Innovations

Human Capital Flight and Youth Entrepreneurship: New Evidence from Nigeria

Jane Ogochukwu Ben-Caleb[1], Egbide Ben-Caleb[2], Joseph Ugochukwu Madugba[3], Olatunji Fadeyi[4], Felicia Abiodun Oyewole[5], Alice Ojile-Matthew David[6]

[1, 4,5,6] Department of Business Studies, College of Business and Social Sciences, Landmark University, Nigeria

[2,3] Department of Accounting and Finance, College of Business and Social Sciences, Landmark University, Nigeria

ORCID 0000-0001-8916-7920[1]

Corresponding Author: **Jane Ogochukwu Ben-Caleb**

Abstract

Purpose: *This study investigates the relationship between human capital flight and youth entrepreneurship among undergraduate students at a private university in Nigeria. Human capital flight, popularly referred to as 'japa' has emerged as a significant impediment to Nigeria's economic development, particularly through the loss of young entrepreneurial talent.* ***Methodology:*** *The study conceptualizes human capital flight using two constructs: intention to emigrate (ITM) and risk perception (RPT), while entrepreneurial motivation (MOT) and perceived quality of education (QED) serve as indicators of youth entrepreneurship. Data were collected from 254 respondents and analysed using a two-step partial least squares structural equation modeling (PLS-SEM) approach.* ***Findings:*** *The findings reveal that intention to emigrate significantly enhances entrepreneurial motivation but does not significantly affect students' perceptions of the quality of education received. Moreover, risk perception was found to have a positive and highly significant relationship with entrepreneurial motivation (β = 0.406,$p < 0.001$).* ***Implications for theory and practice:*** *The study highlights the need for comprehensive policy interventions that address the socio-economic drivers of human capital flight and foster a more supportive entrepreneurial ecosystem to harness the potential of Nigerian youth for national development. Its originality lies in its integrated approach, bridging two streams of literature (brain drain and youth entrepreneurship) within the under-researched context of Nigerian higher education students.*

Keywords*: Human Capital Flight, Brain Drain, Youth Entrepreneurship, Entrepreneurship Education, Undergraduate Students, Nigeria, SDG4, SDG8*

Introduction

Great economies emerge through the tenets of strong entrepreneurial activities (Peter et al., 2019). Unfortunately, the lack of an enabling environment in Nigeria for businesses to thrive has substantially contributed to youth entrepreneurs fleeing to countries where their talents and abilities are well appreciated, secured, improved upon, and utilised effectively. In today's globalised world, human capital flight, commonly known as "brain drain," has become a growing concern across the globe, including countries in Sub-Saharan Africa (Jacob et al., 2020). It is a serious concern to note that with a teeming youth population of about 70% compared to the total population (234,322,841), Nigeria's youth unemployment still stands at 8.4% (Olufemi, 2024). The near collapse of Nigeria's agricultural and manufacturing sectors and a stunted entrepreneurial ecosystem exacerbate the outflow of skilled youth, undermining the country's long-term economic prospects.

Entrepreneurship and human capital flight are both gains and drains of globalization, the latter being the emigration of highly skilled individuals, including students and graduates, to seek better opportunities and improved quality of life in other countries (Kalu & Ede, 2022; Popogbe & Adeosun, 2020).This trend has significant implications for the economic development and prospects of sustainable growth in countries like Nigeria. Nkuda (2021) noted that, among other things that drive entrepreneurship, the vibrant youth population as well as our rich endowment is pivotal but the reverse seems to be the case with Nigeria. Human capital flight is considered a financial loss as it depletes the intellectual capital of the country of origin and cripples the economy's developmental processes (Anetoh & Onwudinjo, 2020).

In recent decades, Nigeria has experienced a notable outflow of skilled professionals seeking better prospects abroad. This trend has garnered significant attention due to its potential adverse implications for the nation's economic development and entrepreneurial landscape, particularly among its youth population (Egbide et al., 2023). With an estimated 70% of Nigeria's population under the age of 25 (Worldometer, 2024), understanding the nexus between human capital flight and youth entrepreneurship is paramount for fostering sustainable economic growth and addressing youth unemployment. Youth entrepreneurship on the other hand, has emerged as a key driver of economic development, offering opportunities for job creation, innovation, and wealth generation (Apostu & Gigauri, 2023). However, the allure of emigration presents a formidable challenge, potentially diverting talent away from domestic entrepreneurial endeavours. This dilemma accentuates the need to examine the motivations, risks, and perceived barriers shaping the entrepreneurial intentions of Nigerian youth.

Existing literature has extensively documented the causes and effects of human capital flight, including push factors such as economic instability, poor governance,

and security challenges (Ighoshemu & Ogidiagba, 2022; Offor et al., 2022; Urowoli & Alero, 2022).Furthermore, scholars have investigated strategies for workforce retention (Murphy & Pacher, 2022) and assessed the negative impacts of brain drain on specific sectors like healthcare (Ipinnimo et al., 2023; Lawal et al., 2022). Although prior research has explored the role of higher education institutions in fostering entrepreneurship amidst brain drain (Nweke & Nweke, 2020; Akporehe, 2022), nevertheless, a critical gap remains in the literature. The relationship between human capital flight and youth entrepreneurial intentions, especially among university students, remains underexplored. Specifically, limited empirical attention has been given to how the intention to emigrate and the perception of domestic risks influence the entrepreneurial motivation of Nigerian undergraduates. While prior studies acknowledge that youth entrepreneurship is essential for national development, few have interrogated how migration aspirations intersect with entrepreneurial behaviour within the unique socio-economic context of an emerging economy such as Nigeria. This gap is particularly salient given that today's university students constitute the next generation of potential entrepreneurs or emigrants.

This study seeks to bridge these gaps by investigating the relationship between human capital flight and youth entrepreneurship, focusing specifically on Nigerian undergraduates. It uniquely positions intention to emigrate and risk perception as key indicators of human capital flight, exploring their direct impact on entrepreneurial motivation and perceived quality of education. Its originality lies in its integrated approach, bridging two streams of literature (brain drain and youth entrepreneurship) within the under-researched context of Nigerian higher education students. Moreover, the findings have practical relevance for policymakers, educational institutions, and development practitioners seeking to design targeted interventions to curb human capital flight, foster entrepreneurial ambition, and harness the demographic dividend for sustainable economic development. By highlighting the underlying motivations and perceived barriers faced by Nigerian youth, the study contributes to the broader discourse on building resilient entrepreneurial ecosystems in developing economies amidst the challenges of globalisation.

The choice of a private university setting for this study was deliberate, considering the growing role of private higher education institutions in Nigeria and their potential influence on entrepreneurial mindsets and aspirations (Aladejebi, 2018). Private universities often boast modern facilities, diverse faculty expertise, and innovative pedagogical approaches, which often motivate students for entrepreneurial endevours. Furthermore, this research aligns with broader efforts to advance the United Nations Sustainable Development Goals (SDGs), particularly

Goal 8, which calls for promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work(United Nations, 2024).

Theory and Hypotheses

This study draws on human capital theory and expectancy-value theory (Becker, 1964; Eccles & Wigfield, 2020).

Human Capital Theory posits that investment in education, skills, and knowledge enhances individual productivity and economic value(Becker, 1964). In the context of entrepreneurship, human capital endowments significantly shape entrepreneurial capabilities, opportunity recognition, and venture success. However, when individuals perceive limited returns on their investment in education, skills, and knowledge locally, they become incentivised to seek environments where their skills are better rewarded, leading to human capital flight.

Expectancy-Value Theory explains individual choice behaviours based on the expectation of success and the subjective value attached to the outcome(Eccles & Wigfield, 2020). When applied to entrepreneurship, it suggests that young individuals assess both the likelihood of success in entrepreneurial endeavours and the perceived benefits compared to alternative pathways such as emigration. Where domestic conditions are perceived as unfavourable, as a result of high economic risks, insecurity, and institutionalized infrastructural deficit, the motivation to pursue entrepreneurship may be overshadowed by a stronger intention to migrate.

Intention to Emigrate and Youth Entrepreneurship

Intention to emigrate reflects a cognitive and affective orientation towards leaving one's home country in search of better socio-economic conditions (Adelani Sunday et al., 2024). While emigration is often seen as a loss to the home economy, emerging evidence suggests that migration intentions may also stimulate entrepreneurial motivations among youth who wish to create a better livelihood either domestically or in preparation for opportunities abroad(Adebayo & Akinyemi, 2022). In contexts where formal employment is limited and risks are high, entrepreneurship may become a strategic intervening pathway.

In addition. while dissatisfaction with domestic educational quality is often cited as a push factor for emigration, it remains unclear whether students' intentions to emigrate directly correlate with their evaluation of the education they receive. Students may perceive their education as adequate yet insufficiently matched to domestic labour market realities, motivating their desire to seek better application opportunities abroad. Thus, we hypothesise:

H_1: Intention to emigrate (ITM) positively influences entrepreneurial motivation (MOT) among Nigerian undergraduate students.

H_2: Intention to emigrate (ITM) has a significant relationship with perceived quality of education (QED) among Nigerian undergraduate students.

Risk Perception and Youth Entrepreneurship

Risk perception refers to individuals' subjective assessment of uncertainty and potential loss associated with entrepreneurial activities. In unstable economic environments like Nigeria, risk perception is heightened. However, individuals with strong entrepreneurial aspirations may interpret risks as challenges to be navigated rather than deterrents. Consequently, heightened risk awareness may paradoxically strengthen entrepreneurial motivation among resilient youth as well as perception of the quality of education in their home country. Accordingly, we propose:

H_3: Risk perception (RPT) positively influences entrepreneurial motivation (MOT) among Nigerian undergraduate students.

H_4: Risk perception (RPT) has a significant relationship with perceived quality of education (QED) among Nigerian undergraduate students.

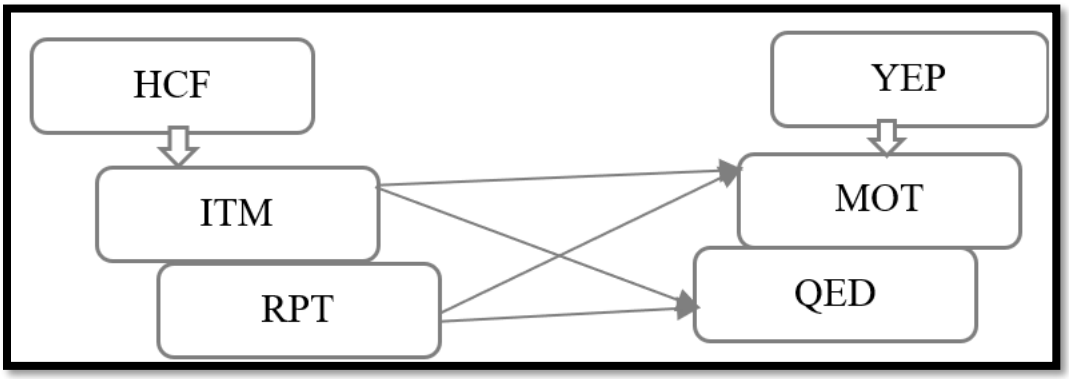

Fig 1: Conceptual framework

N.B: HCF = Human capital flight; ITM= Intention to migrate; RPT= Risk perception; YEP= Youth entrepreneurship; MOT= Motivation; QED =Quality education

Literature Review

This section reviewed existing literature in the following thematic areas: the effect of HCF on youth entrepreneurship, challenges of youth entrepreneurship, and the relationship between human capital flight and youth entrepreneurship.

Conceptual Clarification

Human Capital Flight

Human capital flight is described as the migration of skilled people from less developed and/or developing countries to developed ones(Popogbe &Adeosun, 2020). According to Chimenya and Qi, (2023), HCF is regarded as the international transfer of highly educated persons from their countries of origin (developing nations) to developed countries. Human capital flight, also known as brain drain, refers to the emigration or outflow of highly skilled individuals, including students, professionals, and entrepreneurs, from their home countries to other countries in search of better educational, career, and entrepreneurial opportunities (Jacob et al., 2020). It involves the loss of valuable human resources, knowledge, skills, and expertise from the home country, which may have significant implications for economic development, innovation, and social progress (Egbefo, 2014).

The concept of human capital flight encompasses the migration of individuals who possess specialized skills, qualifications, and talents, such as doctors, engineers, scientists, and entrepreneurs, who are highly sought after in the global labour market. These individuals often choose to leave their home country due to various factors, including limited job prospects, inadequate remuneration, political instability, lack of opportunities for career advancement, and a desire for improved living standards (Ighoshemu & Ogidiagba, 2022).

Human capital flight can have both short-term and long-term effects on the home country. In the short term, it leads to a brain drain, depleting the availability of skilled professionals and entrepreneurs, which can hinder economic growth, technological advancements, and social progress (Anetoh & Onwudinjo, 2020). In the long term, brain drain can result in a loss of human capital accumulation, weakened institutional capacity, reduced innovation, and a perpetuation of socio-economic inequalities. It is important to note that human capital flight is a multidimensional phenomenon influenced by a range of push and pull factors. Push factors include factors that encourage individuals to leave their home country, such as limited job opportunities, inadequate infrastructure, political instability, and societal challenges (Popogbe & Adeosun, 2020). Pull factors, on the other hand, are the attractions and opportunities that other countries offer, such as higher wages, better working conditions, access to advanced technology, and a conducive entrepreneurial ecosystem (Popogbe & Adeosun, 2020).

Youth Entrepreneurship

Youth entrepreneurship refers to the engagement of young individuals, typically aged between 18 and 35 years, in the creation, operation, and management of businesses or entrepreneurial ventures (Nweke & Nweke, 2020). It involves the pursuit of innovative ideas, taking calculated risks, and leveraging resources to

establish and grow enterprises to generate income, create employment opportunities, and make a positive impact onsociety. Youth entrepreneurship is characterised by the unique attributes, aspirations, and challenges faced by young entrepreneurs. It represents a pathway for young individuals to channel their creativity, ambition, and energy into developing sustainable businesses and contributing to economic growth (Funmilade et al., 2021). It often encompasses various forms of entrepreneurship, including startups, small and medium-sized enterprises (SMEs), social entrepreneurship, and technology-driven ventures.

The concept of youth entrepreneurship emphasises the role of young people as drivers of economic innovation and agents of change. The United Nations suggests that the Sub-Saharan youth population will be on the increase and likely represent 30% of the youth around the world come 2050(World Youth Report, 2020). Extant literature(UNDESA, 2020) noted that to promote youth entrepreneurship, especially in Sub-Saharan Africa, policies in favour of youth entrepreneurship should be enacted and implemented. It recognises the importance of nurturing an entrepreneurial mindset, fostering entrepreneurial skills, and creating an enabling environment for young entrepreneurs to thrive. In addition, engaging entrepreneurially is not only about economic outcomes but also about personal development, empowerment, and addressing social challenges.

Furthermore, entrepreneurial activities among youths are influenced by a range of factors, including personal motivations, access to resources, educational background, social networks, and the broader entrepreneurial ecosystem (Apostu & Gigauri, 2023). Motivations for youth entrepreneurship can include factors such as a desire for autonomy, financial independence, passion for a particular industry or cause, or the aspiration to create social impact (Ngwoke et al., 2020). Access to resources is critical for youth entrepreneurs to start and sustain their ventures. These resources can include financial capital, access to markets, business networks, mentorship, and supportive infrastructure (Anoke & Purity, 2022). Educational programs and training play a significant role in equipping young entrepreneurs with the necessary skills, knowledge, and mindset to navigate the entrepreneurial journey and seize opportunities for growth and success(Aga, 2023).

The entrepreneurial ecosystem, including government policies, regulatory frameworks, and support systems, is instrumental in creating an environment conducive to youth entrepreneurship (Prokop, 2022). It encompasses factors such as access to funding, incubators, accelerators, business development services, and networks that facilitate the establishment and growth of youth-led enterprises. Youth-led enterprise has been noted to hold the potential to drive job creation, economic diversification, and social transformation. It empowers young individuals to leverage their innovative ideas, talents, and skills to address societal challenges,

contribute to sustainable development, and shape the future of their communities and nations. (Padi & Musah, 2022; Abada et al., 2021).

Effect of Human Capital Flight on Youth Entrepreneurship

The phenomenon of human capital flight is fueled by certain factors identified as the push and pull. These factors such as limited economic opportunities, political instability, inadequate infrastructure, and educational system challenges, drive the youthful energies out to seek better opportunities abroad, resulting in a significant loss of skilled workforce and entrepreneurial potential within the country. On the other hand, factors such as higher wages, better working conditions, access to advanced technology, and a conducive entrepreneurial ecosystem are the attractions (Popogbe & Adeosun, 2020).

Issues ravaging the entrepreneurial ecosystem in Nigeria include such factors as limited access to capital, lack of entrepreneurial skills and education, risk aversion, regulatory burdens, and limited market access(Ben-Calebet al., 2025). These barriers, combined with the impact of brain drain, create a challenging environment for young people with entrepreneurial aspirations. The relationship between human capital flight and youth entrepreneurship is complex and multifaceted as strategies and policies to retain skilled individuals, promote youth entrepreneurship, and foster economic growth and development in Nigeria have not been fully situated. This incident is germane as policymakers, educational institutions, and stakeholders haveon their hands the task of creating a conducive environment that nurtures and supports young entrepreneurs, thereby unlocking the untapped potential of the youth population for the country's progress and prosperity.

Methodology

Research Design and Context

This study adopted a quantitative, cross-sectional research design to examine the relationship between human capital flight and youth entrepreneurship among undergraduate students. The research was conducted at a leading private university in Nigeria, covering three colleges (Pure and Applied Sciences, Engineering, and Business and Social Sciences). These colleges were purposively selected because entrepreneurship education is mandated across disciplines in Nigerian higher education institutions (Wale-Oshinowo et al., 2019; Olokundun et al., 2018), ensuring a homogeneous exposure to entrepreneurial concepts among respondents.

The study population comprised approximately 1,800 students across the three colleges. Using Taro Yamane’s (1967) formula for sample size determination, a minimum sample of 339 was calculated. A structured questionnaire using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was distributed, and 254 valid responses were obtained, yielding a 74.93% response rate. This response rate

exceeds the recommended threshold for organisational survey research and is considered sufficient for robust Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis (Baruch & Holtom, 2008; Hair et al., 2012).
Ethical approval for the study was not required, as participation in the survey was entirely voluntary, where verbal consent was required. The anonymity of the study participants was strictly maintained; no identifying information was collected or disclosed during or after the research.

Measures and Instrumentation

Intention to emigrate (ITM) and risk perception (RPT) proxied human capital flight using items adapted from the studies of Anetoh and Onwudinjo (2020); Popogbe and Adeosun (2020).Entrepreneurial motivation (MOT) and perceived quality of education (QED) proxied youth entrepreneurship using items adapted from the studies of Saib and Musette (2023) and Kalu and Ede (2022).All four constructs had seven (7) indicators each, bringing it to a total of 28 indicators for this study. Furthermore, the study models are reflective and represent the characterization of an underlying construct. In addition, it is said to be a reflective model when the indicators are substitutable and interrelated(Chin, 2010).

Data Analysis and Procedures

Data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique via Smart PLS 4.0. by Ringle et al. (2024). This was selected due to its suitability for prediction-oriented research in business and social sciences and its flexibility in handling complex models without strict normality assumptions(Chin, 2010). The data set consisted of 254valid responses with no missing values. A preliminary data analysis was conducted to ensure data quality and suitability for multivariate analysis. During indicator reliability assessment, three items (two from RPT and one from MOT) exhibited loading values below conventional thresholds (0.451, 0.391, and 0.344, respectively). However, based on exploratory study standards and the minimal improvement observed upon potential item removal (Hair et al., 2012; Chin, 2010), these indicators were retained. The analysis followed a two-step approach; the measurement model and structural model assessments (Chin, 2010). The measurement model aims to evaluate the quality of the measurement instrument or criteria used which includes the reliability and validity test. The structural model aims to determine the significance of path coefficients through a bootstrapping procedure employing 5,000 resamples. Also, the coefficient of determination (R^2), effect size (F2); and the predictive relevance (Q2) were evaluated. The PLS predict algorithm was employed to evaluate out-of-sample predictive performance as recommended by (Sarstedt et al., 2020; Shmueli et al., 2019).

Results

Measurement Model Assessment

The reliability and validity of the constructs were evaluated through several criteria (quality criteria) to ensure robust measurement. Internal consistency was confirmed as Cronbach's alpha and composite reliability (rho_c)values for all constructs exceeded the recommended threshold of 0.70, indicating satisfactory reliability(Hair et al., 2021). The Average Variance Extracted (AVE) values for each construct were higher or closeto the 0.50 threshold, confirming that over 50% of the variance in the construct's items was explained(Hair et al., 2021). Discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio. According to Sarstedt, et al. (2020), discriminate validity (DV) is the extent to which each construct is or can be differentiated from other constructs in the model. Discriminate validity is evaluated using three (3) approaches: the factor loading assessment, the Fornel-Lackert criterion, and the Heterotriat-Monotrait ratio of correlations (HTMT). However, due to recent shortcomings of the Fornell-Lackert criterion assessment of discriminate validity, the HTMT was deemed an advised assessment which should be less than the threshold of 0.85(Hair et al., 2021). Table 1 shows all HTMT values below the conservative threshold of 0.85, indicating acceptable discriminant validity (Sarstedt et al., 2020). Overall, the dataset had good quality criteria. Figure 2 displays the indicator loadings, while the results of the reliability and validity are presented in Table 1.

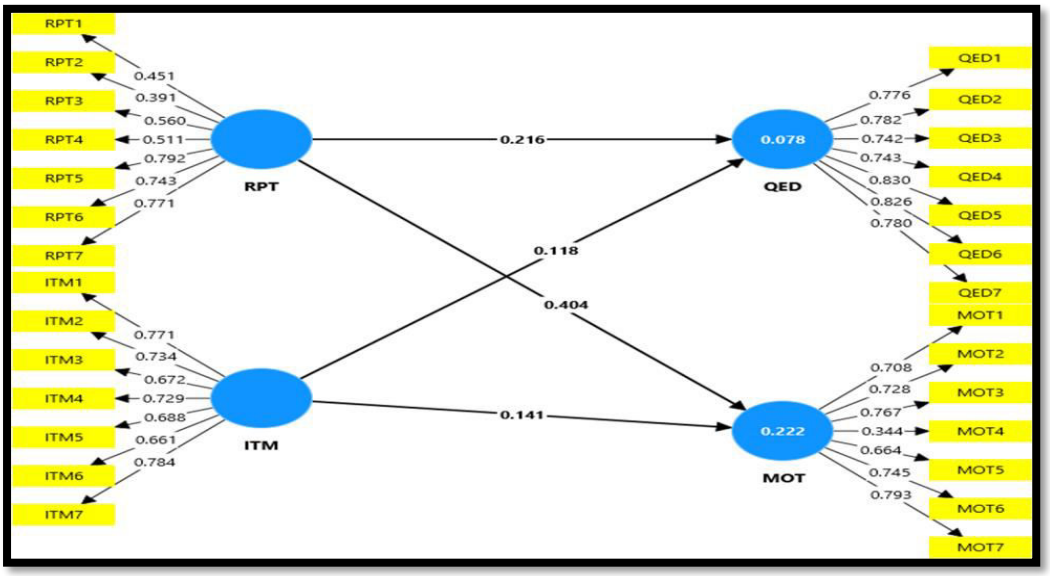

Figure 2: Indicator loading

Note: ITM = Intention to emigrate, **RPT** = Risk Perception, **MOT** = Entrepreneurial Motivation **QED** = Perceived Quality Education

Source: Researcher's Result (2025)

Table 1 presents the construct reliability and validity indicators.

Table 1: Construct Reliability and Validity

Variables	α	CR (rho_c)	AVE	HTMT
ITM	0.850	0.883	0.520	
RPT	0.740	0.806	0.386	0.509
MOT	0.821	0.861	0.481	0.294
QED	0.895	0.917	0.614	0.204

Note: ITM = Intention to emigrate, **RPT** = Risk Perception, **MOT** = Entrepreneurial Motivation **QED** = Perceived Quality Education

Source: Researcher's Result (2025).

Assessment of Coefficient of Determination (R^2)

When using the PLS-SEM technique, the interpretation of R^2 values differs from that of the traditional regression analysis where higher values are expected. In social sciences research using PLS-SEM, R^2 values of 0.25, 0.50, and 0.75 are considered weak, moderate, and substantial(J. Hair et al., 2013, 2021). Figure 2 illustrates the indicator loadings and R^2 (this value is seen in the endogenous variables QED = 0.078 and MOT = 0.222 respectively). This indicates that the model explained 22.2% of the variance in entrepreneurial motivation and 7.8% of the variance in perceived education quality. In social science and exploratory studies such as this, R^2below the recommended threshold of >0.1 value is common (Cohen, 2013).

Table 2: Inner Model Assessment Using R^2, and Q^2

Latent Variable	R-square	R-square adjusted	Q^2
MOT	0.222	0.216	0.189
QED	0.078	0.071	0.045

Source: Researcher's Result (2025)

In the inner model assessment, the evaluation indicates that Q^2values of the endogenous constructs are above 0, which demonstrates an acceptable predictive relevance (Sarstedt et al., 2020).

Table 3: Effect Size (F^2)

	F^2Value	Significance
ITM->MOT	0.022	Small effect
ITM ->QED	0.013	Relatively small effect
RPT -> MOT	0.185	Medium effect
RPT -> QED	0.044	Small effect

Source: Researcher's Result (2025)

The effect size measures the magnitude of an effect on the endogenous variables with a small effect = 0.02, medium effect = 0.15, and large effect = 0.35 (Sarstedt et al., 2020). As shown in Table 3, all effect size values are acceptable, except the f^2 value of intention to emigrate (ITM) on perceived quality education (QED), which is relatively small at 0.013.

Structural Model Assessment

The second assessment following the measurement model is the structural path. The hypothesised relationships were evaluated for path coefficients and their statistical significance. Figure 2 illustrates the structural model, and the results are presented in Table4.

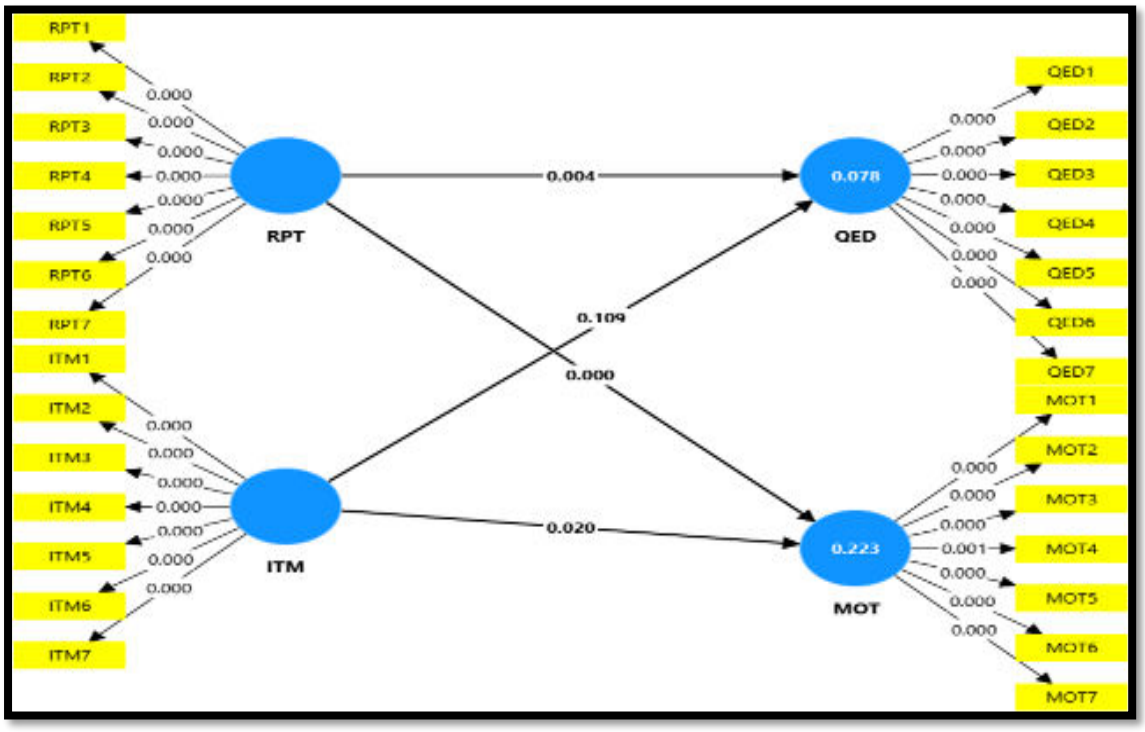

Figure 2: Structural model assessment

Source: Researcher's Result (2025)

Table 4: Path Coefficients and Hypothesis Testing

Path	β	t-value	p-value	Hypothesis	Significance
ITM -> MOT	0.139	2.335	0.020	H_1	Yes
ITM -> QED	0.118	1.601	0.109	H_2	No
RPT -> MOT	0.406	6.255	0.000	H_3	Yes
RPT -> QED	0.216	2.876	0.004	H_4	Yes

Note: ITM = Intention to emigrate, **RPT** = Risk Perception, **MOT**= Entrepreneurial Motivation **QED** = Perceived Quality Education

Source: Researcher's Result (2025).

Discussion of Findings

The R^2 values of 0.222 and 0.078 for MOT and QED respectively may be argued as not substantial in explaining the models however, the result of the model indicates that although the students have high intentions to leave the country for better opportunities abroad; the country (Nigeria), presentsa sufficient motivation to pursue their entrepreneurial endevours. This could be a result of the country's population or it may be a result of the current exacerbating economic hardship and a means to survive. This assertion is validated by the findings of Kamoru Abiodun (2023); and Onwubiko (2022). Furthermore, the QED value (0.078) indicates that the perceived risk of staying in Nigeria (economic and social concerns) was insubstantial on the students' perceived quality of education in Nigeria. The implication of this is that, regardless of the perceived risks associated with living in Nigeria, the students supposed the education they are exposed to, prepared them well to seize entrepreneurial opportunities available locally.

The relationship between intention to emigrate and entrepreneurial motivation (ITM -> MOT) showed it is positive and significant (β = 0.139, p= 0.020), indicating that students with higher intention to migrate exhibit moderately high motivation to pursue entrepreneur ship in Nigeria. Usually, it is expected that the intention to emigrate should dampen the desire or motivation for entrepreneurial activity among the students; this finding shows that the consideration to emigrate also makes entrepreneurship a viable option either as a fallback or preparatory plan. This result supports the hypothesis (**H_1**) that there is a positive relationship between intention to emigrate and entrepreneurial motivation.

The relationship between intention to emigrate and perceived quality education (ITM -> QED) showed a positive but insignificant path (β = 0.118, p = 0.109)

indicating that students' intention to leave Nigeria did not significantly affect their perception of the quality of education received. Furthermore, from their responses, factors such as their institution's facilities, resources provided, support, and mentorship, as well as competent educators, were seen to be responsible for the students' perception of a quality educational system. This result does not support the hypothesis (**H_2**) that there is a positive relationship between the intention to emigrate and perceived quality of education in Nigeria. This finding implies that, though the students plan to leave the country, it does not change the perception that their institution provides quality education.

Conversely, risk perception on entrepreneurial motivation (RPT -> MOT) at β = 0.406, p = 0.000,revealed a positive and highly significant path, indicating that perceived risks in Nigeria drive greater entrepreneurial motivation for the students. This result supports the hypothesis (**H_3**) that there is a positive and highly statistical relationship between perceived risks and entrepreneurial motivation. This finding implies that students who view the Nigerian environment as risky are more inclined to pursue entrepreneurship as a means to mitigate the risk or improve self-reliance. This was observed from the responses provided, where perceived skills, resources, perceived ability to navigate entrepreneurial challenges and the perception of entrepreneurship as a means of creating job opportunities and addressing societal issues motivated students to create local opportunities rather than emigrate.

Likewise, risk perception on perceived quality education (RPT -> QED)at β =0.216, p= 0.004 showed a positive and significant path, indicating that perceived risks in Nigeria significantly increased perceived quality of education. Suggesting that the students see quality education as a resource for navigating the challenges or risks in Nigeria. This result supports the hypothesis (**H_4**) that there is a positive relationship between perceived risks and perceived quality education in Nigeria. This implies that certain risk perceptions such as perceived skills and resources, and perceived ability increase students' perception of a quality educational system in Nigeria.

Conclusion and Recommendations

The effect of human capital flight in Nigeria has risen steadily over the past decade and the majority of youths in Nigeria intend to leave the country for better opportunities that enhance quality of life. This study uncovered the relationship between human capital flight and youth entrepreneurship among 254 undergraduates in a private university from across 3 colleges. Findings revealed that the intention to emigrate significantly increased the motivation to pursue entrepreneurship in Nigeria, but (ITM) was seen not to have affected their perception of the quality of education received. Additionally, risk perception was found to significantly drive greater entrepreneurial motivation for the students.

Moreover, risk perception (RPT) had a positive and highly significant relationship with entrepreneurial motivation (MOT).

These results underscore the urgent need for coordinated efforts to create an enabling environment that retains and harnesses the entrepreneurial potential of Nigeria's youth. Without addressing the socio-economic conditions fueling human capital flight, the country risks losing a critical segment of its innovative workforce, thereby undermining prospects for sustainable growth and development.

Based on these findings, the following recommendations are proposed:

i. The Nigerian government should implement structured initiatives such as startup grants, innovation awards, and preferential support for youths and returnee entrepreneurs to encourage youth retention and motivation to invest their talents within Nigeria
ii. In addition, policymakers and the government should reduce systemic barriers, thereby improving economic stability, enhancing security, and streamlining business regulations through policies critical to making entrepreneurship more attractive to the youth population.
iii. Furthermore, the National Universities Commission and Nigerian universities should strengthen entrepreneurship curricula through stronger industry linkages, practical training programmes, and innovation hubs to better prepare students to think and act entrepreneurially within the country.

Practical Implication

The findings of this study offer several important implications for policymakers, educational institutions, and entrepreneurship development practitioners in Nigeria. First, the positive relationship between intention to emigrate and entrepreneurial motivation suggests that, rather than viewing the desire to emigrate solely as a loss, policymakers could channel migration aspirations into productive entrepreneurial activities within the country. By creating targeted programs that support youth-led enterprises, especially for students and recent graduates, the Nigerian government and development agencies can provide attractive domestic alternatives to migration.

Second, the significant effect of risk perception on entrepreneurial motivation highlights the necessity of reducing systemic barriers that heighten perceptions of economic and security risks. Efforts should focus on improving the ease of doing business, providing startup capital, offering entrepreneurship mentorship programs, and ensuring a stable macroeconomic environment that encourages calculated entrepreneurial risk-taking.

Third, the finding that intention to emigrate does not significantly influence perceived quality of education underscores the need for a nuanced approach to

education policy. While students recognise the value of their education, their decision to emigrate is more strongly influenced by external economic and social conditions rather than by dissatisfaction with educational standards. Thus, higher education institutions should not only enhance entrepreneurship curricula but also strengthen industry linkages, practical training, and post-graduation support systems to increase the attractiveness of domestic opportunities.

Furthermore, the study highlights the urgent need for a comprehensive national strategy that simultaneously addresses the drivers of human capital flight and fosters a vibrant entrepreneurial ecosystem. Building a more enabling environment for youth entrepreneurship can serve as a critical lever for reducing the loss of talent and driving sustainable economic growth in Nigeria.

Ethical Statement/ Ethics, consent and permissions

Ethical approval for the study was not required as participation in the survey was entirely voluntary where verbal consent was required. The anonymity of the study participants was strictly maintained; no identifying information was collected or disclosed during or after the research.

Consent to publish: The participants collectively gave consent toreport and or publish data obtained in this manuscript.

Competing Interest Statement: The authors declare no competing interest.

Data Availability Statement: The original contributions presented in the study are included in the article; further inquiries can be directed to the corresponding author.

Authors' Contribution: **JOB** Conceptualized the study, provided Methodology, Analysis, Writing- Original draft, Review & Editing and Visualization. **EB, JUM** and **OF** reviewed, edited the manuscript, and validated the study. **FAO** and **ADO** reviewed the manuscript. All authors have read and approved the final manuscript.

References

1. *Abada, F., Uzoechina, B., Manasseh, C., Nwakoby, I., Obidike, P., Lawal, I., adedoyin isola, L., & Alio, F. (2021). Curbing Unemployment through Job Creation as Panacea to Inclusive Growth in Nigeria. International Journal of Financial Research, 12, 376.*
2. *Adebayo, A., & Akinyemi, O. O. (2022). "What Are You Really Doing in This Country?": Emigration Intentions of Nigerian Doctors and Their Policy Implications for Human Resource for Health Management. Journal of International Migration and Integration, 23(3), 1377–1396.*

3. *Adelani Sunday, Zamani Andrew E, & Adama Ahmed Mohammed. (2024). Empowerment programmes and employment opportunities as panacea for youth migration in Nigeria. World Journal of Advanced Research and Reviews, 24(3), 1876–1890.*
4. *Aga, M. K. (2023). The mediating role of perceived behavioral control in the relationship between entrepreneurship education and entrepreneurial intentions of university students in Ethiopia. Journal of Innovation and Entrepreneurship, 12(1), 32.*
5. *Akporehe, D. (2022). From Drain to Gain: Managing Brain Drain in Nigerian Universities. 212–224.*
6. *Aladejebi, O. (2018). The Effect of Entrepreneurship Education On Entrepreneurial Intention Among Tertiary Institutions In Nigeria. Journal Of Small Business And Entrepreneurship Development,6.*
7. *Anetoh, B. C., & Onwudinjo, V. G. (2020). Emigration And The Problem Of Brain Drain In Nigeria: A Philosophical Evaluation. Journal of African Studies and Sustainable Development, 3(1), Article 1. acjol.org.*
8. *Anoke, A., & Purity, N.-O. (2022). Entrepreneurial Mindset among Nigerian University Students: A Study of Ebonyi State University's Entrepreneurship Centre, Abakaliki. Asian Journal of Economics, Business and Accounting, 24–33.*
9. *Apostu, S., & Gigauri, I. (2023). Sustainable development and entrepreneurship in emerging countries: Are sustainable development and entrepreneurship reciprocally reinforcing? Journal of Entrepreneurship, Management and Innovation, 19, 41–77.*
10. *Baruch, Y., & Holtom, B. (2008). Survey Response Rate Levels and Trends in Organizational Research. Human Relations, 61, 1139–1160.*
11. *Becker, G. S. (1964). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education (SSRN Scholarly Paper 1496221). Social Science Research Network. papers.ssrn.com.*
12. *Ben-Caleb, J., Egbide, B.-C., Peter, F., Eze, S., Ademola, S., Madugba, J., & Abiodun, O. (2025). Entrepreneurship Curriculum Content and Entrepreneurial Mindset among Nigerian Graduate. Harbin Gongcheng Daxue Xuebao/Journal of Harbin Engineering University, 46.*
13. *Chimenya, A., & Qi, B. (2023). Investigating determinants of brain drain of health care professionals in developing countries: A review.*
14. *Chin, W. W. (2010). How to Write Up and Report PLS Analyses. In V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), Handbook of Partial Least Squares: Concepts, Methods and Applications (pp. 655–690). Springer.*
15. *Cohen, J. (2013). Statistical Power Analysis for the Behavioral Sciences (0 ed.). Routledge.*

16. *Eccles, J. S., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. Contemporary Educational Psychology, 61, 101859.*
17. *Egbefo, D. (2014). Human Capital Flight and the Developmental Problem in Africa. Vol.2,.*
18. *Egbide, B.-C., Madugba, J., Ben-Caleb, J. O., Mercy, A.-I., Ayomide, I. A.-L., & Adesola, A. D. (2023). Personal Budgeting: Implications for Financial Wellbeing of University Staffers in Nigeria. African Journal of Business and Economic Research, 18(4), 351–370.*
19. *ma, O. (2021). Entrepreneurship As An Antidote To Insecurity In Nigeria: Counselling Implication.*
20. *Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. (2012). An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research (SSRN Scholarly Paper 2176430). Social Science Research Network. papers.ssrn.com.*
21. *Hair, J., Hult, G. T. M., Ringle, C., Sarstedt, M., Danks, N., & Ray, S. (2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A workbook.*
22. *Hair, J., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance—ScienceDirect. www.sciencedirect.com.*
23. *Ighoshemu, B. O., & Ogidiagba, U. B. (2022). Poor governance and massive unemployment in Nigeria: As causes of brain drain in the Buhari administration (2015-2020). Insights into Regional Development, 4(2), 73–84.*
24. *Ipinnimo, T., EO, A., & AO, A. (2023). Medical Brain Drain in Nigeria-A Health System Leadership Crisis. Ibom Medical Journal, 16, 94–97.*
25. *Jacob, J., Ochoga, A. O., & Adie, E. I. (2020). Human Capital Flight and Its Impact on the Emerging Economies of the Third World. International Journal of Innovative Research and Development.*
26. *Kalu, D., & Ede, V. (2022). Brain Drain and Underdevelopment in Nigeria: Socio-Philosophical Appraisal. 4, 22–26.*
27. *Kamoru Abiodun, S. (2023). Influence Of Economic Hardship On Undergraduates' Disposition To Academic Activities In Oyo State, Nigeria Paper Presented At The 1 Th International Conference Of The School Of General Studies Education Held Between 13th -17th February, 2023 At The New Economics Hall, Federal College Of Education (Special), Oyo, Oyo State Theme: Economic Hardship, Societal Vices And Insecurity: Issues, Challenges And The Way Forward 1.*
28. *Lawal, L., Lawal, A., Amosu, O., Muhammad-Olodo, A., Abdulrasheed, N., Abdullah, K.-U.-R., Kuza, P., Aborode, A., Adebisi, Y., Kareem, A., Aliu, A., Elelu,*

T., & Murwira, T. (2022). The COVID-19 pandemic and health workforce brain drain in Nigeria. International Journal for Equity in Health, 21, 174.

29. *Murphy, M., & Pacher, C. (2022). Bridging the gap: Brain drain to brain circulation: Researching successful strategies to support effective change. Procedia Computer Science, 200, 556–565.*
30. *Ngwoke, A. N., Aneke, A. O., & Oraelosi, C. C. (2020). Developing Entrepreneurial Mindset In The Nigerian Child Through Quality Early Childhood Education.*
31. *Nkuda, M. O. (2021). Entrepreneurship and Economic Diversification in Nigeria: The Moderating Influence of Enabling Environment on Global Satellite Mobile Village's Experience. Journal of Contemporary Research in Business, Economics and Finance, 3(1), Article 1.*
32. *Nweke, A. C., & Nweke, C. L. (2020). Nurturing Youths Entrepreneurial Mindset and National Development: A Critical Analysis (SSRN Scholarly Paper 3832825). papers.ssrn.com.*
33. *Offor, P. U., Egbulonu, K. G., Ikwumezie, A., & Njoku, A. I. (2022). Unemployment and Nigeria's Human-Capital Flight (1990 – 2020): An Empirical Investigation of a Modelled Case Study of Recruitment of Nigerian Doctors by Saudi Arabia. Asian Journal of Economics, Business and Accounting, 81–97.*
34. *Olokundun, Hezekiah, F. O., & Paul, S. O. (2018). Entrepreneurship Curriculum Contents And Entrepreneurial Development Of University Students In Nigeria.22(1), 60–65.*
35. *Onwubiko, E. (2022). Economic Hardship And Intention To Quit: A Quantitative Study Of Small Businesses Enterprises In Enugu State, Nigeria. Journal of Advance Research in Business, Management and Accounting (ISSN: 2456-3544), 8(3), Article 3.*
36. *Padi, A., & Musah, A. (2022). Entrepreneurship as a Potential Solution to High Unemployment: A Systematic Review of Growing Research and Lessons For Ghana. International Journal of Entrepreneurship and Business Innovation, 5, 26–41.*
37. *Popogbe, O., & Adeosun, O. (2020). Empirical analysis of the push factors of human capital flight in Nigeria. Journal of Humanities and Applied Social Sciences, ahead-of-print, 2632–279.*
38. *Prokop, D. (2022). The Composition of University Entrepreneurial Ecosystems and Academic Entrepreneurship: A UK Study. International Journal of Innovation and Technology Management, 19(06), 2250020.*
39. *Ringle, C. M., Wende, S., & Becker, J.-M. (2024). SmartPLS Algorithms and Techniques. www.smartpls.com.*
40. *Saib, M., & Musette, Y. (2023). Brain Drain—A Threat to Collective Security and Development for Africa. 1er semestre 2022, 127–144.*

41. *Sarstedt, M., Ringle, C. M., Cheah, J.-H., Ting, H., Moisescu, O. I., & Radomir, L. (2020). Structural model robustness checks in PLS-SEM.*
42. *Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. European Journal of Marketing, 53(11), 2322–2347.*
43. *UNDESA. (2020). UNDESA - Exploring Youth Entrepreneurship.*
44. *United Nations. (2024). United Nations Sustainable Development Goals—Time for Global Action for People and Planet. United Nations Sustainable Development. www.un.org.*
45. *Urowoli, C., & Alero, T. (2022). The Nexus among Unemployment, Poverty And Crime In Contemporary Nigeria. Reality of Politics, 19(1), 132–148.*
46. *Wale-Oshinowo, B., Raimi, L., Olarewaju, A., & Mbah, S. (2019).Entrepreneurship Education And Student Entrepreneurial Mindset: A Study Of Students In Federal Government Tertiary Institutions In Lagos, NIGERIA. 6, 194–214.*