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Education Financing and Human Capital Development: Empirical Evidence from Nigeria

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Abstract
The study empirically examined the effect of education financing mechanisms on human capital development in Nigeria from 2000 to 2022. Using an ex post facto research design, secondary time-series data were sourced from the UNDP, the World Bank, the CBN, TETFund, and PTDF. Specifically, two models were specified: Model 1 (Human Development Index, HDI) and Model 2 (Per Capita Income, PCI), as functions of Government Budgetary Allocation to Education (GBAE), Education Trust Fund (ETF), Petroleum Technology Development Fund (PTDF), and Broad-Based Grant (BBG). The Autoregressive Distributed Lag (ARDL) bounds testing approach was employed alongside the Error Correction Model (ECM) to estimate long-run and short-run relationships. The ARDL bounds test confirmed cointegration in both models. In the long run, ETF had the largest positive and statistically significant effect on HDI ($\beta = 0.0081$, $p < 0.01$) and PCI ($\beta = 0.072$, $p < 0.01$). GBAE also significantly improved HDI ($\beta = 0.0042$, $p < 0.05$) and PCI ($\beta = 0.031$, $p < 0.05$). PTDF was marginally significant for HDI but not for PCI, whereas BBG was insignificant in both models. The ECM coefficients (-0.312 and -0.285) indicated convergence to equilibrium at about 30% per year. Overall, education trust funds (ETFs) are more effective than traditional budgetary allocations or donor grants in enhancing human capital. The study therefore recommended that the federal government of Nigeria should expand the ETF model, condition GBAE releases on performance, reform PTDF, and consolidate broad-based grants.

Keywords: Education financing, human capital development, HDI, per capita income, ARDL, Nigeria, TETFund

1.0 Introduction

Finance is the life wire of all economic units-individual, household, business unit and government. Therefore, to a large extent development is predicated upon financial resources. Therefore, education financing plays a pivotal role in human capital development, particularly in developing economies such as Nigeria. Human capital theory emphasizes that investments in education, health, and skills enhance productivity, improve quality of life, and stimulate economic growth. In Nigeria, successive governments have consistently allocated resources to education and health

sectors with the aim of fostering human capital formation. However, the effectiveness of these investments remains contested.

Studies across Africa highlight both the promise and limitations of education financing. Sikayena, Bentum-Ennin, Andoh, and Asravor (2022) found that while government spending on human capital has steadily increased, inefficiencies persist, especially in education compared to health. Ofori, Kuuwill, and Quaye (2024) further argue that governance dynamics can undermine the positive effects of human capital on inclusive growth, suggesting that weak institutions may nullify expected gains. Within Nigeria, Egbaseimokumo (2025) demonstrated that government expenditure on education, health, and training significantly enhances human capital development, with long-term equilibrium effects evident in the Human Development Index (HDI). These findings underscore the importance of sustained and efficient financing strategies to maximize the developmental impact of education and health investments.

Despite the recognized importance of education financing in fostering human capital development, Nigeria continues to grapple with challenges that hinder the full realization of these benefits. While government expenditure on education and health has increased over the years, inefficiencies in resource allocation and utilization persist, limiting the effectiveness of such investments. Evidence suggests that education spending often yields lower efficiency compared to health expenditure, raising concerns about the quality and impact of educational financing on workforce productivity. Moreover, governance weaknesses further complicate the relationship between education financing and human capital development. Poor institutional quality and weak accountability mechanisms can erode the potential gains from public investment, leaving Nigeria with persistent gaps in educational outcomes and human development indicators. Although studies such as Egbaseimokumo (2025) confirm the positive role of education, health, and training expenditures in enhancing human capital, the pace of improvement remains slow, with structural inefficiencies and governance deficits undermining progress.

The problem, therefore, lies not only in the adequacy of education financing but also in its efficiency, governance context, and sustainability. Without addressing these challenges, Nigeria risks continued underperformance in human capital development, which in turn constrains economic growth, reduces competitiveness, and perpetuates inequality.

2.1 Theoretical Framework

The paper followed the footsteps of the human capital theory, which posits that investments in education, health, and skills enhance productivity, improve the quality of life, and stimulate economic growth (Matashu, 2022). Education financing is therefore seen as a critical driver of human capital formation, while healthcare investment ensures a healthier and more productive workforce. Together, these elements contribute to long-term economic development.

However, the efficiency of such investments is not guaranteed. Sikayena, Bentum-Ennin, Andoh, and Asravor (2022) highlight that despite rising government expenditure on human capital, inefficiencies persist, particularly in education spending compared to health. Their findings underscore the importance of institutional quality, trade openness, and economic growth in shaping the effectiveness of public spending. This aligns with the broader view that institutional frameworks are essential for maximizing the returns on education and health financing.

Governance theory further explains variations in outcomes. Ofori, Kuuwill, and Quaye (2024) argue that while human capital promotes inclusive growth, weak governance structures can diminish or even nullify its benefits. This suggests that education financing must be accompanied by governance reforms to ensure that investments translate into equitable and sustainable development.

Complementing these perspectives, financial development theory emphasizes the role of financial systems in amplifying the benefits of human capital investments. Amo, Jobarteh, and Oduo (2020) demonstrate that human capital interacts with financial institutions to boost economic growth, particularly when measured through life expectancy. This indicates that adequate levels of human capital are prerequisites for financial development to effectively promote growth.

Building on this, Nambie, Ocansey, and Ababio (2025) introduce financial literacy theory as a moderating factor. They contend that economic transformation and institutional quality alone cannot fully advance human capital unless accompanied by financial literacy. Financial literacy equips individuals to make informed decisions, navigate financial systems, and maximize the benefits of education financing and institutional reforms.

Finally, health expenditure theory reinforces the importance of healthcare investment in human capital formation. Nwokocha, et al (2025) argue that a healthier population is more productive, and thus government health expenditure directly contributes to human capital development. Their

findings highlight the need for increased funding in the health sector to overcome structural challenges and enhance workforce productivity.

2.2 Empirical Literature

Empirical studies on education financing and human capital development in Nigeria and Africa reveal diverse outcomes regarding the effectiveness of government expenditure in fostering growth and development. Eniekezimene, Wodu, and Anda-Owei (2023) examined the impact of human capital development on economic growth in Nigeria between 1981 and 2021 using the ARDL method. Their findings showed mixed results: in the long run, government expenditure on education and tertiary enrolment had insignificant negative effects on growth, while health expenditure and gross fixed capital formation contributed positively. In the short run, health spending significantly boosted growth, whereas education spending had a negative effect. These results highlight the need for balanced investment strategies, particularly in the health sector.

Amo, Jobarteh, and Oduo (2020) investigated 44 African countries from 1991 to 2020 using Panel Smooth Transition Regression (PSTR) and GMM techniques. They found that human capital, when combined with financial development, enhances economic growth. The effect was stronger when human capital was measured by life expectancy compared to secondary enrolment. Their study further identified threshold values of human capital necessary for financial development to effectively promote growth, underscoring the complementary role of education and health in economic transformation.

Nwokocha, et al (2025) analyzed Nigerian data spanning 1999 to 2023 using a Vector Error Correction Model (VECM). Their results revealed that government health expenditure and out-of-pocket spending significantly improved human capital development. However, physician density and inflation negatively influenced outcomes, pointing to structural challenges in healthcare delivery. The study recommended increased funding for the health sector to build modern facilities that would enhance human capital formation.

Olanipekun, et al (2022) focused on the ECOWAS sub-region between 1990 and 2019, employing panel ARDL estimation. They found that government educational spending had a positive and significant long-run relationship with human capital development. Their findings support the Abuja Declaration's recommendation of allocating 26% of annual budgets to education, emphasizing the importance of sustained investment for inclusive and equitable learning across developing countries.

Sikayena, et al (2022) analyzed the efficiency of public spending on human capital using World Bank data (2006–2017) and Data Envelopment Analysis. Their findings revealed inefficiencies in both health and education spending, though health expenditure was relatively more efficient. Institutional quality, economic growth, foreign direct investment, and trade openness were identified as key determinants of efficiency, suggesting that structural reforms are necessary to maximize the impact of public spending.

Ofori, Kuuwill, and Quaye (2024) examined the role of governance in shaping the relationship between human capital and inclusive growth across 43 African countries (2005–2020). Using SYS-GMM estimation, they found that while human capital promotes inclusive growth, poor governance undermines this effect. Weak institutions were shown to nullify the benefits of human capital, highlighting the importance of governance reforms for sustainable development.

Egbasei (2025) focused on Nigeria, employing an Error Correction Model (1981–2023) to assess the determinants of human capital development. The study found that government expenditure on education, health, and training significantly improved the Human Development Index (HDI). Training and skill acquisition were particularly influential, while the error correction term indicated that 14.7% of disequilibrium in human capital development is corrected annually. These results underscore the importance of sustained investment in education, healthcare, and skills development.

Nambie, Ocansey, and Ababio (2025) investigated the moderating role of financial literacy in the relationship between institutional quality, human capital development, and financial inclusion across 48 African countries (2003–2024). Their findings revealed that financial literacy enhances the positive impacts of institutional quality and human capital on financial inclusion, enabling individuals to better navigate financial systems and leverage institutional frameworks. This suggests that financial literacy is a critical complement to education financing in promoting inclusive growth.

Wirajing, Nchofoung, and Etape (2023) examined 48 African countries between 2000 and 2019 using the system GMM approach to address endogeneity concerns. Their findings revealed that human capital development positively influences economic growth, with both male and female contributions proving essential. Moreover, internet penetration and foreign direct investment were shown to interact with human capital to produce additional positive effects. The study

recommended that policymakers allocate more resources to education and health sectors to strengthen human capital as a prerequisite for sustainable growth.

Nambie, Ocansey, and Ababio (2025) explored the interrelationship between economic transformation, financial literacy, and human capital development in Africa using panel data from 2003 to 2024. Employing GMM estimation, they found that while economic transformation is crucial for advancing human capital, its full potential is realized only when accompanied by financial literacy. Financial literacy enables individuals to make informed decisions, thereby magnifying the benefits of economic growth. The study emphasized the importance of integrating financial literacy into educational curricula, promoting inclusive economic policies, and leveraging technology to expand access to financial education.

Collectively, these empirical studies demonstrate that while education financing and health expenditure are critical to human capital development, their impacts vary across contexts and time horizons. Health spending consistently shows stronger positive effects, whereas education expenditure requires complementary reforms in governance, institutional quality, and financial literacy to maximize its contribution to economic growth.

3.0 Research methodology

The study adopted an ex-post facto research design using annual time-series secondary data sourced from the UNDP, World Bank, CBN, TETFund, and PTDF from 2000 to 2022. This design is appropriate because the independent variables (education financing mechanisms) are historical and cannot be manipulated (Creswell & Creswell, 2018).

3.1 Model Specification

The Autoregressive Distributed Lag (ARDL) bounds testing approach was employed with two models specified in linear logarithmic form to normalize data distribution and interpret elasticities:

Model 1 – HDI

$$\ln HDI_t = \alpha_0 + \alpha_1 \ln GBAE_t + \alpha_2 \ln ETF_t + \alpha_3 \ln PTDF_t + \alpha_4 \ln BBG_t + \varepsilon_t$$

Model 2 – PCI

$$\ln PCI_t = \beta_0 + \beta_1 \ln GBAE_t + \beta_2 \ln ETF_t + \beta_3 \ln PTDF_t + \beta_4 \ln BBG_t + \mu_t$$

Where:

- HDI = Human Development Index
- PCI = Per Capita Income
- GBAE = Government Budgetary Allocation to Education (₦ billion)

- ETF = Education Trust Fund disbursement (₦ billion, real)
- PTDF = Petroleum Technology Development Fund (₦ billion)
- BBG = Broad-Based Grant (official development assistance to education, ₦ billion)
- ε, μ = error terms assumed

The Augmented Dickey-Fuller (ADF) test was applied to each variable to determine order of integration and the optimal lag length for the ARDL model was determined using AIC and Schwarz Bayesian Criterion (SBC). The Pesaran et al. (2001) bounds test was employed because it accommodates variables that are I(0) or I(1) but not I(2).

The null hypothesis H_0: no cointegration ($\delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = 0$).

Decision rule: Reject H_0 if calculated F-statistic > upper bound critical value at 5% significance.

If cointegration exists, the ARDL model was estimated. The ECM form is:

$$\Delta Y_t = \varphi_0 + \Sigma\varphi_1 \Delta Y_{t-1} + \Sigma\varphi_2 \Delta X_{t-1} + \lambda ECT_{t-1} + \nu_t$$

Where:

- Δ = first difference operator
- ECT_{t-1} = lagged error correction term (deviation from long-run equilibrium)
- λ = speed of adjustment coefficient (expected negative and significant, between -1 and 0)

4.0 Results and Discussion

In investigating the empirical relationship between education financing mechanisms (GBAE, ETF, PTDF, BBG) and human capital development (proxied by HDI and PCI) in Nigeria from 2000 to 2022. The analysis follows a structured econometric workflow: descriptive statistics, unit root testing, lag selection, cointegration testing (ARDL bounds test), long-run and short-run estimation (ECM), and diagnostic tests. All estimations were performed using EViews 12 at a 5% significance level unless otherwise stated.

4.1 Descriptive statistics

Based on the descriptive table**, t**he mean HDI of 0.512 indicates that Nigeria falls within the medium human development category according to UNDP classifications (0.550–0.699 is high; below 0.550 is medium to low). The median (0.518) is very close to the mean, suggesting a roughly symmetric distribution. This value is low compared to South Africa (0.713) and Ghana (0.632), highlighting Nigeria's persistent human capital challenges despite significant education spending (UNDP, 2022). At an average, PCI (Per Capita Income) stood at 2,140.5, Nigeria remains a lower-

middle-income country. The narrow range (1,750–2,780) reflects economic stagnation, partly due to oil price volatility and weak diversification (World Bank, 2023).

Table 1: Summary statistics of variables (2000–2022)

Variable	Mean	Median	Std. Dev.	Min.	Max.
HDI	0.512	0.518	0.068	0.410	0.620
PCI	2140.5	2110.0	342.1	1750.0	2780.0
GBAE	425.3	418.0	118.4	210.0	650.0
ETF	152.1	145.0	67.3	40.0	280.0
PTDF	78.4	76.0	22.1	45.0	120.0
BBG	95.2	92.0	31.4	50.0	150.0

Source: E-views 12 statistical software

Furthermore, **t**he average annual allocation of ₦425.3 billion for GBAE (Government Budgetary Allocation to Education) appears substantial but represents only 5–8% of the national budget which falls below UNESCO's recommended 15–20%. The minimum of ₦210 billion occurred during the 2008 global financial crisis, while the maximum of ₦650 billion was recorded in 2021 following renewed advocacy for education funding (BudgIT, 2021). Also, the mean disbursement of ₦152.1 billion for ETF (Education Trust Fund) has grown steadily. The large standard deviation (₦67.3 billion) indicates significant year-to-year variation, driven by changes in the education tax rate (from 2% to 2.5% in 2018) and oil price fluctuations affecting company income tax collections (TETFund, 2022).

Lastly, PTDF (Petroleum Technology Development Fund) averaging ₦78.4 billion, with the minimum (₦45 billion) and the maximum (₦120 billion) reflected increased intervention in renewable energy training (PTDF, 2022). While Broad-Based Grant (BBG) showed an average value of ₦95.2 billion. The range (₦50–150 billion) reflects donor fatigue and shifting priorities.

4.2 Unit Root Test (Stationarity Check)

According to Granger & Newbold (1974), regressing non-stationary (random-walking) variables on each other can produce spurious regression. The ADF test checks whether each variable has a unit root (non-stationary). Based on table 2 below, government budgetary allocation (GBAE) and Petroleum trust fund (PTDF) were stationary at level (I(0)) because we reject the unit root null at $p < 0.05$. This implies that deviations from the mean are temporary. That is, budget allocations and fund's disbursements revert to a long-run average after any shock.

Table 2: Augmented Dickey-Fuller (ADF) unit root test

	Level (with trend & intercept)		**First Difference (with intercept)**		**Order of Integration**
	ADF statistic	p-value	ADF statistic	p-value	
lnHDI	-2.143	0.512	-4.892	0.001***	I(1)
lnPCI	-1.987	0.598	-5.123	0.000***	I(1)
lnGBAE	-3.876	0.024**	-6.234	0.000***	I(0)
lnETF	-2.345	0.398	-4.567	0.002***	I(1)
lnPTDF	-3.654	0.038**	-5.890	0.000***	I(0)
lnBBG	-2.678	0.245	-4.123	0.008***	I(1)

Source: E-views 12 statistical software

Contrarily, lnHDI, lnPCI, lnETF and lnBBG were non-stationary at their levels**.** After taking the first difference, the series becomes stationary ($p < 0.01$). Therefore, the variables are integrated of order one: I(1). Because we have a **mix** of I(0) and I(1) variables but no I(2) variables (none required second differencing), the ARDL bounds testing approach is appropriate (Pesaran et al., 2001).

4.3 Lag Length Selection

Selecting the appropriate lag length is critical for ARDL models. Too few lags may omit important dynamics (omitted variable bias). Too many lags waste degrees of freedom (with only 23 annual observations, we cannot afford many lags) (Lütkepohl, 2005).

Table 3: Lag Order Selection Criteria (Maximum lags = 3)

Lag	LogL	LR	FPE	AIC	SIC	HQ
0	145.23	NA	1.2e-08	-4.21	-3.98	-4.12
1	234.56	178.34*	3.4e-10*	-6.78*	-5.12*	-6.01*
2	245.12	21.12	2.9e-10	-6.81	-4.89	-6.05
3	248.98	7.72	3.1e-10	-6.72	-4.56	-5.98

Source: E-views 12 statistical software

All five criteria (LR, FPE, AIC, SIC, HQ) select Lag 1 as optimal. This is indicated by the asterisks in the Lag 1 row. The AIC value at Lag 1 (-6.78) is the lowest (most negative), indicating the best fit with the fewest parameters.

4.4 ARDL Bounds Test for Cointegration

The ARDL bounds test checks whether a long-run equilibrium relationship exists between the dependent variable (HDI or PCI) and the independent variables (GBAE, ETF, PTDF, BBG). Based on the result in table 4, there is a statistically significant long-run equilibrium relationship between education financing variables (GBAE, ETF, PTDF, BBG) and the dependent variables (human capital development and per capita income) in Nigeria. This means that over the 2000–2022 period, these variables did not drift arbitrarily apart; instead, they are bound together by an equilibrium relationship. Any short-run disturbance will trigger a correction process that restores long-run balance.

Because cointegration exists, we can estimate both short-run dynamics (using the Error Correction Model) and long-run elasticities (using the ARDL levels equation) without worrying about spurious regression.

Table 4: Bounds Test Results for Model 1 (Dependent: lnHDI) and Model 2 (Dependent: lnPCI)

Model	F-statistic	Critical Value (5%)	Decision
Model 1: F(lnHDI | lnGBAE, lnETF, lnPTDF, lnBBG)	5.89	I(0) = 2.86, I(1) = 4.01	Cointegration exists

Model	F-statistic	Critical Value (5%)	Decision
Model 2: F(lnPCI | lnGBAE, lnETF, lnPTDF, lnBBG)	6.12	I(0) = 2.86, I(1) = 4.01	Cointegration exists

Source: E-views 12 statistical software

4.5 Long-Run Elasticity Estimates (ARDL Levels Equation)

Because all variables are in natural logarithms, the coefficients represent **elasticities**—the percentage change in HDI for a 1% change in the financing variable, holding other variables constant (Gujarati & Porter, 2009). The result for HDI as dependent variable showed that a 1% increase in ETF disbursement is associated with a 0.0081% increase in HDI in the long run. While this appears small, consider that ETF disbursements grew from ₦40 billion to ₦280 billion over the study period—a 600% increase. Using the average, a 10% increase in ETF would raise HDI from 0.512 to approximately 0.516, which is meaningful given HDI's slow-moving nature. This finding aligns with Barr and Tassel (2018), who found that dedicated trust funds outperform general budgets in African education systems because they reduce principal-agent problems between politicians and implementers.

Similarly, Government Budgetary Allocation revealed that a 1% increase raises HDI by 0.0042%. These means government budget allocations are statistically significant but economically less effective than the education trust fund. Petroleum Technology Development Fund had a marginal statistical significance of 0.064 slightly above the conventional 0.05. Thus, a 1% increase in PTDF spending raises HDI by 0.0035%, but this effect is not robust at the 95% confidence level (the confidence interval includes zero: -0.0002 to 0.0072). PTDF is only marginally significant because it's mandate narrowly focused on overseas postgraduate scholarships for petroleum engineering, geology, and petrochemicals (PTDF Act, 1973). While this training produces high-quality specialists, it does not affect Basic literacy and life expectancy. Lastly, Broad-Based Grant was **s**tatistically insignificant at all conventional levels ($p > 0.10$). So we cannot confidently state that BBG has any long-run effect on HDI.

Table 5: Long-Run Coefficients – ARDL(1,1,1,1,1) Selected by AIC

Dependent Variable: lnHDI (Model 1)

Regressor	Coefficient	Std. Error	t-statistic	p-value
lnGBAE	0.0042	0.00171	2.45	0.025**
lnETF	0.0081	0.00260	3.12	0.006***
lnPTDF	0.0035	0.00177	1.98	0.064*
lnBBG	0.0021	0.00148	1.42	0.174
Constant	0.412	0.0791	5.21	0.000***

Dependent Variable: lnPCI (Model 2)

Regressor	Coefficient	Std. Error	t-statistic	p-value
lnGBAE	0.031	0.0148	2.10	0.049**
lnETF	0.072	0.0209	3.45	0.003***
lnPTDF	0.018	0.0118	1.52	0.146
lnBBG	0.014	0.0105	1.33	0.199
Constant	3.214	0.385	8.34	0.000***

Source: E-views 12 statistical software

Model 2 for PCI, revealed a significant finding. Education trust fund (ETF) showed that a 1% increase in ETF disbursement raises per capita income by 0.072% in the long run. This suggests ETF investments are particularly effective at generating economic productivity gains. Also, **g**overnment budgetary allocation showed **s**tatistically significant at the 5% level. A 1% increase in GBAE raises PCI by 0.031%. This confirms that budget allocations positively affect income but with substantial leakage. Oketch (2016) reviewed 15 African countries and found an average PCI to education spending of 0.04–0.08.

In contrast, PTDF has an **i**nsignificant ($p > 0.10$) impact on per capita income. This implies that PTDF spending does not have a statistically discernible effect on per capita income. This finding could be because many PTDF scholars stay abroad after completing overseas degrees (Nigeria

loses ~70% of its petroleum engineering PhDs to the UK, US, and Canada) (PTDF, 2022). Finally, **BBG (Broad-Based Grant) showed an i**nsignificant impact on PCI. This signifies that donor grants have no long-run effect on Nigerian per capita income. This challenges the optimistic view of aid effectiveness (e.g., Sachs, 2005) and supports the findings of Easterly (2006) that aid works only under strong institutional conditions that Nigeria does not yet meet.

4.6 Short-Run Dynamics: Error Correction Model (ECM)

The Error Correction Model separates short-run dynamics from the long-run equilibrium (captured by the lagged error correction term). The coefficient on ECT(-1) represents the proportion of last period's disequilibrium that is corrected in the current period.

Table 6: Error Correction Model Results

Model 1 (Dependent: ΔlnHDI)

Regressor	**Coefficient**	**Std. Error**	**t-statistic**	**p-value**
ΔlnGBAE	0.0015	0.0012	1.25	0.229
ΔlnETF	0.0034	0.0018	1.89	0.077*
ΔlnPTDF	0.0012	0.0015	0.80	0.435
ΔlnBBG	0.0008	0.0011	0.73	0.478
ECT(-1)	-0.312	0.0802	3.89	0.001***

Model 2 (Dependent: ΔlnPCI)

Regressor	Coefficient	Std. Error	t-statistic	p-value
ΔlnGBAE	0.012	0.0098	1.22	0.238
ΔlnETF	0.031	0.0145	2.14	0.047**
ΔlnPTDF	0.008	0.0112	0.71	0.486
ΔlnBBG	0.006	0.0091	0.66	0.519
ECT(-1)	-0.285	0.0776	3.67	0.002***

Source: E-views 12 statistical software

The negative ECT sign indicates that if HDI and PCI was above its long-run equilibrium last year, it will decrease slightly this year (negative feedback), and if it was below equilibrium, it will increase. Thus the 0.312 ECT for HDI means that 31.2% of the deviation from long-run equilibrium in HDI is corrected within one year**.** However, the speed of adjustment of 28.5% for PCI is slightly slower than for HDI.

5.0 Conclusion and Recommendations

This paper examined the effect of four education financing mechanisms (GBAE, ETF, PTDF, BBG) on human capital development (HDI) and per capita income (PCI) using the ARDL-ECM techniques. The paper concluded that education financing in Nigeria significantly drives human capital development, but institutional design determines effective utilization of education financial resources to foster human capital development**.** ETF remains the most effective mechanism for driving the process. On the basis of the entire findings, the paper provided the following policy recommendations:

Government should increase education tax and extend ETF coverage to primary/secondary education level. PTDF should be reformed to include STEM, renewable energy, and digital skills. All donor education grants should be collated in a pool of fund, National Education Performance Fund

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