

Accounting for the public good: Bridging profit and purpose in addressing Nigeria's development crisis

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Abstract

Purpose: This study investigates how public financial management indicators and corporate social responsibility (CSR) efforts influence national development in Nigeria. It focuses on understanding the link between fiscal governance, private sector accountability, and human development outcomes in the context of Nigeria's persistent development crisis.

Research Methodology: The research employs a quantitative ex-post facto design, analyzing secondary data from 2003 to 2022. Key variables include Capital Expenditure, Debt-to-Revenue Ratio, and the Corruption Perception Index, alongside CSR investment data. A structured econometric model using multiple regression analysis assesses their impact on the Human Development Index (HDI).

Results: Findings reveal that capital expenditure has a significant positive impact on HDI, while corruption perception negatively affects development outcomes. Debt financing contributes positively when effectively managed. Conversely, CSR investments show statistically insignificant influence, indicating a disconnect between corporate initiatives and national development priorities.

Conclusion: Effective public financial management, particularly in capital investment and anti-corruption strategies, remains crucial for enhancing Nigeria's HDI. CSR's limited developmental impact suggests the need for stronger integration into national planning.

Limitations: The study is limited by data availability on CSR activities and potential measurement biases in perception-based corruption indices. The exclusion of qualitative CSR outcomes may also under-represent its long-term development impacts.

Contribution: This study offers empirical evidence for aligning fiscal discipline with responsible corporate action. It contributes to stakeholder theory and public interest accounting by proposing policy frameworks that link profitability to purposeful national development, especially in emerging economies like Nigeria.

Keywords: *Corporate Social Responsibility, Debt Sustainability, Stakeholder Theory, Public Accounting, Public Financial Management, Sustainable Development*

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1. Introduction

Nigeria faces significant development challenges that are deeply rooted in systemic issues, such as poor governance, corruption, poverty, inequality, inadequate infrastructure, and limited access to essential services. Despite being Africa's largest economy, over 40% of Nigerians live below the poverty line (Bank, 2022b). The country's heavy reliance on oil revenue has created vulnerabilities to economic

shocks, while the mismanagement of public resources has exacerbated inequalities and hindered development (Adediran et al., 2019). These issues persist despite the country's vast natural resources and economic potential of the country. Addressing these challenges requires a concerted effort to align profit-making objectives with developmental priorities through public financial management (PFM), corporate social responsibility (CSR), and human-development strategies.

This study is critical as it underscores the need for an integrated approach to sustainable development by bridging the gap between profit and purpose. Public financial management, corporate accountability through CSR disclosures, and the Human Development Index (HDI) provide frameworks for evaluating and addressing Nigeria's development crisis effectively. However, integrating CSR into business strategies offers an opportunity to bridge the gap between aligning corporate goals with national development priorities (Idemudia & Osayande, 2018). Studies have shown that transparent financial management and corporate accountability can significantly enhance resource allocation and improve developmental outcomes (Mohammed, Buba, & Ahmed, 2023).

Furthermore, CSR has evolved beyond philanthropy to include strategic initiatives that align with national development goals, fostering social and economic progress (Adegbite, Amaeshi, Nakpodia, Ferry, & Yekini, 2020). The HDI, as a measure of well-being, highlights areas that require targeted interventions, making it a critical tool for policymakers and corporate actors. Integrating these dimensions ensures that development strategies are inclusive and sustainable (Bank, 2022b). However, the lack of robust frameworks for accountability and collaboration between public and private actors limits the effectiveness of these initiatives in achieving the SDGs. This disconnect between economic imperatives and societal needs perpetuates poverty, inequality, and underdevelopment in Nigeria. By integrating profit with purpose, this study argues that Nigeria can address its socio-economic challenges and create a sustainable development pathway.

Despite the growing body of literature on public financial management (PFM), corporate social responsibility (CSR), and the human development index (HDI), several gaps remain, particularly in the Nigerian context. While numerous studies have explored CSR practices and their impact on corporate financial performance (Bande (2022); Usman and Amran (2015)), there is limited research on how CSR initiatives directly influence HDI metrics such as education, healthcare, and income equality. Most CSR studies in Nigeria focus on profitability and stakeholder satisfaction, neglecting CSR's broader societal impact (Hassan, Abdullah, & Mansor, 2024). Second, studies on public financial management often emphasize transparency, accountability, and corruption but rarely connect these factors to their implications for human development outcomes (Rafindadi & Ogidan, 2018). For instance, while poor governance and corruption have been identified as major impediments to effective PFM. Odior and Alenoghena (2014), there is limited empirical evidence linking these challenges to specific HDI components in Nigeria.

Third, existing research often treats PFM, CSR, and HDI as isolated variables. Few studies have examined the interplay between these factors and how they collectively influence developmental outcomes. This fragmented approach overlooks the potential synergies between effective public financial management, CSR-driven private sector engagement, and human development improvements. Finally, there is a scarcity of longitudinal studies that analyze trends over extended periods. Most empirical studies in Nigeria focus on short-term data, failing to capture the historical dynamics and long-term impacts of PFM and CSR on the HDI (Hassan et al., 2024). This study offers a novel framework that integrates and highlights the ability or potential of these variables to foster economic development. This holistic approach provides a deeper understanding of how public and private sector efforts can be aligned to address Nigeria's developmental challenges.

2. Literature review

2.1 Concept of Public Financial Management

Public Financial Management (PFM) refers to the systems, processes, and institutions that governments use to manage public resources effectively, efficiently, and transparently. It encompasses budget

preparation, execution, accounting, reporting and auditing. PFM ensures that public funds are allocated to priority areas, promoting accountability and service delivery (Allen, Hemming, & Potter, 2013). Effective PFM is essential for sustainable development because it ensures the optimal use of scarce resources, minimizes corruption, and enhances trust in public institutions. It provides a framework for fiscal discipline, allocative efficiency, and operational effectiveness. In developing countries such as Nigeria, strengthening PFM systems can significantly improve developmental outcomes by addressing fiscal leakage and promoting transparency (Bank, 2022b). Nigeria's tax-to-GDP ratio remains among the lowest in the world, averaging around 6% compared with the African average of 17% (OECD, 2021). This has constrained the government's ability to fund critical sectors, such as education and health. The Finance Act 2019 sought to improve tax compliance and expand the tax base by increasing VAT from 5% to 7.5%. However, its impact on revenue generation has been slow because of structural inefficiencies in tax administration (Bank, 2022b).

Okolo, Edeme, and Emmanuel (2018) found that capital expenditure, construction expenditure, and non-oil revenue can accelerate infrastructural development in the long run, but such is being hampered by external debt. The positive effect of recurrent expenditure on infrastructural development indicates that the bulk of the expenditure in Nigeria over the years has been recurrent. This suggests the need to boost non-oil revenue, reduce recurrent debt, and channel external debt into productive infrastructural development.

Nigeria ranks poorly on the Corruption Perception Index, with a score of 24/100 in 2022, indicating pervasive corruption in public financial management (International, 2023). Corruption diverts resources from critical sectors and undermines development efforts. The establishment of the Economic and Financial Crimes Commission (EFCC) has led to the recovery of billions of Naira from corrupt officials. However, the lack of systemic reforms has limited its long-term impact (Umar, Samsudin, & Mohamed, 2018). Nigeria's debt-to-revenue ratio has exceeded 70% in recent years, with a significant portion of the revenue allocated to debt servicing (Bank, 2022b). This limits the fiscal space for capital expenditures and public investments. The Debt Management Office (DMO) introduced the Medium-Term Debt Strategy (MTDS) to reduce borrowing costs and extend the repayment periods. However, rising external debt has increased vulnerability to such shocks.

2.2 Corporate Social Responsibility Concept

Corporate Social Responsibility (CSR) disclosure refers to the process by which organizations communicate their social, environmental, and economic impacts to stakeholders. It involves reporting activities that contribute to sustainable development, including environmental conservation, community development, and ethical business practices (Carroll & Shabana, 2010). CSR disclosure enhances corporate accountability and transparency, fostering stakeholder trust. It also enables organizations to demonstrate their commitment to societal well-being, which can improve their reputation and competitiveness in the market. In Nigeria, CSR disclosures have gained prominence as companies increasingly align their operations with the United Nations Sustainable Development Goals (SDGs) (Adegbite et al., 2020).

CSR plays a vital role in bridging the gap between public financial constraints and societal needs. Companies in Nigeria, particularly in the oil and gas sector, have significantly contributed to community development. Shell's Global Memorandum of Understanding (GMoU) framework has invested millions of dollars in healthcare, education, and infrastructure projects in Niger Delta local communities. This has improved access to basic services and reduced social unrest in the region (Hassan et al., 2024). The Dangote Foundation has invested heavily in poverty alleviation and food security, directly contributing to HDI improvement.

2.3 Concept of Human Development Index

The Human Development Index (HDI) is a composite measure developed by the United Nations Development Programme (UNDP) to assess a country's social and economic development. It considers three key dimensions: Health, measured by life expectancy at birth; Education, assessed through mean years of schooling and expected years of schooling; and Standard of Living, measured by gross national

income (GNI) per capita. The HDI provides a holistic view of development by focusing on people's well-being rather than economic growth. It is a critical tool for identifying developmental gaps and prioritizing interventions (UNDP, 2024). For Nigeria, improving the HDI components is essential for addressing its development crisis. Historically, the country's HDI has been consistently ranked low on the index due to challenges in healthcare, education, and income inequality (UNDP, 2022) (Bank, 2022a). Addressing these deficits requires a balance between public financial strategies and private-sector contributions. To strengthen this, the Nigerian government initiated the National Social Investment Programme (NSIP) in 2015 to reduce poverty and improve human capital. Programs such as the N-Power initiative have directly contributed to education and employment outcomes, positively impacting the HDI. Similarly, the MTN Foundation has invested in educational scholarships and healthcare projects, contributing to HDI improvements in underserved communities.

2.4 PFM, CSR Disclosure, and HDI Nexus

The relationship between public financial management (PFM), CSR disclosure, and the Human Development Index is symbiotic and integral to addressing Nigeria's development challenges. The dynamic nexus of PFM (tax-to-GDP ratio, capital expenditure, debt-to-revenue ratio), governance (CPI), and private sector contributions (CSR) in improving human development outcomes (HDI) requires further investigation. Therefore, efficient PFM ensures that public resources are directed toward critical sectors, such as health, education, and infrastructure, which directly impact HDI dimensions. Transparent and accountable PFM systems can reduce fiscal leakage, ensuring that funds reach their intended beneficiaries (IMF, 2018). CSR Disclosure and HDI, on the other hand, serve as corporate initiatives, as disclosed through CSR reports, complementing government efforts by addressing gaps in public service delivery. For instance, corporate investments in education, healthcare, and community development can significantly enhance HDI outcomes (Adegbite et al., 2020).

PFM and CSR Disclosure: A robust PFM system can create an enabling environment for CSR by ensuring policy consistency and fostering public-private partnerships (PPPs). Clear regulatory frameworks and incentives can encourage corporations to align their CSR initiatives with national development goals (Mohammed et al., 2023). When PFM and CSR disclosure efforts are aligned, they create a multiplier effect on the HDI. For instance, public investment in infrastructure, supported by corporate contributions to education and healthcare, can accelerate human development.

Effective public financial management (e.g., higher tax revenue and reduced corruption) creates an enabling environment for private sector participation in development. CSR initiatives often target areas where public investment is lacking, such as in education and healthcare. For example, MTN Foundation's scholarships complement government efforts to improve literacy rates. High corruption levels reduce the efficiency of capital expenditure, leading to poor-quality infrastructure and services. Anti-corruption reforms can enhance the impact of public spending on HDI. Rising debt servicing costs limit public investment in development. CSR contributions can fill this gap, as seen in the Niger Delta, where oil companies fund community projects. Increasing tax revenue allows the government to invest in critical sectors, improving HDI. For instance, expanding the tax base through reforms like the Finance Act can enhance public goods provision.

2.5 Theoretical Framework and Hypotheses Development

Stakeholder theory, introduced by Freeman (1984), provides a robust framework for understanding the interplay between public financial management, corporate social responsibility (CSR), and human development. The theory posits that organizations, including governments and private corporations, have a responsibility to consider the interests of all stakeholders—not just shareholders—in their decision-making processes. Stakeholders include individuals or groups directly or indirectly affected by an organization's actions, such as employees, communities, customers, governments, and society at large (Amaeshi, Adi, Ogbechie, & Amao, 2006; Asher & Novosad, 2020).

The theory is relevant to the study as it emphasizes balancing economic objectives with societal well-being. Hence, one of its tenets is for organizations to prioritize the creation of value for all stakeholders, which aligns with the dual goals of public financial management (efficient resource allocation) and CSR

(social investments). The theory highlights the interconnectedness of various stakeholders. For instance, governments rely on corporate taxes for revenue, while corporations depend on public infrastructure and a skilled workforce, which are products of public financial investments. The theory underscores the ethical obligation of both public and private actors to act in ways that benefit society. For corporations, this translates into CSR initiatives, while for governments, it involves transparency, accountability, and equitable resource distribution.

In Nigeria, the development crisis is characterized by low HDI scores, poor infrastructure, high corruption, and limited fiscal capacity. Stakeholder theory provides a lens to analyze how public financial management and CSR can work together to address these challenges: Balancing Profit and Purpose: Corporations in Nigeria are often criticized for prioritizing profit over societal well-being. Stakeholder theory advocates for aligning corporate objectives with societal goals, such as reducing poverty and improving education. With limited government revenue (low tax-to-GDP ratio) and high debt servicing costs, CSR can complement public investments in critical sectors. Stakeholder theory emphasizes the importance of ethical governance, which aligns with improving Nigeria's Corruption Perception Index (CPI) and ensuring that public funds are used effectively.

In light of the above, the study reviewed empirical evidence that provides critical insights that align with the focus of this research. First, looking at CSR Practices and Blind Spots in Nigeria, Hassan et al. (2024) examined the gap between CSR practices and neglected areas within Nigerian corporations. The findings revealed that many organizations perceive CSR primarily as charitable acts, often neglecting broader aspects such as environmental sustainability and comprehensive stakeholder engagement. This study underscores the need for a more holistic approach to CSR, aligning corporate actions with long-term societal needs. A study by Rafindadi and Ogidan (2018) analyzed the effect of public financial management on Nigeria's economic development. The findings emphasized that effective management of public funds is crucial for economic growth, particularly in critical sectors such as infrastructure, education, and healthcare. The study also highlighted the importance of transparency and accountability in public financial management to optimize development outcomes.

Babatunde and Perera (2017) analyzed the effectiveness of public-private partnerships (PPPs) in infrastructure development in Nigeria from 2009 to 2019. A case study and comparative analysis of the major PPP projects' methods was adopted. The findings revealed that successful PPPs improved infrastructure access, but many failed due to poor contract design and a lack of transparency. The study recommends and advocates for improved PPP regulatory frameworks and stakeholder engagement. Suggesting that PPPs can drive development if governance gaps are addressed. A study by Bande (2022) investigated the impact of CSR activities on the financial performance of 12 Deposit Money Banks listed on the Nigerian Stock Exchange over ten-year period (2009–2018). The findings revealed that CSR investments in community development positively and significantly influenced financial performance, while CSR expenditures on education and health showed mixed effects. The study highlights the strategic importance of CSR in enhancing corporate profitability and contributing to societal development.

Idemudia and Osayande (2018) examined the role of CSR in mitigating socio-economic inequalities in Nigeria's oil-producing communities from 2004 to 2017. The study employed panel data analysis of CSR disclosures data and found that CSR spending had limited impact on reducing conflict and improving development outcomes due to poor alignment with community needs. Therefore, the study recommended that firms should redesign CSR to be participatory and transparent. The implication is that CSR must shift from philanthropy to shared value creation, particularly in conflict-prone regions. Fagbemi, Osinubi, Nzeribe, and Bankole (2022) finds empirical evidence regarding the role of corruption in the development of human capital in Nigeria for 1996–2019 period. Using ARDL technique to examine the long-run and short-run relationship between corruption and human capital development, and VECM to assess the causal effects, the analysis involves the inclusion of two corruption indicators (corruption index and control of corruption) as well as two human capital development measures (human capital index and life expectancy at birth).

Olaoye and Orimogunje (2022) assessed the influence of public financial management reforms on economic development in Nigeria from 1999–2014. The employed time-series econometric analysis uses indicators such as public debt, capital expenditure, and budget implementation rates. The findings indicate that capital expenditure positively influenced development outcomes, while recurrent spending was poorly aligned with service delivery. The study recommends stronger expenditure tracking mechanisms and performance-based budgeting. This suggests that fiscal accountability is essential for translating public spending into tangible development.

Adeleke (2014) explored the relationship between CSR practices and employee satisfaction within Nigeria's banking sector. The research found that CSR initiatives related to ethics, human rights, and employee rights were positively correlated with employee satisfaction. This indicates that CSR not only benefits external stakeholders but also improves internal organizational dynamics, contributing to overall productivity and development. Usman and Amran (2015) analyzed the relationship between different dimensions of CSR disclosures—such as environmental impact, community involvement, and human resources—and corporate financial performance among Nigerian listed companies. The study found that while CSR activities related to community involvement positively influenced financial performance, environmental impact disclosures had a negative effect. This suggests that CSR efforts must be strategically aligned with corporate and societal priorities to achieve sustainable outcomes.

Oluyemi, Yinusa, Abdulateef, and Akindele (2016) investigated the relationship between corporate social responsibility and, workers' well-being in Nigeria deposit money bank. The study carried out a cross-sectional survey of 160 bank workers in Ilorin; and found out that provision of health (binary: provide vs not) had a significant association with workers' well-being, while adequacy (which is a subjective assessment) did not show any significant relationship. The study suggests availability matters more than perceived adequacy, or that adequacy was poorly operationalized. Amaeshi et al. (2006) explored CSR practices among Nigerian firms and their link to sustainable development, using cross-sectional data collected in 2005. The study surveyed 32 Lagos-based Nigerian companies, using descriptive statistics and thematic analysis. The findings revealed that CSR is mostly viewed as philanthropy rather than a strategic development tool. This study calls for a redefinition of CSR in the Nigerian context to align with national priorities. This implies that a lack of strategic CSR weakens corporate contributions to national development.

Despite the growing body of literature on public financial management (PFM), corporate social responsibility (CSR), and the human development index (HDI), several gaps remain, particularly in the Nigerian context. By addressing these gaps, this study contributes to the growing body of literature on sustainable development in Nigeria. Hence, the hypotheses of the study are stated in the null form:

- H0₁: There is no significant positive influence between Debt-to-Revenue Ratio and HDI in Nigeria.
- H0₂: There is no significant effect of CPI and HDI in Nigeria.
- H0₃: Capital expenditure has no significant positive influence on the HDI in Nigeria.
- H0₄: There is no significant positive influence between Greater CSR contributions and HDI in Nigeria.

3. Research methodology

An ex-post facto or quantitative research design was adopted for this study. This method relies on existing secondary data, which eliminates the possibility of researcher-induced manipulation of the data. This study empirically evaluates the interplay of public financial management (PFM) proxies (debt-to-revenue ratio, corruption perception index (CPI), capital expenditure (CEXP)), corporate social responsibility (CSR), and national development proxied as human development index (HDI). The sample spans 2003–2022 and is selected because of the availability of data. The data were collected from the World Bank, the United Nations Development Programme (UNDP), Transparency International, CBN statistical bulletins, the National Bureau of Statistics (NBS), and corporate sustainability reports for CSR initiatives from firms in the Nigerian stock exchange group. The CSR data are an aggregated value of the education sustainability, community development, and social security costs of ten firms in the Nigerian oil and gas and manufacturing sectors. In addition, data from 2003 to 2017 were interpolated using a moving average.

Owing to the unavailability of consistent CSR data for 2003–2017, a moving average interpolation technique was adopted to estimate the missing values. The choice of moving average is based on its suitability for smoothing time-series data and revealing underlying trends over time, especially in financial and socioeconomic variables. Given the relatively stable nature of CSR investments by large firms and the expectation of gradual year-on-year changes, the moving average method provides a logical and statistically sound approximation that mitigates these random fluctuations. Furthermore, as this study employs a longitudinal analysis (2003–2022), filling these gaps allows for a more comprehensive time series, enhances sample size adequacy, and supports robust statistical analysis. It also ensures alignment with the HDI and public financial management variables, allowing for meaningful temporal comparisons.

However, it is important to acknowledge the limitations of this approach. The use of moving average interpolation may mask short-term fluctuations or structural shifts in CSR spending during the interpolated years. While this improves data completeness and trend analysis, it may introduce a smoothing bias, reducing the ability to detect abrupt changes or policy-driven spikes in CSR initiatives within that period. Hence, the results, specifically for the interpolated years, should be interpreted with caution. The functional model of this study is expressed as follows:

$$\text{HDI} = F(\text{DRR}, \text{CPI}, \text{CEXP}, \text{CSR})$$

$$\text{HDI} = \beta_0 + \beta_1 \text{DRR} + \beta_2 \text{CPI} + \beta_3 \text{CEXP} + \beta_4 \text{CSR} + \mu \dots \dots \dots 2$$

Where:

- β_0 = intercept (constant)
- $\beta_1 - \beta_4$ = coefficients to be estimated
- and national development proxied as
- DRR = Debt-to-revenue ratio
- CPI = Corruption Perception Index
- CSR = Corporate social responsibility
- CEXP = Capital Expenditure
- HDI = Human Development Index
- μ - Stochastic variable
- f - Functional notation

This basic model captures the nexus between public financial management and national development in Nigeria.

4. Result and discussion

Table 1. Summary of Descriptive Statistics

	HDI	DRR	CPI	CEXP	CSR
	0.503400	392.8945	2.395000	1656.564	1.64E+09
Median	0.501500	340.1400	2.500000	901.2000	1.46E+09
Maximum	0.548000	721.0600	2.800000	6335.580	3.83E+09
Minimum	0.449000	96.89000	1.400000	241.7000	1.33E+09
Std. Dev.	0.029545	226.9726	0.376235	1673.689	5.68E+08
Skewness	-0.122816	0.113334	-1.414082	1.562110	3.267149
Kurtosis	1.832402	1.328295	4.193329	4.333542	12.64799
Jarque-Bera	1.186349	2.371647	7.852117	9.615902	113.1506
Probability	0.552570	0.305495	0.019721	0.008165	0.000000
Sum	10.06800	7857.890	47.90000	33131.28	3.27E+10
Sum Sq. Dev.	0.016585	978814.8	2.689500	53223491	6.13E+18
Observations	20	20	20	20	20

Table 1 presents the descriptive statistics of the sampled variables. HDI and DRR appear to be normally distributed based on their Jarque-Bera probability values (>0.05). CPI, CEXP, and CSR were not normally distributed, suggesting the presence of extreme values or skewed distributions. The HDI and CPI have relatively low standard deviations, indicating limited variability. DRR, CEXP, and CSR exhibited significant variability, suggesting major fluctuations over time. CPI, CEXP, and CSR exhibited high kurtosis (>3), indicating the presence of extreme values. CSR is highly positively skewed, suggesting that only a few firms have very high CSR spending, whereas most firms contribute less. The CPI is negatively skewed, implying that lower corruption perception values are more frequent.

The Human Development Index (HDI) is relatively stable over time, but given its moderate mean, further policy efforts are required to improve it. While the debt-to-revenue ratio is volatile, it could indicate an unstable fiscal policy or fluctuating government revenues. Capital expenditure and CSR showed extreme variations, suggesting the need for more consistent policies to stabilize investments in infrastructure and social development. Corruption perception remains an issue, with consistently low scores indicating persistent challenges.

Table 2. Correlation Test Result

	HDI	DRR	CPI	CEXP	CSR
HDI	1	0.50356	0.70095	0.75894	0.46817
DRR	0.50356	1	-0.15092	0.56054	0.40825
CPI	0.70095	-0.15092	1	0.24889	0.00465
CEXP	0.75894	0.56054	0.24889	1	0.79350
CSR	0.46817	0.408257	0.00465	0.793506	1

Table 2. shows the associations between the sampled variables. Capital Expenditure (CEXP) (0.75894) shows a strong positive correlation, indicating that increased capital spending is associated with a higher HDI. The Corruption Perception Index (CPI) (0.70095) has a strong positive correlation, suggesting that lower corruption (higher CPI) enhances human development. The debt to Revenue Ratio (DRR) (0.50356) has a moderate positive correlation, implying that higher debt relative to revenue may be linked to HDI improvements, possibly due to borrowing for development projects. Corporate Social Responsibility (CSR) (0.46817) has a moderate positive correlation, showing that higher CSR investments contribute to better human development.

However, the relationship between the independent variables, CEXP and CSR (0.79350), has a strong positive correlation, indicating that firms/government spending on CSR tends to increase with capital expenditure. CEXP and DRR (0.56054) have a moderately positive correlation, suggesting that government capital expenditure increases with higher debt levels. CPI and DRR (-0.15092) have a weak negative correlation, meaning that higher debt-to-revenue ratios slightly coincide with lower corruption perception scores. In summary, this implies that CEXP is the most influential factor on HDI, followed by CPI and DRR. CSR has a positive but weaker impact on HDI than CEXP and CPI. DRR and CPI show a slight negative relationship, indicating that higher debt may be linked to higher levels of perceived corruption.

Table 3. Multiple Regressions Results

Dependent Variable: HDI				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.353811	0.019007	18.61467	0.0000
DRR	5.76E-05	1.18E-05	4.869263	0.0003
CPI	0.048429	0.006294	7.694533	0.0000
CEXP	5.50E-06	2.34E-06	2.351061	0.0352
CSR	1.62E-12	5.32E-12	0.305164	0.7651
ECM(-1)	0.101132	0.640167	0.157978	0.8769
R-squared	0.947274	Mean dependent var		0.506263
Adjusted R-squared	0.926995	S.D. dependent var		0.027355

F-statistic	46.71150	Durbin-Watson stat	1.765715
Prob(F-statistic)	0.000000		

Drawing from Table 4.3, the R-squared of (0.9473) implies that the model explains about 94.73% of the variation in the Human Development Index (HDI), indicating a strong explanatory power. The Adjusted R-squared (0.9270) was 92.70%, confirming its robustness. The F-statistic (46.71, p-value = 0.0000) indicates that the overall model is highly significant, meaning that the independent variables jointly explain HDI variations. The Durbin-Watson (1.77) suggests minimal autocorrelation in the residuals, indicating a reliable regression.

On the other hand, the individual predicting variables, such as the Debt to Revenue Ratio (DRR) (Coefficient = 5.76E-05, p = 0.0003), are statistically significant at the 5% level. This means that a 1-unit increase in DRR leads to a 0.0000576 increase in HDI, implying that higher government borrowing relative to revenue positively impacts human development, possibly through increased investment in social programs. Second, the Corruption Perception Index (CPI) (Coefficient = 0.0484, p = 0.0000) indicates a positive significant effect on HDI at the 5% level. This means that a 1-unit increase in CPI (lower corruption) raises HDI by 0.0484, showing that reducing corruption significantly enhances human development. Third, Capital Expenditure (CEXP) (coefficient = 5.50E-06, p = 0.0352) has a positive significant influence on HDI at the 5% level. This also means that a 1-unit increase in CEXP raises HDI by 0.0000055, confirming that government spending positively influences human development, albeit with a small effect. Lastly, Corporate Social Responsibility (CSR) (Coefficient = 1.62E-12, p = 0.7651) has a positive, non-significant effect at the 5% level. The near-zero coefficient suggests that CSR investments have an insignificant direct impact on HDI in this model, possibly due to inconsistent reporting or limited CSR contributions, relative to total development spending. The Error Correction Model (ECM(-1)) (Coefficient = 0.1011, p = 0.8769) indicates a weak adjustment mechanism, meaning past disequilibrium does not significantly affect current HDI changes.

The regression results provide key insights into the relationship between public finance variables (debt-to-revenue ratio, capital expenditure, tax-to-GDP ratio, and corruption perception index), corporate social responsibility (CSR), and human development (HDI). The positive and statistically significant relationship between the Debt to Revenue Ratio (DRR) and HDI suggests that borrowing, when properly managed, can contribute to human development. This finding aligns with the Keynesian economic theory, which supports government borrowing to finance development projects that improve welfare (Solow, 2016). However, excessive debt accumulation may lead to fiscal instability, reducing future investments in social programs (Reinhart and Rogoff, 2018). The strongest predictor of HDI in this model was CPI (0.0484, p < 0.01), implying that reducing corruption significantly enhances human development. Countries with lower corruption tend to have better public service delivery, higher infrastructure efficiency, and improved access to healthcare and education (International, 2023). This confirms the findings of Acemoglu and Robinson (2019), who argued that institutional quality is a fundamental determinant of development outcomes.

The significant but small effect of capital expenditure (CEXP) suggests that while government spending on infrastructure, education, and healthcare positively affects human development, its impact may be diluted by inefficiencies, leakages, or corruption (Bank, 2022a). This finding highlights the need for improved fiscal governance to ensure that funds are effectively utilized for development projects (Alesina & Perotti, 2017). CSR investments were statistically insignificant, implying that private sector contributions to social development are either too small, inconsistent, or poorly integrated into the national development efforts. This contradicts studies that argue that CSR can improve socio-economic well-being (Carroll & Shabana, 2010). The results suggest that without strong regulatory frameworks and incentives, CSR activities may have a minimal impact on human development in Nigeria. The ECM term was insignificant, indicating that deviations from equilibrium do not strongly influence the short-term changes in HDI. This suggests that policy changes may take longer to impact human development, emphasizing the need for consistent and long-term policy implementation over short-term interventions (Rodrik, 2018).

5. Conclusion

This study explores the interplay between public financial management, corporate social responsibility, and human development in Nigeria. The findings demonstrate that capital expenditure is a critical driver of human development, reinforcing the need for increased and well-targeted public investment. Conversely, corruption emerges as a major impediment to sustainable growth, undermining fiscal policies, and reducing the effectiveness of public spending. Debt financing, when prudently managed, has a positive but delicate impact on the HDI, emphasizing the need for responsible borrowing and efficient debt utilization. The study also found that CSR investments, in their current form, do not significantly contribute to the HDI, suggesting misalignment between corporate initiatives and national development needs. This again emphasizes the need for sustainable governance reforms, transparency, and strategic investments for crucial long-term development. Therefore, to bridge the gap between profit and purpose, this study recommends the following:

- i. The government must adopt sustainable debt policies to ensure that borrowed funds are directed toward productive investments rather than recurrent expenditures.
- ii. Strict enforcement of anti-corruption laws, coupled with greater accountability in public sector spending, is essential to improve Nigeria's development outcomes.
- iii. The government should enhance fiscal discipline, transparency, and efficiency in capital expenditure allocation to ensure that public investment yields tangible social and economic benefits. In addition, institutional frameworks should be strengthened to promote transparency, accountability, and effective policy implementation in both the public and private sectors.
- iv. Corporate organizations should align their CSR activities with national development priorities, focusing on sectors such as education, healthcare, and infrastructure, to maximize their impact. Strengthening collaborations between the government and the private sector can bridge financing gaps in infrastructure, social welfare, and economic development initiatives.

5.1 Contribution to Knowledge

By addressing these policy gaps, Nigeria can harness public and private resources to drive inclusive and sustainable development. The findings of this study offer valuable insights for policymakers, business leaders, and development practitioners, advocating for a governance model that balances economic profitability with the public good to accelerate national progress.

5.2 Suggestions for Further Research

Future research should explore qualitative assessments of CSR initiatives to complement quantitative findings and capture their long-term social impacts. Comparative studies across African countries could provide broader insights into the effectiveness of public financial management and CSR integration. Moreover, developing sector-specific CSR impact models may provide more actionable policy recommendations.

5.3 Limitations of the Study

This study is limited by the availability and consistency of corporate social responsibility (CSR) data across Nigerian firms and sectors. Additionally, reliance on perception-based indices, such as the Corruption Perception Index, may introduce subjectivity. The study also does not capture the qualitative aspects of CSR impact, which may understate long-term developmental outcomes.

Data Availability Statement

The datasets used and analyzed in the current study are publicly available from reputable sources, including the National Bureau of Statistics (NBS), Transparency International, and published CSR disclosures from selected corporate entities in Nigeria. Additional data and analysis codes are available from the authors upon reasonable request.

Conflicting Interests Disclaimer

The authors declare that they have no known competing interests or ties that could have challenged the work reported in this paper.

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