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IMPACT OF INFLATION ACCOUNTING ON BUSINESS PROFIT MEASUREMENT IN A HIGH-INFLATION ECONOMY

Bamenda Philip Chinda[1,*]
[1]*Ahmadu Bello University Zaria*
Email: emeritusbpcresearch@gmail.com[*]
***Corresponding author**: Bamenda Philip Chinda
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ABSTRACT

The study examined the impact of inflation accounting on business profits measurements of listed non-financial companies in a high-inflation economy specifically Nigeria. Historical cost accounting records events and transactions at their nominal or recorded cost and does not reflect the real economic effects of such events in a high inflation environment. The study therefore examined the effects of three selected variables namely: cost of sales, staff cost and finance cost and on Business Profit Measurement of the listed non-financial companies in Nigeria, while controlling for the variable of firm age. The research design adopted in this study is ex post facto research design. A balanced panel of 540 firm-year observations of the 54 listed non-financial companies out of 72 in Nigeria for a period of ten years (2012–2021) were used in the study. Secondary data were collected from the annual reports of the studied companies. The data were analysed using descriptive statistics, correlation analysis, normality test (Jarque–Bera normality test), multicollinearity test (Variance Inflation Factor, VIF), heteroscedasticity test (Breusch–Pagan Lagrangian Multiplier test and Modified Wald test) and regression analysis (Feasible Generalised Least Squares). The study found that while staff cost has positive relationship with Business Profit Measurement, cost of sales and finance cost have no significant relationship with Business Profit Measurement. The overall regression model was jointly significant at 5% level of significance. The study concluded that historical cost accounting does not capture the real economic effects of inflation and thus supports the adoption of current purchasing power accounting. Inflation-adjusted accounting enhances the quality of financial reporting, increases comparability and reliability of financial information and thus supports sound investment decisions, good corporate governance and sustainable economic development to achieve SDGs 8, 9, 12, 16 and 17.

Keywords: *Inflation Accounting; Business Profit Measurement; Current Purchasing Power Accounting; Historical Cost Accounting*

INTRODUCTION

Measuring reliable business profits has become one of the main objectives of financial reporting. The reported profits from a company not only determine how investors make their investments and how much a company pays in the form of dividends, but also the amount of tax a company has to pay and the amount that a creditor can recover from a company's assets. In addition, reported profits form the basis for remunerating company executives, the market value of a company and the effective use of its capital. Thus, financial reporting that measures profits reliably is very important for the economic and social development of today's economies (Asuquo, et al., 2017; Mbambo, 2020; Tembo & Silwimba, 2025).

As already noted, the utility of information generated by an accounting system diminishes as inflation becomes more persistent. Measuring the revenues and expenses of a firm in terms of the falling purchasing power of money (as represented by historical costs) is less than adequate for reporting the current earnings of a firm (Asuquo et al., 2017). In Historical Cost Accounting, current sales are reported as revenues at the time they are earned while other current expenses, such as current inventory, current depreciation, and other current operating expenses, are reported at their historical costs. As a result, current profits are overstated and the current requirements for maintaining capital are concealed. The figures, complying with the minimum requirements for financial reporting, are however not sufficient for users of financial reports (such as investors, creditors, supervisors of firms, etc.). They overstate the profits reported by a firm when compared to its inflation adjusted profits and therefore reduce the reliability of measurement of Business Profit Measurement (Ergün, 2025; Kramarova, 2021).

As regards the impact of inflation on other elements of a company's financial reports, it must be noted that unlike in developed economies where short-lived fluctuations in prices occur from time to time, in emerging

economies where prices keep increasing from year to year and from period to period, all elements of financial reports are affected by the increasing prices (Aruoture, 2025; Asuquo, et al., 2017; Christiana, 2022; Kumar et al., 2022; Lyimo & Nwasota, 2022; Odunayo et al., 2020; Oko et al., 2021; Suhut et al., 2025; Tërstena et al., 2023). Therefore, all elements such as salaries and benefits of employees, Finance Charges, etc. are increased by inflation (Aruoture, 2025; Asuquo, et al., 2017; Belema & Odi, 2019; Christiana, 2022; Jeevitha et al., 2019; Kumar et al., 2022; Lyimo & Nwasota, 2022; Modugu et al., 2012; Nyoni & Nathaniel, 2019; Odunayo et al., 2020; Oko et al., 2021; Suhut et al., 2025; Tërstena et al., 2023). The bottom line or profit of a company is therefore reported in financial reports in higher nominal amounts. Whether the increase in reported numbers reflect real increase in efficiency and in generation of wealth by a company is another issue. Even when all elements of financial reports of a company are reported in correct format as required by Accounting Standards, the numbers do not reflect the current reality of a company's financial performance and therefore are not useful to users of financial reports of a company. The numbers must therefore be adjusted to their current values by using historical cost figures as and when they are reported. Two main approaches of inflation accounting, i.e. Historical Cost Accounting (HCA) and Current Purchasing Power Accounting (CPPA) have therefore been discussed in some literature (See for instance: Aruoture, 2025; Asuquo, et al., 2017; Patjoshi, 2013; Suhut et al., 2025; Wali et al., 2024) . These two approaches of inflation accounting are used in order to maintain and improve the quality of financial reporting so that users of financial reports of a company are able to make accurate and timely economic decisions and a company is able to ensure its sustainability in the long run.

Inflation accounting has again become a topic of great interest in the area of financial accounting and reporting in an inflationary economy. The main objective of inflation accounting is to try and improve general purpose financial reports so that they are more accurately reported in terms of the current general purchasing power of the company's money or in terms of current replacement cost of its active and passive assets and various inputs and costs to production and expenses of the firm (IFRS, 2001). Inflation accounting therefore attempts to eliminate or reduce distortions of historical cost accounting and to report all significant events of a firm on an equal basis in terms of the current general purchasing power of money or the current replacement cost of assets.

Although there is increased research into the application of inflation accounting, there is a gap in empirical studies. The majority of studies on the effect of inflation on the reported profits of a company, on the financial performance of a company and on the economy as a whole. In contrast to these studies, there are only a few studies that deal with the individual cost components which are affected by the inflation when calculating the Business Profit Measurement of a company (See for instance : Asuquo,, et al., 2017; Maralutua & Pulungan, 2022; Odunayo et al., 2020; Oko et al., 2021; Suhut et al., 2025; Tembo & Silwimba, 2025). The majority of the studies deal with very few manufacturing companies as well as with financial service providers (See for instance: Aruoture, 2025; Asuquo, et al., 2017; Christiana, 2022; Illés, 2010; Jaffar & Sharaaz, 2016; Kumar et al., 2022; Lyimo & Nwasota, 2022; Odunayo et al., 2020; Oko et al., 2021; Patjoshi, 2020, 2013; Suhut et al., 2025; Tembo & Silwimba, 2025; Tërstena et al., 2023). They contain a high degree of subjectivity. There is a research gap for several non-financial companies, which are listed on the Nigeria Exchange Group (NGX) and are affected by a persistent inflation. This study closes this gap for the three major cost components of the Cost of Sales, Staff Cost and Finance Cost .

Furthermore, the study has also been motivated by an on-going debate in the area of accounting policy-making with respect to the need for financial reporting that has been adjusted for the effects of inflation. Currently the International Financial Reporting Standards require financial statements to be prepared on an historical cost basis and to be adjusted for the effects of hyperinflation only. However, there is considerable evidence presented in the inflation accounting literature with respect to the effects of a range of moderate to high rates of general price increase on the financial reports of entities reporting under an historical cost basis of accounting. In addition to requiring entities to present financial reports that have been adjusted for the effects of general price increase, there is also a view that entities should also provide supplementary information that has been reported on a current basis.

The study is based on a synthesis of Historical Cost Accounting Theory and Current Purchasing Power Accounting. The reasons adduced by all the theoretical positions mentioned above for the use of current cost and purchasing power figures for reporting events in periods of rising general price levels are highlighted and explained. These reasons point to the fact that figures reported by means of historical cost accounting fail to present a true and fair view of a company's financial position, financial performance and cash flows. Such figures do not have any relation to current facts and therefore do not serve useful purpose to the users of financial statements.

In addition to theoretical contributions, this study shall be of benefit to corporate world, investors, government agencies, tax authorities, accounting standard setting bodies and other users of financial reports. Measuring business profit accurately shall enhance investment efficiency, improve capital allocation, ensure fair taxation, promote good corporate governance and generally enhance sustainable growth and development of

companies. It shall thus contribute to the attainment of SDGs 8, 9, 12, 16 and 17 through transparent reporting, responsible use of resources, accountability, corporate social responsibility and sustainable economic development.

The study examined the relationship between inflation accounting and business profits of non-financial listed companies on Nigerian Exchange Group (NGX) within a high-inflation environment. Business Profit Measurement (BPM) is used as the dependent variable, and three inflation-sensitive accounting cost components namely Cost of Sales (COS), Staff Cost (SC) and Finance Cost (FC) as independent variables. Firm Age (FA) is included as control variable in the study. The study also aspired to contribute to accounting literature by enhancing financial reporting in high and persistent inflation environment.

LITERATURE REVIEW

Empirical Literature Review

Inflation Accounting and Business Profit Measurement

Over the last two decades, the subject of inflation accounting has received an exponential increase in empirical studies from around the world. Most countries today are suffering from high inflation rates and are searching for ways and means to account for the effects of such high inflation on financial reporting of companies. The early empirical research on inflation accounting focused on conceptualising ways and means by which the historical cost can be compared and measured during high inflation periods (Asuquo, et al., 2017; Chen, 2022; Patjoshi, 2020). However, the majority of the recent empirical research on the subject have shifted their focus towards empirical examination of the effects that the use of inflation adjusted accounting measurements could have on financial reporting quality, earnings quality, firm value and management decisions (Aruoture, 2025; Kramarova, 2021; Modugu et al., 2012; Odunayo et al., 2020; Oko et al., 2021; Suhut et al., 2025). This study aims to add to the body of knowledge by examining the specific channels through which the accounting measurements affect the reported business profit of listed non-financial companies in high-inflation environments such as Nigeria.

However, the studies on the effects of inflation on financial reporting have certain limitations that the present study tries to overcome. In the first place, most of the studies on the subject examined the effects of accounting for inflation on accounting figures without identifying the key operating cost variables affected by inflation and their impact on Business Profit Measurement (See for instance : Chen, 2022; Christiana, 2022; Kumar et al., 2022; Lyimo & Nwasota, 2022; Murtiningrum, 2023; Tërstena et al., 2023). The majority of the research on the effects of inflation on business profit measurement were conducted on the basis of studies of few manufacturing companies quoted on the stock exchange and other economic variables. In other words, the existing research have few studies on the effects of different forms of inflation accounting on the business profit measurements on listed non-financial companies in countries with very high rates of inflation such as Nigeria (See for instance : Asuquo, et al., 2017; Belema & Odi, 2019; Christiana, 2022; Modugu et al., 2012; Oko et al., 2021).

However, despite the contributions of previous studies to the body of knowledge on the measurement and disclosure of financial information in inflationary economies, there still exist uncertainties and deficiencies in the current literature on the effects of inflation accounting. The major deficiency of the current studies is that of conceptualisation. Most of the previous empirical studies on the effects of inflation on financial information measurement and disclosure treated inflation accounting as mere accounting technique without identifying the various operating cost components that go into the measurement of Business Profit Measurement and the effects of inflation on them. Thus, most of the previous studies on the effects of inflation on financial reporting and measurement did not specifically examine the impact of inflation on the measurement of business profit. The studies were generally broad in their focus on the overall effects of inflation on accounting measurement and disclosure.

This study is different from other existing studies on inflation accounting for a number of reasons. First, most of the prior studies treated inflation accounting as a mere accounting technique for financial reporting and thus did not analyse the effects of the accounting technique on various operating cost components of Business Profit Measurement. Here, an important cost-component perspective of inflation accounting is adopted and as such an attempt is made to examine the effects of the technique on Cost of Sales, Staff Cost and finance Cost, the three (3) important cost components of the Business Profit Measurement of a company. For example, an increase in a company's reported profit could be caused by an increase in the inventories held by the company; an increase in the labour costs of the employees of the company; an increase in the remunerations of the employees of the company; an increase in the interest and other financing costs of the company. In this study, the effects of the accounting technique on each of the cost components are examined.

There are several contextual issues that should be considered while evaluating the applicability of prior research evidence to listed non-financial companies on the Nigerian Exchange Group (NGX). First, empirical studies conducted in the past to study various aspects of earnings quality, accounting adjustments and other related financial reporting issues were conducted in different national environments, which are characterised by different institutional structures, macroeconomic conditions and regulatory frameworks. For instance, in the study conducted by Patjoshi (2013) on listed companies on the Bombay Stock Exchange in India, the study provides useful insights for investors and analysts in Nigeria but such findings cannot be directly applied to Nigeria because of marked differences in the above mentioned environments. While institutions such as the Securities and Exchange Board of India (SEBI) are more effective in their enforcement of market regulations, in Nigeria similar institutions such as the Securities and Exchange Commission (SEC), the Federal Inland Revenue Service (FIRS) and others are less effective.

In Nigeria listed companies are required to prepare financial reports within an IFRS framework, which are intended to be of use to a variety of users and which, amongst other things, are required to enable users to see how profits have changed from year to year. Financial reports for listed companies in Nigeria are required to be prepared by companies within an environment provided by a number of Nigerian institutions, including the Financial Reporting Council of Nigeria (FRC), the Securities and Exchange Commission (SEC) and the Nigerian Exchange Group (NGX). So while IFRSs have been adopted by Nigeria for public-interest entities, the extent to which historical figures and accounts provide useful and reliable information in respect of earnings of companies of the type under consideration here will depend on a variety of factors including (i) the degree of compliance with IFRSs by reporting companies and by auditing and other professional firms involved with those companies, (ii) the effectiveness of the various Nigerian institutions mentioned in above within the context of the capital market in Nigeria. Those factors will, in turn, be influenced by a variety of other factors, including the nature and structure of corporate governance of companies within the Nigerian capital market, and the manner in which the reporting requirements of IFRSs interact with accounting information within the context of the Nigerian financial-reporting environment.

The research focuses specifically on the Nigerian financial reporting environment of listed non-financial companies and therefore recognizes that whilst accounting relationships established in prior studies have been found to hold in contexts that are substantially different, there are, nonetheless, important contextual differences between those prior studies and the Nigerian environment under consideration here. These differences stem not only from geography, but also importantly from a combination of regulatory, institutional and, not least, macroeconomic differences. Accordingly, it is recognized that, to date, there is no empirical evidence from Nigeria itself which can specifically illuminate these issues of importance for listed non-financial companies and that prior studies have adopted a number of different and distinct research approaches and these have a number of significant limitations, which the current study specifically aims to address.

The primary research gap that this study addresses, however, is of a regulatory, institutional and macroeconomic nature rather than purely geographical. Thus, whilst the study draws on evidence from previous research into the determinants and consequences of earnings quality in accounting, these prior studies were mostly conducted in widely differing national environments. Thus, for example, whilst Patjoshi (2013) investigated listed companies on the Bombay Stock Exchange in India, there are significant institutional, capital market, enforcement and even economic environments between that study and the listed non-financial companies on the Nigerian Exchange Group (NGX) in this study. In this regard, therefore, the study also contributes to the literature on the application of inflation accounting in IFRS-based environments, especially an emerging capital market such as Nigeria.

METHODOLOGY

The study is positivist research. It assumes that there are real world phenomena in the world of accounting, economics and these can be studied with the aid of data from empirical sources. Thus, it is an ex post facto study. It focused on 72 listed non-financial companies on the Nigerian Exchange Group (NGX) over a 10-year study period of 2012-2021. An adjusted population of 54 listed non-financial companies were studied. Listed non-financial companies were chosen as the appropriate sample for the study. These companies have huge investors in stock, non-current assets, labor costs and finance activities. They are huge and their financial reports are prone to distortions arising from huge inflation in the economy. Secondary data were used in the study. These numbers were extracted from the audited annual accounts of the corporations under review and restated for purchasing power in the current year to derive the Current Purchasing Power Effect (CCPE). The regression model is based on the accounting data

for the current purchasing power (CPP) of the numbers, that is, after having transformed the historical numbers of the Cost of Sales (COS), Staff Cost (SC) and Finance Cost (FC) into CPP terms. The inflation restating formula adopted for this purpose is CCPE = {[(100 − Inflation Rate) / 100] × Historical Cost} where Historical Cost is the reported amount in the accounts and the Inflation Rate the applicable rate for the time period under review.

The CCPE formula was used to translate historical-cost numbers reported by companies in their annual reports, including audit reports, into real terms, that is, into terms that reflect changes in the purchasing power of money. Historical-cost figures are reported in nominal terms and their economic value for periods with inflation different from that of the accounting period is not revealed. The CCPE figures were calculated in order to remove the distortion caused by the change in the general price level and in order to provide figures of greater economic value in relation to measuring business profits affected by inflation.

The principal variable of interest in this study is Business Profit Measurement (BPM). However, it is difficult to measure directly from a company's financial reports. In this study, a proxy for BPM is used, namely the firm's profit after tax (PAT). Inflation accounting variables are costs that affect each of the costs in a firm's financial reports and these are measured through the three costs, namely Cost of Sales (COS), Staff Cost (SC) and Finance Cost (FC). A firm's age (FA) could also have an impact on a company's BPM and, thus, it is used as a control variable in this study. The four study variables, that is Business Profit Measurement (BPM), Cost of Sales (COS), Staff Cost (SC) and Finance Cost (FC) were all expressed in CCPE (that is, Current Purchasing Power Effect) terms for the historical costs of each to allow for the effects of inflation. The re-stated amounts were computed using the following formula: CCPE = [(100 − Inflation Rate) / 100] × Historical Cost.

Business Profit Measurement Model

The empirical relationship is specified as: BPM=f (COS, SC, FC, FA)

The econometric model is expressed as: $\boldsymbol{BPM_{it} = \beta_0 + \beta_1 COS_{it} + \beta_2 SC_{it} + \beta_3 FC_{it} + \beta_4 FA_{it} + \varepsilon_{it}}$

Where: **BPM** = Business Profit Measurement, **COS** = Cost of Sales, **SC** = Staff Cost, **FC** = Finance Cost, **FA** = Firm Age, β_0 = Constant term, $\beta_1 – \beta_3$ =Coefficient of independent variables, β_4 = Coefficient of control variable, ε = Error term, **i** = Firm, **t** = Time

RESULTS AND DISCUSSION

The effect of inflation accounting on the measurement of profits of businesses in highly inflationary countries like Nigeria is further examined in this section. Minimum, maximum, mean, and standard deviation of relevant measures as well as of correlation coefficients, tests for multicollinearity, non-normality and heteroskedasticity are presented. Additionally, the results from a regression analysis using a model of business profits measurement as the dependent variable and several independent variables are reported. In order to address the problem of heteroskedasticity in the regression, the dependent variable is modeled using a model specified with Feasible Generalised Least Squares (FGLS).

Descriptive Statistics

The descriptive statistics of the data are presented in Table 4.1, including for independent and dependent variables, mean, minimum and maximum values and standard deviation. Note that BPM, COS, SC and FC are stated in Nigerian naira (₦) after CCPE restatement; FA is stated in years.

Table 4.1: Descriptive Statistics

ariables	bs	ean	d. Dev.	in	ax
PM	40	653,735	),100,000	4,600,000	90,000,000
OS	40	7,300,000	2,700,000	401.481	90,000,000
C	40	153,169	1,500,000	387.603	),600,000
C	40	940,409	849,187	).21007	1,200,000
A	40	)	2		5

Source: Author's computation using STATA 17, 2026.

Summary statistics of the main variables are provided in Table 4.1 above based on the 540 firm-year observations over the 10year time frame under study. The monetary variables BPM, COS, SC and FC are expressed in Nigerian Naira (₦) while FA is expressed in years. The monetary variables have been expressed in their Current Purchasing Power in terms of their inflation-adjusted CCPE effect used in the analysis above. For example, mean of BPM = ₦6,653,735 which translates to an average Business Profit Measurement of approximately ₦6.65m for the sample of firms in the study above. There are no missing values for the above variables. Hence, the above

summary statistics for the variables provide complete, comparable and reliable data for the panel data used in the estimation above.

Table 4.1 also provided evidence on the disparate effects of inflation on businesses. While average Business Profit Measurement of the sample firms under study remained positive, the extreme variations observed from firm to firm indicates that the effects of inflation on businesses depend on several factors. These factors include: the pricing strategies adopted by firms; the levels of efficiency of firms in their various areas of operations; the various financing arrangements employed by firms in their businesses; the compositions of assets of firms; and even the managerial abilities of firms. For instance, while the average Cost of Sales and Staff of all the firms under study were 47,300,000 and 5,153,169 respectively, extreme variations existed between these ratios for the various firms under study. Thus, while some firms operated under very low costs of sales and staff cost, others operated under very high cost of sales and staff cost. Similarly, while the average, Finance Cost of all the firms under study is 2,940,409, extreme variations existed among them for the various firms under study. Thus, while some firms operated under very low finance cost as percentages of their business profits, other firms operated under very high, finance cost as percentages of their business profits. The wide variations observed in the ratios of the various costs of the firms under study indicate that these costs could also affect the disparate effects of inflation on businesses. It is within this context that Historical Cost Accounting Theory posits that the reported profits of firms reflect their real economic performance and success. Current revenues are matched with their corresponding historical costs which fail to reflect the changes in purchasing powers over time. Thus, current accounting systems under Historical Cost Accounting fail to reflect true economic performance and real success of firms. Hence, there is a need for the adoption of current accounting approaches such as Current Cost Accounting and Current Purchasing Power Accounting which would better reflect the firms' true economic performance and profit.

Correlation Results Discussion

Table 4.2 presents the correlation matrix, offering insights into the associations under examination.

	BPM	COS	SC	FC	FA
PM					
OS					
C					
C				1.0000	
A				-0.1235	1.0000

Source: Author's computation using STATA 17, 2026.

All of the inflation accounting variables in the correlation matrix presented a positive association with BPM except the firm age which served as a control variable. This is because higher Business Profit Measurement for a firm means higher current operating costs. The figures in the correlation matrix exposed the serious limitations of historical cost accounting in an inflation environment. For example, as nominal revenues of a business increase, historical cost measurements of its activities would not increase at the same rate and reported profits of the business would be overstated. The highest association between BPM and the inflation accounting variables presented in the correlation matrix was for Finance Cost with a correlation coefficient of 0.6028. Also the correlation coefficients between BPM and other inflation accounting variables presented in the correlation matrix were 0.4853 for Staff Cost and 0.4488 for Cost of Sales. These correlation coefficients indicate that current replacement costs and real finance costs are important variables for assessing a business's true performance.

The association of Firm Age with BPM is weak and negative with a correlation of r = –0.1835. Thus, an old firm is not necessarily more profitable than a young firm. An old firm may lack flexibility that results in low productivity of its employees and assets. Moreover, an old productive asset can also result in low profitability of a firm. The intercorrelations of the independent variables of size, activities and firm age indicate that larger firms with greater activities are likely to experience higher production costs, higher staff costs and higher finance costs. Importantly, none of the independent variables suffer from serious multicollinearity, as the intercorrelations between the independent variables are below 0.90, and thus all of the independent variables can be used in the regression analysis.

Normality Test Discussion

Table 4.3: Jarque-Bera Test

ırque-Bera normality test:	3,000 Chi ^{2} 0
est for Ho: Normality	

Source: *Author's computation using STATA 17, 2026.*

The results of the Jarque–Bera (JB) normality test on the variables under examination are presented in Table 4.3. From the test results, it was observed that the variables studied did not follow normal distribution. The JB statistic of 5.3×10^4 (53,000) and the associated Chi-square (2) probability value of 0.0000 indicated that the null hypothesis of normality was rejected at all the conventional levels of significance (1%, 5% and 10%) for all the variables under examination. The results revealed extreme variability in the Business Profit Measurement, Cost of Sales, Staff Cost and Finance Cost of the sampled firms. The extreme variability could be attributed to the differences in the firm size, scale of operation, capital intensity, sources of finance and the effects of inflation of the listed non-financial companies in Nigeria.

The test result simply indicates that the variables under consideration are not normally distributed but the existence of such situation does not in any way preclude the validity of subsequent analysis carried out on panel data. This study has utilised panel data from 54 listed non-financial companies (approximately 75% of the population of 72 listed companies) over a 10-year period (2012–2021). Therefore, for such large samples, the Central Limit Theorem (CLT) will make the estimates derived therefrom to be unbiased and normally distributed, even if the individual variables themselves are not normally distributed. This scenario of non-normality of individual variables is more common with regard to most of the corporate panel data sets and are as a result of inter-alia differences in firm-specific characteristics, industrial diversities and the macroeconomic events that generally affect the firms.

Multicollinearity Analysis

The multicollinearity result is presented in Table 4.4.

Table 4.4: Multicollinearity Result

ariable	IF	/VIF
OS	43	4112
C	03	4932
C	80	5567
A	08	9261
lean VIF	83	

Source: *Author's computation using STATA 17, 2026.*

In this study, three different proxies for inflation accounting have been used. All of these proxies are related to the cost structure of a firm. For this reason, it is necessary to test for multicollinearity between the independent variables in order to check whether reliable estimates of the regression have been obtained or not. The results of test for multicollinearity for all independent variables are presented in Table 4.4. The results presented in the table indicate that the Variance Inflation Factor (VIF) values for all independent variables vary from 1.08 to 2.43 with a mean of 1.83. Similarly, the tolerance values for all independent variables vary from 0.41112 to 0.9261. In view of these results, it is obvious that all the VIF values are below the threshold value of 5.00 specified by Hair et al., (2014) as well as below the threshold value of 10.00 specified by Gujarati and Porter, (2009). Similarly, the tolerance values for all independent variables are greater than 0.10 specified by Hair et al., (2014). For this reason, it can be safely concluded that there is no problem of multicollinearity amongst the independent variables in this study. Each independent variable can explain the business profit measurement independently.

Lagragian Multiplier result

The result of the LM test is presented in Table 4.5 below.

Table 4.5: Breusch and Pagan Lagrangian Multiplier Test Random Effect

reusch and Pagan Lagrangian multiplier test random effect
hibar2(01) = 422.06
:ob > chibar2 = 0.0000

Source: Author's computation using STATA 17, 2026.

The Breusch–Pagan Lagrangian Multiplier (LM) Test for Random Effects has been carried out and its results reported in Table 4.5. The LM test has been used to compare the simple pooled OLS model with the Random Effects model. The Breusch–Pagan LM test statistic chibar² equals 422.06 and its p-value is equal to 0.0000. This result rejects the null hypothesis that there are no firm-specific effects and thus the use of the pooled OLS model for the measurement of Business Profit Measurement is not suitable as it fails to account for unobserved firm-specific variables. The results of the estimated variance components indicate that a large proportion of the variance of Business Profit Measurement is between firms' variation rather than error term variation. A panel data estimator therefore is the most suitable estimator. The earlier descriptive statistics, cross-correlation analysis and the VIF values do not indicate any serious problems of multicollinearity of the independent variables and thus the results of the LM test are supported. The two alternative approaches to the effects of inflation, Historical Cost Accounting and Current Purchasing Power (CPP) Accounting, all assume that the effects of inflation on a firm are affected by its mix of assets, its sources of finance, by other company-specific factors as well as by the chosen accounting policies of the firm. The issue of heteroskedasticity, in addition to the results of the Hausman test already presented, is thus examined in more detail in the subsequent section in order to decide whether the Random Effect Model or the alternative model of Feasible Generalized Least Squares (FGLS) should be preferred in order to obtain the most robust, efficient and correct estimates of the examined relationship.

Heteroskedasticity Result Discussion

Table 4.6 presents the heteroskedasticity test results, providing a thorough assessment of the homoscedasticity assumption within the regression model under review.

Table 4.6: Heteroskedasticity Test

odified Wald test for groupwise heteroskedasticity in a fixed effect regression model
o: sigma (i) ^ 2= sigma^2 for all I
hi² (54) = (1.3e+09) 1,00,000,000
rob > chi² = 0.0000

Source: Author's computation using STATA 17, 2026.

Modified Wald (MW)-test for Groupwise Heteroskedasticity has been tested for the listed non-financial companies in the sample. The Chi-square test for homoskedasticity, denoted as MW-statistic, has a Chi-square value of 1.3×10^9 with 54 degrees of freedom and a very low probability value of 0.0000. Hence, the null hypothesis of homoskedasticity is rejected at all conventional levels of significance (1%, 5%, and 10%) for the regression error terms of the sampled firms. This result supports the existence of groupwise heteroskedasticity for the listed non-financial companies in the sample. This result is consistent with the prior descriptive statistics for the sample of non-financial companies, as well as with the results of the Jarque–Bera normality test for the sample companies. In fact, the prior descriptive statistics for the sample companies revealed considerable variation and/or unexplained differences in the Business Profit Measurement of the companies, in their respective cost structures, initial asset bases, respective financing techniques, and operational characteristics, in general.

The test of heteroskedasticity by MWT indicates that there are differences in the effects of inflation on the sampled firms. These differences are mainly caused by the differences in size, production capacity, capital structure, structure of finance etc. of the sampled firms. In other words, the production costs, labor costs and finance costs of the sampled firms under study differ and these differences are unequal. The findings of the test of heteroskedasticity by MWT support the Historical Cost Accounting Theory that states that the use of historical cost measurements becomes less accurate during periods of high inflation. The findings also support the relevance of Current Purchasing Power Accounting (CPPA) that use inflation-adjusted financial reports. The test of heteroskedasticity by MWT also justifies the use of robust panel estimation techniques, i.e. Feasible Generalised Least Squares (FGLS).

Regression Result

The result of the FGLS have been presented in Table 4.7 below.

Table 4.7: Feasible Generalised Least Square Regression

PM	Coefficients	d. Error	-statistics	-values
OS	.0056	.0040	39	163
C	.5239	.0868	.03	000
C	.1688	.1621	04	298
A	8991.63	9864.72	.96	050
ONSTANT	089680	10436.2	79	074
Vald chi^2 (4)	**= 65.69**			
rob>chi^2	**= 0.00**			
umber of Observations	**= 540**			

Source: Authors computation using STATA 17, 2026.

Table 4.7 presents the results from the FGLS regression of inflation accounting and Business Profit Measurement (BPM) for a balanced panel of 54 non-financial listed companies in Nigeria for the period of 2012 to 2021. This panel comprised of 540 firm-year observations. FGLS was the most suitable estimator for this study because of non-normality, groupwise heteroskedasticity and firm-specific effects. The test for multicollinearity among independent variables revealed no problem of multicollinearity (as indicated by VIF values). In addition, Hausman test revealed that Random Effects model was not suitable for this study. In other words, using FGLS for estimating the parameters in the study's model was adequate to correct for the problem of heteroskedasticity and panel heterogeneity while producing efficient and accurate estimates.

The overall model is highly significant; the Wald Chi-square value for the model is 65.69 with p-value less than 0.0000. Hence, the model explains Business Profit Measurement of companies with significant variations arising from inflation accounting variables selected for the study. A panel of companies of same industry was used for the study hence it captures cross section variation as well as time series variation of the companies over the ten years studied.

From the results presented in Table 4.7 above, there are several variables that are persistently and significantly related to BPM. These include staff costs and other accounting variables that are generally recognised as being sensitive to current purchasing power accounting. The results further expose the extreme limitations of Historical Cost Accounting (HCA) and the use of measurement variables at historical monetary values without any recognition of change in their purchasing power and consequent effect on their value or the profits of enterprises reporting using such variables. To address these extreme limitations of HCA, Current Purchasing Power Accounting (CPPA) present financial statement items in constant purchasing power. Reporting using such variables will therefore result in financial statements of greater reliability, relevance, accurate representation and decision usefulness.

Discussion of the Effect of Cost of Sales (COS) on Business Profit Measurement

The findings of FGLS estimation of Cost of Sales **(**COS) on BPM for listed non-financial companies in Nigeria were positive but insignificant. Hence, the null hypothesis that COS has no significant relationship with BPM for listed non-financial companies in Nigeria at 5% level of significance could not be rejected. Thus, COS does not explain any additional variations in BPM over and above other inflation-sensitive variables. This finding is consistent with the views of Asuquo et al. (2017), Wali et al. (2024) and Aruoture (2025) that in a persistent rise in general price level, historical cost measurements become less meaningful and less informative.

The Historical Cost Accounting Theory is one of the well-established theories in accounting and it records all items including inventories at their acquisition cost in the expectation that the monetary unit will remain stable. Under situations of inflation, the replacement cost of items including inventories would be higher than their acquisition cost. Consequently, reported profits would be overstated and relationship between Cost of Sales and Business Profit Measurement would be distorted. In order to remove such distortions, Current Purchasing Power Accounting (CPPA) Theory were advanced by accounting researchers to restate historical cost figures including those of inventories by using a general price level or the current purchasing power of the items. The adoption of CPPA would make financial reports more relevant and of higher quality to assist users including investors and managers in their decisions.

This study therefore has implications for improved financial reporting for the above-mentioned groups and for SDG 8 (Decent Work and Economic Growth) and SDG 16 (Peace, Justice and Strong Institutions) through efficient resources allocation, transparency, accountability and credibility.

Discussion of the Effect of Staff Cost (SC) on Business Profit Measurement

Hypothesis Two examined the relationship between Staff Cost (SC) and Business Profit Measurement (BPM) of quoted non-financial firms in Nigeria. Using Feasible Generalised Least Squares (FGLS) results showed that the coefficient of staff cost (SC) was positively and significantly related to BPM ($\beta = 0.5239$, $z = 6.03$, $p = 0.000$) thus the null hypothesis was rejected. This implies that an increase in staff cost of one unit would increase BPM by approximately ₦0.524. Similar findings were reported by Odunayo et al., (2020), Asuquo et al. (2017), Wali et al. (2024), Aruoture (2025), Suhut et al. (2025), and Tembo and Silwimba (2025) on the effects of inflation on financial performance of firms in developing economies with high inflation.

The findings also highlighted the limitations of the Historical Cost Accounting (HCA) Theory in an inflationary environment. Under the HCA Theory, the Recording of events of a firm, particularly the measurement and recording of costs of labour are assumed to be at their Constant Purchasing Power in value. Thus, the nominal values of the costs of labour are recorded without any acknowledgment of their depreciation in real terms due to inflation. Thus, in a highly inflationary environment as obtain in Nigeria, the HCA fails to measure the true Business Profit of a firm accurately and leads to distorted Business Profit Measurements. It is therefore necessary to resort to the Current Purchasing Power Accounting (CPPA) Theory, to revalue labour costs by general price level. Such an approach would remove distortions caused by the surging general price level and ensure accurate reliability, comparability and faithful Business Profit Measurements of a firm's Business Profit in an inflationary economy.

View from sustainability. Findings from the above hypotheses can be used by companies and their management to accurately measure and manage their labour costs. Such accurate measurement and management of labour costs will aid companies and their management in making proper organisational decisions and in effective utilisation of resources to sustain profits. Sustainability goals of SDG 8- Decent Work and Economic Growth can thus be achieved by ensuring that workers are paid fairly and are able to have decent work while making adequate profits. Also, sustainability goals of SDG 12- Responsible Consumption and Production can be achieved by companies' effective management of costs. Furthermore, sustainability goals of SDG 16- Peace, Justice and Strong Institutions can be achieved by companies' transparent, credible and useful financial reporting. Hence, Historical Cost Accounting could be complemented with Current Purchasing Power Accounting in high-inflation economies for measurement of Business Profit Measurement and quality financial reporting.

Discussion of the Effect of Finance Cost (FC) on Business Profit Measurement

This hypothesis evaluated the relationship between finance cost and Business Profit Measurement of listed non-financial companies in Nigeria. The FGLS estimates of the coefficients for Finance Cost (FC) showed positive sign but it was not statistically significant at all conventional test sizes. Hence the null hypothesis cannot be rejected. It appears that the firms are able to utilize the funds borrowed by them productively. Thus finance cost may not be able to explain the variation in BPM of listed non-financial companies in Nigeria. As per Historical Cost Accounting Theory (HCA), the finance cost of a company is recorded at the nominal amount (face value) incurred by it. There is no adjustment for erosion in purchasing power. In other words, the real cost of the borrowed finance of a company during a period of high inflation is overstated (Al Arbed, 2025). However, Current Purchasing Power Accounting (CPPA) is based on the premise that all monetary amounts in financial reports of a company should be restated in the general price level at the time when the cash flows of the item were realized or in the current purchasing power (IFRS, 2001; Maharshi Dayanand, 2004).

From the regression equation above, it can be seen that the profitability effects of external financing are more on the efficient use of the funds borrowed rather than the costs of such funds. In an inflation environment, the historical cost accounting system could misrepresent the true economic cost of borrowing; whereas, CPPA improve the relevance, comparability and reliability of financial reports by removing inflation-induced distortions. This finding is consistent with the mixed results obtained from other empirical studies on the relationship between finance cost and business profit measurement. Such results could be due to differences in the financing strategies of firms as well as the prevailing macroeconomic conditions of the environment in which such firms operate. For instance, Asuquo et al. (2017) found out that there was a positive relationship but was insignificant. In another study, Wali et al. (2024) found a negative and significant relationship while Aruoture (2025) found a significant and negative relationship.

Viewed from the sustainability angle, the results support the use of CPPA in the high-inflation environment of Nigeria. Such accounting will enhance quality and credibility of financial reports, thus facilitating investment and financing decisions. In particular, the said SDGs will be advanced as follows: SDG 8 (Decent Work and Economic Growth) by facilitating resources allocation; SDG 9 (Industry, Innovation and Infrastructure) by promoting sustainable investment in assets of all types; and SDG 16 (Peace, Justice and Strong Institutions) by promoting transparency, accountability and high-quality financial reporting by corporations.

CONCLUSION

The study examined the relationship between three different inflation sensitive accounting cost components and the Business Profit Measurement (BPM) of fifty-four (54) non-financial listed companies in Nigeria for the period of 2012 to 2021. The study utilised a balanced panel data of 540 firm-year observations in estimating the Feasible Generalised Least Squares (FGLS) model. The results revealed that while Staff Cost recorded a positive and significant co-efficient with the dependent variable, the same did not hold for Cost of Sales, and Finance Cost as their co-efficients were not statistically significant at the conventional levels, the overall model was jointly significant.

The results for the three inflation-sensitive cost components presented in this section reveal that their relationships with Business Profit Measurement are not uniform. These accounting amounts were extracted from the audited financial statements of the companies in this study and, subsequently, restated into Current Purchasing Power Effect (CCPE) terms using the same inflation-adjustment procedure as specified in the Methodology before the results from the regression analysis were presented in Table 4.7. As mentioned earlier, the results presented in Table 4.7 used the above-inflation-adjusted data and, therefore, results from the same study cannot be used for the purpose of a direct statistical comparison between HCA and CPPA models, that is, the results from this study should not be used to estimate a single regression line using the above data and then compare results between HCA and CPPA models. Instead, the results from this study present the findings of selected inflation-adjusted cost components and their respective relationships with BPM as specified in the above empirical model.

This study, however, attempts to establish the relevance of the examination of specific cost components of inflation-sensitive accounting figures in relation to reported Business Profit. Such analysis can enhance transparency in the interpretation of nominal accounting figures, aid investors and borrowers in their respective financial and investment decisions and foster accountability for sustainable economic development.

RECOMMENDATIONS

1. For listed non-financial companies in Nigeria historical cost accounting should be supplemented with Current Purchasing Power Accounting (CPPA) in order to increase the quality of business profit measurement during periods of inflation.

2. Standard setters and financial regulators should encourage additional disclosure of inflation adjusted accounts in countries with sustained levels of inflation especially Nigeria.

3. As members of the management of the listed non-financial companies in Nigeria, they should use the historical cost information in their pricing, investment, financing and dividend decisions, to protect the shareholders' wealth and productive assets.

4. Tax authorities when designing their tax policies should make use of the inflation-adjusted profit measure instead of nominal profit.

5. As in point 4 above, investors and creditors must be very careful when using historical-cost accounts in situations of high and persistent inflation. In addition to historical-cost accounts, they should also make use of the aforementioned inflation-adjusted accounts.

6. Future research should extend this study to other industries, to other countries and to a comparison of other alternatives of inflation accounting in order to provide more research for decision makers and for standard setters.

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