. Centralized controls, such as the Integrated Payroll and Personnel Information System (IPPIS) in Nigeria, should be reformed to allow universities to manage their own staffing and compensation.

4. Implement the Triple Helix Model

Strengthen university industry government partnerships through policy incentives, joint research projects, internship programs, and curriculum development. As the literature suggests, "when these three actors intertwine, the university becomes a genuine catalyst, converting knowledge into usable development" 1.

5. Promote Research Commercialization

Universities should invest in technology transfer offices, intellectual property management, and innovation hubs to translate research into commercially viable products and services. This would generate additional revenue and

demonstrate the tangible value of university research.

6. Engage the Diaspora

Strategic programs should be developed to engage the diaspora in institutional development. This could include diaspora fellowship programs, collaborative research projects, and return incentives for academics willing to spend time in African universities.

7. Address Underlying Governance Issues

Broader governance reforms are essential to create an environment in which academics can see a future for themselves and their families. This includes addressing corruption, improving infrastructure, providing security, and stabilizing the economy.

8. Invest in Regional Cooperation

Regional cooperation among African universities can help pool resources, share expertise, and reduce the sense of isolation that contributes to migration decisions. The African Continental Free Trade Area provides a framework for such cooperation.

Conclusion

The university and the development question in Africa are inextricably linked. Universities have the potential to be powerful engines of development, producing the skilled professionals, research, and innovation that Africa desperately needs. Yet this potential remains unrealized as brain drain continues to hemorrhage the continent's most valuable resource its human capital.

The persistence of brain drain reflects deep structural problems that cannot be solved through short-term interventions. It requires a fundamental reorientation of how governments, institutions, and the international community

approach higher education in Africa. This reorientation must be grounded in a genuine commitment to African development, an understanding of the value of universities as public goods, and a willingness to invest in the institutions that will shape the continent's future.

The stakes are high. As Chijioke et al. (2025) warn, "with the current trajectory of human capital flight, achieving any of the 17 Sustainable Development Goals (SDGs) in Nigeria is difficult"². The same could be said for many other Sub-Saharan African countries. The path forward lies in recognizing the central role of universities in development and taking concrete action to make academic careers in Africa not just viable, but attractive. This is not merely a matter of institutional reform; it is a matter of national survival.

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