

Privatization and Profitability: An Empirical Analysis of the Power Holding Company of Nigeria

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Abstract

The profitability of the Power Holding Company of Nigeria's (PHCN's) successor companies has been a controversial topic since its privatization, posing continuous difficulties for the electricity distribution companies with no apparent remedy in sight. Therefore, this study examines how privatization affects the profitability of PHCN's distribution companies, concentrating on three important profitability metrics: asset turnover ratio (ATR), net profit margin (NPM), and return on assets (ROA). Using secondary data from the chosen distribution companies therein after called DisCos' annual financial reports, the study used a comparative case study design. All of Nigeria's eleven privatized electricity distribution companies made up the population, and Ikeja, Abuja, and Enugu DisCos were chosen using a purposive sample technique to reflect the country's three geopolitical zones. To evaluate the profitability of these companies post-privatization, data analytic techniques used include trend analysis, comparative analysis, and ratio analysis. Three goals were met by the study, which looked at how privatization affected return on asset, net profit margin, and asset turnover ratio. Findings showed that DisCos had both times of great profitability and ongoing financial losses, which explained notable changes in the profitability indices. The unstable patterns imply that privatization has not produced steady profitability since financial performance is still hampered by operational inefficiencies, exorbitant expenses, and regulatory restrictions. In particular, the DisCos were unappealing to investors due to their volatile asset turnover ratio, mostly negative ATR, and unpredictable ROA fluctuations. The study suggests that cost-control measures be put in place to lower operating costs and enhance financial performance in light of these findings. To reduce revenue leaks and optimize cash flow, better billing and revenue collection processes should also be implemented.

Keywords: Asset turnover ratio, Net profit margin, Privatisation, Profitability, Return on Assets

1. Introduction

A business's ability to make more returns than it spends in a particular time frame is reflected in its profitability, which suggest a key indicator of its success and financial health. Profitability is the main factor that affects an organization's ability to reward shareholders, reinvest in operations, innovate, and make a significant contribution to economic growth and national development (Zhang &

Jedin, 2023). This means that consistent profitability is essential for infrastructure development, customer satisfaction, and service efficiency for organisations in vital industries like power supply.

Public firms traditionally tasked with providing basic services have struggled with profitability in many emerging nations, including Nigeria (Udegbunam, Igbokwe-Ibeto & Nwafor, 2023). This may be connected to a mixture of inefficiencies, bureaucratic bottlenecks, limited infrastructure, and bad management. These challenges have resulted in underperformance, ongoing financial losses, and an inability to satisfy the rising demand for high-quality services. As a result, privatization has drawn more and more attention as a tool for policy reform to address these inefficiencies and boost business profitability in the public sector (Radić, Ravasi & Munir, 2021).

One of the most important economic reform tactics used by many nations to increase the profitability, effectiveness, and service provision of public firms is privatization (Abdeldayem & Al Dulaimi, 2022). Privatisation refers to the transfer of ownership, management, and control of state-owned companies to private sector actors (Adebayo & Ackers, 2023). It suggests that the private sector, which is motivated by profit incentives and operational effectiveness, is better equipped to run businesses effectively than the public sector, which is frequently hindered by political meddling and a lack of market discipline. It is anticipated that private investors will implement efficient corporate governance procedures, make investments in cutting-edge technologies, eliminate wasteful spending, and enhance service delivery through privatization. These actions are thought to eventually result in increased profitability (Agyemang, Yusheng & Osei, 2025). Privatization can take various forms, including full divestiture, partial sale of shares, public-private partnerships, and management contracts (Hassan & Fatile, 2022).

In Nigeria, the Power Holding Company of Nigeria (PHCN) was in charge of generating, transmitting, and distributing electrical energy for many years. However, under the larger economic reforms started by the Nigerian government in 2005, PHCN became the focus for privatization due to its persistent underperformance, typified by poor service delivery, financial mismanagement, a lack of infrastructure investment, and widespread inefficiency (Okibe & Mokuye, 2018). According to Adedokun (2024), the privatization of (PHCN) is focused at

reorganizing the electricity industry for accessibility, stability, reliability, efficiency, and profitability.

In spite of significant government financing and monopoly control over the electricity industry, PHCN was frequently criticized prior to privatization for its poor service delivery, high operating expenses, frequent power outages, and incapacity to turn a profit (Harb, 2023). It was, therefore, expected that the privatization process would draw in private investment, increase operational effectiveness, and turn PHCN into a successful business that could provide Nigeria's expanding electricity needs (Onochie, Egware & Eyakwanor, 2015).

Notwithstanding these anticipations, the precise effect of PHCN's privatization on its profitability is still up for empirical discussion. While some scholars aver that privatization has increased profitability and efficiency, others maintain that issues including inconsistent regulations, inadequate infrastructure, and persistent operational inefficiencies still negatively impact PHCN's financial performance (Hodge, 2018; Radić et al., 2021). This begs the crucial question of whether privatization has succeeded in turning PHCN into a successful and well-run company. Moreover, profitability remains a key factor in determining the success and sustainability of an organization, especially for companies operating in sectors like the power supply (Strielkowski, Civín, Tarkhanova, Tvaronavičienė & Petrenko, 2021). Despite the fact that PHCN was privatized in an attempt to boost efficiency and profitability, there is growing concern that the reform has not fully produced the anticipated outcomes. This can be traced to the ongoing erratic and insufficient power supply, high operating costs, disgruntled customers, and a persistent reliance on government interventions and subsidies (Okegbemi, 2024). The problem is that PHCN's low profitability remained after privatization, raising questions about whether privatization is a successful strategy for improving financial performance.

The issue continues because there seems to be a discrepancy between privatization and real increases in profitability, despite the fact that privatization was intended to introduce efficiency, accountability, responsibility, and market discipline. Regulatory obstacles, poor infrastructure, poor corporate governance, and unfavorable market circumstances are some of the causes that might be keeping privatized PHCN firms from turning a profit (Bello, Adetoun & Anuoluwapo, 2024).

In light of this, the relationship between privatization and profitability is still ambiguous and unproven, requiring further empirical research (da Rocha, 2015; Rai & Pandey, 2022; Yarrow, 1986). Given the above, the purpose of this study is to examine the relationship between profitability and privatization using PHCN as a case study with a view to understanding whether privatization has indeed translated into financial improvements or not.

The objective of this study is to examine the impact of privatization on the profitability of the Power sector using Power Holding Company of Nigeria (PHCN) as a case study. Specific objectives are to:

- i. Determine the influence of privatization on return on assets (ROA) of PHCN post-privatisation
- ii. Identify the effect of privatisation on net profit margin (NPM) of PHCN post-privatization
- iii. Investigate the influence of privatisation on asset turnover ratio (ATR) of PHCN post-privatisation.

The study is limited to three Distribution Companies in three geographical regions of Nigeria, with Ikeja DisCo representing the Western region of Nigeria, Enugu DisCo representing the Western Region and Abuja DisCo representing the Northern region of Nigeria. Profitability is limited to three profitability metrics: asset turnover ratio (ATR), net profit margin (NPM), and return on assets (ROA). Data are limited to post-privatization periods between 2018-2022.

The study is organized as follows. The section 1 explains the introduction. Section 2 sets out to review the literature, covering the theoretical, conceptual and empirical arguments regarding privatisation and profitability. In Section 3, the methodology adopted for the study, outlining the research design, data sources and analyses used, is laid out. Section 4 of the paper presents the findings on the post-privatisation performance of the sample electricity distribution companies based on profitability indicators namely, return on assets, net profit margin and asset turnover ratio. Section 5 provides conclusion and recommendations based on the study's findings.

2. Review of Literature

2.1 Theoretical Review

2.1.1 X-Efficiency Theory

Leibenstein (1966) developed the X-Efficiency Theory. The theory challenges the traditional economic assumption that companies always operate as effectively as feasible. Leibenstein assert that internal inefficiencies, such as poor management, a lack of competition, and insufficient incentives, keep companies from continuously reaching their full potential in terms of productivity especially in monopolistic and government-controlled enterprises. The theory applies to this study in that it explains the fact that the state-owned monopoly Power Holding Company of Nigeria (PHCN) had significant inefficiencies, such as bureaucratic decision-making delays, complacent service delivery due to a lack of competition, wasteful resource application (inadequate infrastructure), and low accountability because government funding and subsidies disallowed competition and pressure to make a profit.

It is assumed that privatisation would improve X-efficiency by promoting profit-driven management to reduce waste and improve operations, permitting competition from private electricity providers, promoting financial investments in state-of-the-art infrastructure to increase productivity, and creating performance-based employee incentives (Yang, Steensma & Ren, 2021).

2.1.2 Public Choice Theory was propounded by Buchanan and Tullock (2003). The theory argues that public enterprises are often used to serve political ends rather than economic goals, leading to inefficiency. Self-interest continues to be the dominant motivator for acts in the marketplace, whether as consumers, employees, or employers, even if many people take other people's welfare into account when making various decisions (Ash, 2000). Public choice economists also make the assumption that, despite possible concern for others, persons in the political arena are primarily motivated by their own self-interest, whether they are bureaucrats, politicians, lobbyists, or voters. Voters, legislators, and bureaucrats were among the individuals whose conduct was analyzed under the theory. It became a set of theories of governmental failures. It explains that political actors may over-staff enterprises or provide services below cost for political gains. However, by moving enterprises into the private domain, is expected to insulate them from such political influences and foster profit-oriented management.

2.2 Conceptual Review of the Literature

2.2.1 Profitability

Profitability refers to a business's ability to generate profit relative to its income, assets, equity, and expenses. Common profitability indicators include Return on Equity (ROE), Return on Assets (ROA), Earnings Per Share (EPS), Gross Profit Margin (GPM), Operating Profit Margin (OPM), and Net Profit Margin (NPM) (Choiriyah et al., 2020; Purnamasari, 2015); and Asset Turnover Ratio (ATR) (Rachman, Karyatun & Digdowiseiso, 2023). In the context of privatization, increased profitability is often considered a measure of success, reflecting a company's financial sustainability without reliance on government subsidies (Birdsall & Nellis, 2003). However, critics argue that privatization can sometimes prioritize financial gains over broader social objectives, particularly in essential sectors such as energy (Parker, 2021; Radić et al., 2021). Without effective regulatory oversight, privatization may lead to higher prices, monopolistic tendencies, and restricted access for underserved and unserved communities, making its impact on profitability both complex and context-dependent.

One of the key indicators of profitability in privatized firms is Return on Assets (ROA), which measures a company's efficiency in utilizing its assets to generate profit. ROA is formally defined as the ratio of net income to the average total assets owned by a business over a given period (Choiriyah, Fatimah, Agustina & Ulfa, 2020). Net income represents the company's total earnings after deducting expenses such as interest, taxes, depreciation, and operational costs. Meanwhile, total assets include both long-term assets (such as real estate, machinery, and investments) and current assets (such as cash, inventory, and receivables). By calculating ROA as net income divided by total assets, businesses can assess how effectively they utilize their asset base to generate profits. Expressed as a percentage, ROA facilitates comparisons across companies and industries, making it a valuable tool in profitability analysis.

Another critical measure of profitability is Net Profit Margin (NPM), which evaluates how much net profit a company earns from each sale. A higher NPM typically indicates strong cost management and operational efficiency, while a declining NPM could signal inefficiencies, particularly in sales performance, which may undermine investor confidence. Although increasing net income generally correlates with higher overall sales, NPM alone does not directly impact stock prices. Some research findings on the relationship between NPM and stock

returns have been mixed. For instance, while Amina (2021) reported a negative and significant impact, Solikhah (2015) found that NPM had a positive but negligible effect on stock returns. This suggests that the influence of profitability on stock performance may vary based on industry dynamics and market conditions.

Alongside ROA and NPM, assets turnover ratio (ATR) serves as an essential financial metric for assessing a company's profitability and shareholder value (Brigham & Ehrhardt, 2021). Effective asset utilization is indicated by a greater ATR, but operational inefficiencies are suggested by a lower ATR (Ross, Westerfield, & Jaffe, 2020). ATR varies by industry, with capital-intensive industries like manufacturing often showing lower ratios than retail and service sectors (Damodaran, 2019). Research has indicated that companies with decreasing ATR frequently face financial difficulties and decreased profitability (Penman, 2021). As a result, sustaining an ideal ATR is essential for long-term financial success.

Taken together, ROA, NPM, and ATR provide a comprehensive assessment of a company's profitability, particularly in the post-privatization era. While privatization aims to enhance profitability through improved efficiency and cost management, its true impact remains subject to various economic, regulatory, and market factors that ultimately determine the financial success of privatized firms.

2.2.2 Privatization

Drucker (1949) a well-known management expert, coined the term "privatization" before Margaret Thatcher, the prime minister of the United Kingdom at the time, embraced it (Yergin & Stanislaw, 2004). However, privatization is viewed from a variety of angles. As the government takes on a regulatory role, it mostly refers to the transfer of government-owned shares to private investors, indicating a change in ownership from the government to individuals (Pan African Summit, 2000). This approach ensures ongoing control to stop market abuses by implying a partial withdrawal of government ownership rather than the full sale of government assets (Odocii, 2016). Privatization, according to Starr (2011), is "the transfer of public assets to the private sector through sale, lease, or management contracts." According to Ezeani (2004), it is a purposeful government policy that aims to increase private sector involvement through asset sales, private control, and market-driven decision-making while decreasing state intrusion. According to Aminu and Peterside (2014), privatization can help the public sector become more

efficient by using management practices that incentivize effective work and penalize ineffectiveness.

According to Nwankwo (2016), privatization is the process of giving private persons and businesses ownership of shares in selected enterprises that were previously owned by the government. According to this viewpoint, the transfer of ownership and management of state-owned businesses to private organizations is known as privatization. In the same vein, privatisation can also mean any action that increases the role of the private sector in the economy, without change in ownership of state-owned assets or enterprises (Ramamurti, 2000). Two primary categories of privatization are distinguished by scholars: the complete transfer of ownership and management of public businesses to private people or groups is known as "full privatization." It frequently starts with a partial sale, before complete divestiture (Falae, 1986; Nankani, 1991). A limited transfer of ownership with the government maintaining control is known as partial privatization (Gupta, 2005). According to Gupta, this type of privatization sheds light on the controversy surrounding the poor performance of state-owned enterprises. However, political meddling in state-owned enterprises frequently clashes with profit maximization, skewing managerial goals (Shleifer & Vishny, 1994).

2.2.3 Privatization and Profitability

Privatization is associated with improved performance, mainly because managers are forced to create strategies for making enough money in the face of competition, which leads to increased efficiency and effectiveness (Ozah, 2022). As a result, privatization is essential to economic reforms. Its success hinges on the private sector's capacity to function effectively and efficiently, as stressed by Ozah (2022). By removing subsidies for failing businesses and raising tax revenue from successfully privatized companies, privatization can reduce costs and increase efficiency, which will ultimately ease the financial burden on taxpayers (Liljeblom, Maury & Hörhammer, 2020). This is how the effectiveness of privatization is measured. Since more importance is placed on larger political and economic goals than on financial performance, state-owned businesses frequently struggle with profitability. Political appointments and bureaucratic procedures often result in inefficiencies for government-run firms, which can impede efficient management (D'Alauro, Quagli & Nicolliello, 2024). Additionally, Rahman, and Yilun (2021) emphasized that private businesses are typically more profitable and efficient than their state-owned counterparts. In spite of this,

Birdsall (2008) found that privatization has a significant impact on financial and operational performance, leading to increased firm profitability, real sales, operating efficiency, capital expenditure, investment, and dividend policies, while also reducing leverage. Additionally, privatized firms demonstrate more efficient corporate governance compared to state-owned enterprises (Masu-Gombe, 2006). This efficiency is reflected in improved service coverage, enhanced quality and reliability, and lower prices (Delfino & Casarin, 2001; Gombe & Mukhtar, 2024).

The idea behind privatization is that by selling off failing public companies, governments may more efficiently reallocate inadequate resources. Higher operational efficiency is often attained by privatized businesses, which boosts their profitability after the sale. This argument backs up the idea that the private sector should lead the charge in promoting economic growth and innovation while the government should lessen its direct engagement in the creation of goods and services (Radić, Ravasi & Munir, 2021).

2.3 Brief Background Information about Electricity Generation and Distribution in Nigeria

Nigerian electricity generation began in 1896, fifteen (15) years after it was originally introduced in England. Fossil fuels, mostly from hydro and gas thermal plants, are currently Nigeria's main sources of energy generation. The majority of Nigeria's electricity is produced by gas/ steam thermal and hydroelectric plants, and it is delivered to customers through a transmission network that links power plants to several substations close to densely populated areas (Ohimain, 2015). High-voltage direct current (HVDC), single-phase alternative current (SPAC), and three-phase alternative current (TPAC) are commonly used in the transmission system. In order to reduce energy losses, electricity is transmitted at high voltages (110 kV or higher). The most used transmission technique is overhead power lines, however underground cables are used sparingly in select urban areas (Iwayemi, 2008).

Despite sectoral changes and more than a century of electrical development, progress has been sluggish (Aliyu, Dada & Adam, 2015). This was what called for privatisation intervention (Oyedepo, 2014). As a result, the National Electric Power Authority (NEPA) changed its name to Power Holding Company of Nigeria after the Electric Power Sector Reform Act was passed in 2005. It was then split up into eighteen (18) businesses, comprising six (6) generation companies, eleven (11) distribution companies, and one (1) transmission firm.

These organizations are in charge of the nation's power generation, transmission, trading, distribution, bulk supply, and resale at the point of privatisation.

2.4 Empirical Review

The study by Abel and James (2025) explored the impact of electricity-sector privatization on the Nigerian economy, with specific reference to Kaduna Electricity Distribution Company. They appraised the extent to which electricity distribution was better managed after been handed over to private sector. The conclusion from the study showed that Nigeria has obtained evidence relating to the impact of electricity-sector reform in Nigeria, the difficulties which hamper privatised power distribution companies from achieving expected economic benefits.

In their study, Omachi and Mohammed (2024) looked at the impact of privatization and commercialization of PHCN on Nigerians. They focus on Benin Zone. The study found out that PHCN's reform efforts are undermined by the effects of poor funding, corruption, governmental interference, vandalism, fraud, poor maintenance, and indebtedness on poor performance.

Zakari and Ibeme (2023) investigate the relationship between privatization policy and performance in electricity sector of Nigeria through the use of survey design. It was found that there exists significant positive relationship between privatization and electricity-sector performance. It can also be noted that electricity quality and supply infrastructure have a significant positive relationship with the extent of privatization. Thus, the study concludes that it is possible that privatization adds to the improved electricity sector performance.

The relationship between privatization and organizational efficiency in some privatized enterprises was researched by Sunday, Yusufu, and Abdullahi (2022). Findings proved that there is a significant relationship between privatization and performance of enterprise. Conclusion from this study is that organizational efficiency is associated positively with organizational performance, there's need for modification of ownership and managerial involvement in decision making.

Rahman and Yilun (2021) in their study on firm size, firm age, and firm profitability: evidence from China revealed that there is a positive relationship between firm size and profitability and a negative relationship between firm age and profitability, which is consistent with existing studies conducted in other countries.

Birdsall (2008) found that privatization has a significant impact on financial and operational performance, leading to increased firm profitability, real sales, operating efficiency, capital expenditure, investment, and dividend policies, while also reducing leverage.

Aliyu, Dada and Adam, (2015) found that despite sectoral changes and more than a century of electrical development, progress has been sluggish. While Ozah (2018) revealed from their study that there had been significant or adequate progress in electrical development over time.

3. Methodology

3.1 Research Design: Using a comparative case study design, this research examines PHCN's performance post-privatization. The necessity to determine whether privatization has had a noticeable impact on the company's profitability guided the design choice. The analysis concentrated on successor firms, specifically the distribution companies (DisCos), which manage the key services that PHCN used to control, because PHCN is no longer a single entity after privatization.

3.2 Data Collection Methods: Secondary data were used in the study. This comprises PHCN's (post-privatization) financial reports of three selected Electricity Distribution Companies namely: - Ikeja, Abuja and Enugu. These three were so chosen to represent the three geo-political zones of the country with Ikeja Disco representing the West, Enugu DisCo representing the East, and Abuja DisCo representing the North. Key profitability metrics including return on assets (ROA), Return on equity (ROE), and Asset Turnover Ratio (ATR) are all included in the statistics.

3.3. Data Analysis Techniques: To assess the impact of privatization on profitability, the study used a combination of trend analysis - which examined the trajectory of profitability indicators over time, comparing periods post privatization; comparative analysis - a comparison of key metrics between private management (successor companies), and ratio analysis - computation of financial ratios such as profit margin to measure profitability. Additionally, content analysis was used to analyze qualitative data from reports to understand the broader implications of privatization on service delivery and regulatory performance. The study employed a financial and historical quantitative secondary data. Specifically, the annual financial data necessary to compute

Return on Assets (ROA), Net Profit Margin (NPM) and asset Turnover Ratio (ATR) of the selected Ikeja, Abuja and Enugu Electricity Distribution Companies for the period 2018-2022 was collected from published annual reports and audited financial statements of these chosen Discos and other relevant Official financial documentations. Secondary financial data provides unbiased measure to compare Post privatization performance of these companies.

4. Results and Discussions

Three financial performance metrics employed in this study are - Return on Assets (ROA), Net Profit Margin (NPM), and Asset Turnover Ratio (ATR) - are used to analyze profitability for Distribution Companies (DisCos) in Enugu, Ikeja, and Abuja throughout the five-year period from 2018 to 2022. The base year 2018 was chosen because it marks five years after the privatisation in 2013 to allow for the post-transition establishment of DisCos under private ownership, private management and operating systems so that profitability could be seen to have resulted from privatisation, and not just a transition phenomenon.

Analysis of Return on Assets (ROA)

Table 1. RETURN ON ASSETS (ROA)

		2022	2021	2020	2019	2018
	Net income	33967491	-24784622	8783474	158612788	-90150144
Ikeja	Total Asset	253109814	180980387	155608050	131690209	132764458
	ROA (%)	13	-14	6	120	-68
Abuja	Net Income	-7336802	-11945351	-11471618	-124292535	-85719329
	Total Asset	284125939	271901479	176699692	166191380	169942529
	ROA (%)	-3	-4	-6	-7	-50
Enugu	Net Income	-44210376	-39626126	178197088	-64847895	-24498089
	Total Asset	103014551	114405306	91303909	77128621	70596211
	ROA (%)	-43	-35	195	-84	-34

Source: All data were extracted from the annual report of Enugu, Ikeja and Abuja DisCos from 2018-2022 by the researcher.

ROA measures how well a business makes use of its resources to turn a profit. Profitability is indicated by a positive ROA, whereas losses and inefficiencies in the financial system are shown by a negative ROA. The ROA calculated above ranges between 2018-2022. Enugu DisCo's ROA fluctuated significantly over time, as Table 1 illustrates. ROA was negative for most of the company's years, with notable drops in 2018 (-34%) and 2019 (-84%). Nevertheless, there was a notable improvement in 2020, as evidenced by the ROA peaking at 195%. This improvement was short-lived, since declining financial performance was indicated by ROA's drop in 2021 (-35%) and 2022 (-43%). This suggests that, in light of Enugu DisCo's ROA, the business has not made efficient use of its resources to produce steady profitability.

Table 1's data revealed that Ikeja DisCo's financial performance varied as well. In 2019, the company's ROA peaked at 120%, demonstrating its highest level of profitability. After that, though, there was a notable drop in 2020 (6%), and things got worse in 2021 (-14%). Although the variations point to volatility in financial management, 2022 saw a minor recovery of 13%. This suggests that Ikeja DisCo has not continuously used its resources to produce a profit, similar to Enugu DisCo mentioned above.

Like the other two businesses examined above, Abuja DisCo's performance was erratic, as shown in Table 1. During the review period, the company's ROA was extremely negative. The two years with the worst results were 2018 (-50%) and 2019 (-7%). Despite slight gains in 2020 (-6%) and 2021 (-4%), ROA stayed negative, and the company's struggles continued in 2022, when its ROA was -3%. This suggests that Abuja DisCo has continuously fallen short of using its resources efficiently in order to produce profitable outcomes.

4.2 Analysis of Net Profit Margin

Table 2. NET PROFIT MARGIN (NPM)

		2022	2021	2020	2019	2018
	Net income	33967491	-24784622	8783474	158612788	-90150144
Ikeja	Revenue	170418051	170146043	124978034	100588240	168333160
	NPM (%)	20	-15	7	158	-54
	Net income	-7336802	-11945351	-11471618	-124292535	-85719329
Abuja	Revenue	148882467	165325621	139131455	255987711	82220731
	NPM (%)	-5	-7	-8	-49	-104
	Net income	-44210376	-39626126	178197088	-64847895	-24498089
Enugu	Revenue	106257843	119252899	314998766	57232437	54779736
	NPM (%)	-42	-33	56.7	-113	-45

Source: All data were extracted from the annual report of Enugu, Ikeja and Abuja DisCos from 2018-2022 by the researcher.

Table 2 showed the Net Profit Margin of the DisCOs under consideration. The net profit margin measures a company's ability to convert revenue into profit. A negative margin implies that a company is operating at a loss. However, a positive net profit margin indicates that a company is making profit. Table 2 revealed that Enugu DisCo's NPM varied considerably over time. The business had significant financial losses in 2018 (-45%) and 2019 (-113%), as seen by its extremely negative profit margins. When the NPM rose to 56.7% in 2020, there was a notable turnaround, indicating a brief time of profitability. Sadly, this improvement was short-lived, as the margin continued to deteriorate in 2021 (down 33%) and 2022 (down 42%). This suggests that Enugu DisCo has had significant financial irregularities throughout time and has been unable to sustain consistent profitability.

The data in Table 2 revealed that Ikeja DisCo's profitability fluctuated significantly. The business had a very successful year in 2019 with an outstanding

NPM of 158%. Nevertheless, there was a notable drop in 2020 (by 7%), and things became worse in 2021 (by -15%). A slight recovery was noted in 2022 (20%), but the overall trend reflects unstable financial performance. This suggests that Ikeja DisCo has had trouble maintaining steady profit margins and with financial stability, much like Enugu DisCo mentioned above.

Similar, the other two businesses examined above, Abuja DisCo's financial performance was unstable, as shown in Table 2. The business experienced ongoing losses, with 2018 and 2019 showing the worst results (-104%) and -49% respectively. Despite slight improvements in 2020 (-8%) and 2021 (-7%), the business was still unable to turn a profit. The NPM was still negative at -5% by 2022, a sign of persistent financial difficulties. This implies that Abuja DisCo is still dealing with serious financial difficulties and has not been able to produce consistent earnings.

4.3 Analysis of Asset Turnover Ratio

Table 3. ASSET TURNOVER RATIO (ATR)

		2022	2021	2020	2019	2018
	Revenue	170418051	170146043	124978034	100588240	168333160
Ikeja	Assets	253109814	180980387	155608050	131690209	132764458
	ATR	.67	.94	.80	.76	1.26
	Revenue	148882467	165325621	139131455	255987711	82220731
Abuja	Assets	284125939	271901479	176699692	166191380	169942529
	ATR	.52	.61	.79	1.54	.48
Enugu	Revenue	106257843	119252899	314998766	57232437	54779736
	Assets	103014551	103014551	91303909	77128621	70596211
	ATR	1.03	1.16	3.45	.74	.08

Note: ATR: Asset Turnover Ratio; Source: All data were extracted from the annual report of Enugu, Ikeja and Abuja DisCos from 2018-2022 by the researcher.

Lastly, Table 3 showed one important financial indicator that assesses how well a business uses its assets to produce income, the Asset Turnover Ratio (ATR). Thus, a strong asset efficiency is indicated by a greater ATR, whereas underutilization of resources is suggested by a lower ATR. An assessment of Ikeja DisCo, Abuja DisCo, and Enugu DisCo's ATR performance from 2018 to 2022 is given in Table 3, which shows significant variations and financial inefficiencies over time.

Over the course of the evaluation period, Ikeja DisCo's ATR showed an irregular trend. In the year 2018, the company had the highest ATR of 1.26, demonstrating effective asset use to produce income. However, in the following year 2019, the ratio started to fall, falling to 0.76, 0.80 in 2020, and then to 0.67 in 2022. This declining trend means that Ikeja DisCo has encountered more difficulties in sustaining operational efficiency and successfully producing income from its asset base.

Similarly, Abuja DisCo also showed a declining ATR trend. However, with significant fluctuations. The company's maximum ATR of 1.54 was recorded in 2019, indicating a period of strong asset efficiency. However, there was gradual decline in the ATR to 0.79 in 2020, 0.61 in 2021, and 0.52 in 2022, indicating that this peak was brief. Abuja DisCo has had trouble generating revenue in relation to its asset base, as evidenced by the ongoing drop, which suggests operational inefficiencies and potential financial instability.

Out of the three firms, Enugu DisCo's ATR performance was the most unstable. In year 2018, the business reported an extremely low ATR of 0.08, which was indicative of serious asset utilization inefficiencies. ATR, however, increased to 3.45 by 2020, indicating a remarkable improvement in operational effectiveness. Unfortunately, ATR dropped to 1.16 in year 2021 and then to 1.03 in year 2022, indicating that this efficiency could not be maintained. The sharp fluctuations in Enugu DisCo's ATR point to erratic revenue-generating tactics and precarious financial management.

4.1 Discussion of Findings

The notable shifts in Return on Assets (ROA) show that the privatization of Distribution Companies (DisCos) has not consistently increased profitability despite the fact that Ikeja DisCo did considerably well in 2019, 2020 and 2022. Although data showed that there were times when Ikeja, Enugu DisCos were

quite profitable, especially in a few years, these profits were not maintained. Rather, the companies saw regular downturns, with several years characterized by significant losses. This volatility indicates that the sector has not seen the same level of the anticipated efficiency and financial stability that followed privatization. Furthermore, these companies' uneven performance might be a result of negative macroeconomic indices. Many DisCos had trouble investing in updated systems, putting strong governance structures in place, and efficiently controlling operational and customer service expenses after being privatized. The lack of capital investment to improve metering systems and expand distribution networks has further impacted on financial outcomes. Cost recovery was observed as a major impediment militating against profitability as the tariff largely remains less than cost of service. This submission opposed the opinions of Rahman and Yilun (2021) and Birdsall (2008) who found that privatization has a significant impact on financial and operational performance, leading to increased firm profitability, real sales, operating efficiency, capital expenditure, investment, and dividend policies, while also reducing leverage.

The result showed that the distribution Companies (DisCos) still have a difficult time maintaining steady profitability even after being privatized. The unpredictable shifts in net profit margins point to a number of reasons that are impeding steady financial progress. It is possible that external economic factors like subsidies, high inflation rate, volatile foreign currency rates, and other macroeconomic instability are raising operating expenses and decreasing customer purchasing power, which is ultimately having an impact on revenue collection. Furthermore, one of the main factors restricting revenue generation is inadequate tariff regulation. DisCos might not be able to recoup all their costs if tariffs are not cost-reflective, which would result in continuous losses. Revenue shortages are also a result of regulatory measures that set price caps or provide government subsidies without addressing the underlying inefficiencies. This assertion supports the opinion of Aliyu, Dada and Adam, (2015) who stated that despite sectoral changes and more than a century of electrical development, progress has been sluggish. This finding, however, opposed the opinion of Ozah (2018) that there had been significant or adequate progress in electrical development over time.

The irregular trends in asset turnover ratio indicate that privatization has not significantly improved the efficiency of DisCos in utilizing their assets to generate revenue. Despite efforts to enhance operational performance, DisCos

continue to struggle with optimizing asset utilization, leading to financial inefficiencies. This inconsistency makes them less attractive to investors, as inefficient asset use raises concerns about long-term financial sustainability. Furthermore, their inability to maximize revenue from existing assets limits reinvestment in infrastructure and service improvements, exacerbating operational inefficiencies and financial instability in the sector.

5. Conclusion and Recommendations

Overall, while privatization was aimed at enhancing efficiency and profitability, the persistent financial struggles of DisCos highlight deeper structural and operational issues that need to be addressed for long-term sustainability and profitability. Despite efforts to improve power distribution, the financial challenges faced by these DisCos highlight operational inefficiencies, high costs, and regulatory constraints that hinder profitability. The data indicates that privatization has not resulted in stable profitability for Enugu, Ikeja, and Abuja DisCos. Key findings include: inconsistent asset turnover ratio - ATS trends revealed that the efficiency of asset utilization has not significantly improved post-privatization, as turnover rates remain unstable or declining; inefficient asset utilization - the majority of years recorded low asset turnover, indicating that privatization has not led to consistent operational improvements. These results offer doubt on the claims made by scholars that privatization improves operational and financial efficiency. Rather, the data lends credence to claims that DisCos still have structural inefficiencies that jeopardize their financial viability and profitability in spite of sectoral reforms.

Based on the above, the following recommendations are suggested to improve the profitability and general efficiency of the privatized Distribution Companies (DisCos) in Enugu, Ikeja, and Abuja:

- i Cost recovery framework must be put in place to allow DisCos charge cost-reflective tariff. The financial performance of any company starts with setting of price of commodity higher than cost
- ii Put cost-control measures into place in order to lower operating costs which caused unpredictable swings in profitability; enhance metering systems, and limit Aggregate Technical, Commercial, and Collection (ATC&C) losses.
- iii Enhance billing and collection systems by decreasing customer payment defaults through the implementation of stronger revenue collection procedures and growing prepaid metering systems.

- iv Increase asset utilization efficiency by maximizing resource consumption and creating new revenue streams, growing service offerings - such as embedded power production and smart energy solutions - will increase asset turnover.

Limitations of the Study

One of the main shortcomings of this study relies on the existence and recency of the financial data. As this research was conducted in 2026, but analysis was limited to the years of 2018-2022 due to the unavailability of fully audited and comparable annual financial reports on year 2018-2022 providing necessary figures for the calculation of ROA, NPM and ATR for the chosen DisCos after 2022. Therefore, findings of this study reflect imperfect current financial performance of Ikeja, Abuja, and Enugu DisCos. Notwithstanding, five years' analysis of profitability is considered as useful to measure profitability trend of DisCos post-privatization as a whole, and further studies might cover analysis from 2023-2026 when the fully audited annual financial reports are released to public.

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Data Availability Statement (DAS)

The authors hereby declare that the data used in this paper can be made available on request

References

- Abdeldayem, M. M., & Al Dulaimi, S. H. (2022). Public sector reform in emerging economies: Does privatisation matter? *Human Systems Management*, 41(1), 73-85.
- Abel, J. K., & James, J. (2025). Effect of privatization of power industry on nigerian economy: a case of kaduna distribution company. *Journal of Agripreneurship and Sustainable Development*, 8(4), 65-70.

- Adebayo, A., & Ackers, B. (2023). Theorising hybridity in state-owned enterprises (SOEs). *Journal of Management and Governance*, 27(4), 1249-1275.
- Adedokun, R. F. (2024). *A roadmap for energy transition strategic planning and governance: a case study of Nigeria's grid-based renewable electricity sector* (Doctoral dissertation).
- Agyemang, A. O., Yusheng, K., & Osei, A. (2025). Driving the sustainability transition from policy to practice: Synergizing corporate governance and technological innovation to advance responsible consumption and production. *Sustainable Development*, 33(5), 6528-6548.
- Aliyu, A. S., Dada, J. O., & Adam, I. K. (2015). Current status and future prospects of renewable energy in Nigeria. *Renewable and sustainable energy reviews*, 48, 336-346.
- Aminah, L. S. (2021). The effect of current ratio, net profit margin, and return on assets on stock return. *Journal of Management, Accounting, General Finance and International Economic Issues*, 1(1), 1-9.
- Ash, C. (2000). Social-Self-Interest. *Annals of public and cooperative economics*, 71(2), 261-284.
- Bello, O. W., Adetoun, O. E. A., & Anuoluwapo, D. B. (2024). Power Privatization and Economic Development: Assessment of EKO and IKEJA PHCN in Lagos State. *Analele Universitatii "Constantin Brancusi" din Targu Jiu. Serie Litere si Stiinte Sociale*, (2), 101-112.
- Birdsall, N. (2008). Income distribution: effects on growth and development. In *International Handbook of Development Economics, Volumes 1 & 2*. Edward Elgar Publishing.
- Birdsall, N., & Nellis, J. (2003). Winners and losers: assessing the distributional impact of privatization. *World development*, 31(10), 1617-1633.
- Buchanan, J. M., & Tullock, G. (2003). What is public choice theory. *Rationalizing capitalist democracy: The cold war origins of rational choice liberalism*, 133.
- Bustani, B., Kurniaty, K., & Widyanti, R. (2021). The effect of earning per share, price to book value, dividend payout ratio, and net profit margin on the stock price in Indonesia stock exchange. *Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship*, 11(1), 1-18.
- Choiriyah, C., Fatimah, F., Agustina, S., & Ulfa, U. (2020). The effect of return on assets, return on equity, net profit margin, earning per share, and operating profit margin on stock prices of banking companies in Indonesia

- Stock Exchange. *International Journal of Finance Research*, 1(2), 103-123.
- Choiriyah, C., Fatimah, F., Agustina, S., & Ulfa, U. (2020). The effect of return on assets, return on equity, net profit margin, earning per share, and operating profit margin on stock prices of banking companies in Indonesia Stock Exchange. *International Journal of Finance Research*, 1(2), 103-123.
- Coase, R. H. (1960). Law economics. *Journal of Law and Economics*, 3, 1-44.
- D'Alauro, G., Quagli, A., & Nicolliello, M. (2024). The effect of investor protection on forced CEO turnover. *Corporate Governance: The International Journal of Business in Society*, 24(8), 108-132.
- Da Rocha, B. T. (2015). Let the markets begin: The interplay between free prices and privatisation in early transition. *Journal of Comparative Economics*, 43(2), 350-370.
- David-West, A. (2014). Nigerian power sector: Value investment opportunity or value trap?. *CSL Stockbrokers Power Sector Infrastructure Review*, UK.
- Delfino, J., & Casarin, A. (2001). The reform of the utilities sector in Argentina. *Utility Privatization and Regulation-A Fair Deal for Consumers*, 149-174.
- Drucker, P. F. (1949). Concept of the corporation. (WF Walter.). *Jahrbücher für Nationalökonomie und Statistik*, 161(1-2), 313-316.
- Estrin, S., & Pelletier, A. (2018). Privatization in developing countries: what are the lessons of recent experience? *The World Bank Research Observer*, 33(1), 65-102.
- Ezeani, N. C. (2004). Good Public Relations: An Imperative for Public Services Librarians. *Journal of the Nigerian library association Enugu*, 1(1), 79-86
- Gombe, B. M., & Mukhtar, M. (2024). Corporate governance and challenges of financial leverage of privatised cement industry in Nigeria. *Journal of Scientific Research and Reports*, 30(6), 95-106.
- Harb, A. (2023). *Delivering a Competitive and reliable energy supply in Lebanon: A qualitative exploratory case study* (Doctoral dissertation, University of Phoenix).
- Hassan, K. I., & Fatile, J. O. (2022). Public private partnership and educational infrastructure in Nigeria. *Journal of Public Administration, Finance & Law*, 26, 138-151.
- Hodge, G. (2018). *Privatization: An international review of performance*. Routledge.

<https://doi.org/10.1093/acrefore/9780190224851.013.93>

- Iwayemi, A. (2008). Investment in electricity generation and transmission in Nigeria: issues and options. *International Association for Energy Economics*, 7(8), 37-42.
- Lee, A. D., & Usman, Z. (2018). Taking stock of the political economy of power sector reforms in developing countries: a literature review. *World Bank Policy Research Working Paper*, (8518).
- Liljeblom, E., Maury, B., & Hörhammer, A. (2020). Complex state ownership, competition, and firm performance—Russian evidence. *International Journal of Emerging Markets*, 15(2), 189-221.
- Masu-Gombe, B. (2024). Does privatization improve corporate governance and profitability? Evidence from cement company of northern Nigeria. *Lapai Journal of Economics*, 8(1), 264-286.
- Maulani, M., Paramita, G., & Kisworo, Y. (2022). Pengaruh Current Ratio (CR), Net Profit Margin (NPM), Return On Asset (ROA), dan Return On Equity (ROE) Terhadap Perubahan Laba (Studi Kasus PT Rolupat Kriya Indonesia Periode 2018-2021). *Fokus: Jurnal Manajemen Dan Bisnis*, 4(1), 46-60.
- Odocii, S. (2016). *Impact of privatization on service delivery in privatized companies in Uganda* (Doctoral dissertation, Kampala International University, College of Economics and Management).
- Ohimain, E. I. (2015). Diversification of Nigerian electricity generation sources. *Energy Sources, Part B: Economics, Planning, and Policy*, 10(3), 298-305.
- Okegbemi, A. C. (2024). Economic environment factors and how they suppress growth and development in Nigeria. *African Economic Review*, 11(4), 256-278.
- Okibe, H. B., & Mokuye, C. S. (2018). An appraisal of power sector reforms and delivery of electric services in Nigeria. *South East Journal of Political Science*, 3(2), 1-12.
- Omachi, O. L. O. B. O., & Mohammed, U. (2024). Privatisation And Commercialization in Nigeria: A Study of Power Holding Company (PHCN) Of Public Enterprises. *International Journal of Social Sciences and Management Review*, 7(5), 432-441.
- Onochie, U. P., Egware, H. O., & Eyakwanor, T. O. (2015). The Nigeria electric power sector (opportunities and challenges). *Journal of Multidisciplinary Engineering Science and Technology*, 2(4), 494-502.
- Oyedepo, S. O. (2014). Towards achieving energy for sustainable development in Nigeria. *Renewable and sustainable energy reviews*, 34, 255-272.

- Ozah, H. (2022). *The impact of privatization on state-owned enterprises in nigeria* (Doctoral dissertation, Vilniaus universitetas.).
- Parker, D. (2021). *Privatization of state-owned enterprises*. In *Oxford research encyclopedia of business and management*. Oxford: Oxford University Press.
- Purnamasari, D. (2015). The effect of changes in return on assets, return on equity, and economic value added to the stock price changes and its impact on earnings per share. *Research journal of finance and accounting*, 6(6), 80-90.
- Rachman, S., Karyatun, S., & Digdowiseiso, K. (2023). The effect of current ratio, debt to equity ratio, debt to asset ratio, and total asset turnover on the financial performance of property and real estate companies listed in the idx for the 2016-2020 Period. *Jurnal Syntax Admiration*, 4(2), 361-377.
- Radić, M., Ravasi, D., & Munir, K. (2021). Privatization: Implications of a shift from state to private ownership. *Journal of Management*, 47(6), 1596-1629.
- Rahman, M. J., & Yilun, L. (2021). Firm size, firm age, and firm profitability: evidence from China. *Journal of Accounting, Business and Management (JABM)*, 28(1), 101-115.
- Rai, V. K., & Pandey, D. K. (2022). Does privatization of public sector banks affect stock prices? An event study approach on the Indian banking sector stocks. *Asian Journal of Accounting Research*, 7(1), 71-83.
- Ramamurti, R. (2000). A multilevel model of privatization in emerging economies. *Academy of Management Review*, 25(3), 525-550.
- Solikhah, U. (2015). *Pengaruh Ratio Profitabilitas Terhadap Return Saham Di Bursa Efek Indonesia (Studi Empiris Pada Perusahaan Manufaktur Sektor Food And Beverage Tahun 2010-2012)* (Doctoral dissertation, Universitas Muhammadiyah Surakarta).
- Starr, R. M. (2011). *General equilibrium theory: An introduction*. Cambridge University Press.
- Strielkowski, W., Cívín, L., Tarkhanova, E., Tvaronavičienė, M., & Petrenko, Y. (2021). Renewable energy in the sustainable development of electrical power sector: A review. *Energies*, 14(24), 8240.
- Sunday, O. Y., Yusufu, A. I., & Abdullahi, M. H. (2022). Privatization and the efficiency of selected enterprises in Nigeria. *Journal of Social Sciences Advancement*, 3(1), 20-25.
- Udegbum, I. P., Igbokwe-Ibeto, C. J., & Nwafor, C. C. (2023). Challenges and opportunities in implementing digital transformation in Nigerian public service. *Journal of the Management Sciences*, 60(3), 296-308.

- Van de Walle, N. (1989). Privatization in developing countries: a review of the issues. *World Development*, 17(5), 601-615.
- Yang, H., Steensma, H. K., & Ren, T. (2021). State ownership, firm innovation and the moderating role of private-sector competition: the case of China. *Competitiveness Review: An International Business Journal*, 31(4), 729-746.
- Yarrow, G. (1986). Privatization in theory and practice. *Economic policy*, 1(2), 323-364.
- Yergin, D., & Stanislaw, J. (2004). Globalized financial markets. *The Virtuous Vice: Globalization*, 37.
- Zakari, M., & Ibeme, N. P. (2023). Privatisation Policy and the Performance of the Power Sector in Nigeria. *Journal of Public Administration*, 58(3-1), 858-871.
- Zhang, M. D., & Jedin, M. H. (2023). Firm innovation and technical capabilities for enhanced export performance: the moderating role of competitive intensity. *Review of International Business and Strategy*, 33(5), 810-829.

Appendix I

Table 1 shows the composition of the 18 business units, the successors, their distribution as well as load allocation.

Table 1: The Eleven Electricity Distribution Companies (DisCos) in Nigeria

	Successor DisCo	Purchaser	Distribution	Load Allocation (%)
1	Abuja DisCo	KANN Consortium Utility Co. Ltd	1082	11.5
2	Benin DisCo	Vigeo Power Consortium	1855	9.0
3	Eko DisCo	West Power and Gas Consortium	1440	11.0
4	Enugu DisCo	Interstate Energy Consortium	1920	19.0
5	Ibadan DisCo	Integrated Energy Distribution and Marketing	1989	13.0
6	Ikeja DisCo	NEDC/ KEPCO Consortium	2077	15.0
7	Jos DisCo	Aura Energy Limited	714	5.5
8	Kaduna DisCo	Northwest Power Ltd	1233	8.0
9	Kano DisCo	Sahelian Power SPV Consortium	788	8.0
10	Port Harcourt DisCo	4Power Consortium	1164	6.5
11	Yola	Integrated Energy Distribution and Marketing Company	265	3.5

Source: Adapted from David-West (2014)

Table 2. Generation Companies following the Unbundling of PHCN

Genco	Installed Capacity	Type
Afam Power Plc.	776MW	Gas
Egbin Power Plc.	1320MW	Gas
Sapele Power Plc	600MW	Gas
Kainji Power Plc.	760 MW	Hydro
Ughelli Power Plc.	900 MW	Gas
Jebba Power Plc.	578MW	Hydro
Shiroro Power Plc.	600MW	Hydro

Source: Nigerian Electricity Regulation Commission