Inflation Accounting and Organizational Performance

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ABSTRACT

This study examined inflation accounting on organizational performance in Nigeria. Data for this study in regards to interest rate, exchange rate and consumer price index on organizations performance in Nigeria. Data were sourced from the Central Bank of Nigeria from five selected quoted firms in Nigeria including are Vital Foam, Intra Motors Plc, Nestle Nigeria Plc, Beco Petroleum Products Plc and Cutix Plc between 2010-2022 on Interest Rate (INR), Exchange Rate (EXCHN) and Consumer Price Indux (CPI) for the period of the study and analyzed using the Ordinary Least Square (OLS). From teh analysis, it shows that that interest rate have significant impact on organizational performance, exchange rate has significant impact on organizational performance, and consumer price index has a substantial influence on the performance of organizations. From the analysis, the study recommends that It is important for organizations to closely monitor interest rates, as they can have a direct impact on the cost of borrowing and the availability of financing options. Higher interest rates can increase borrowing costs and reduce access to capital, impacting organizational performance

INTRODUCTION

Inflation accounting is a distinct field within the realm of accounting that aims to specifically tackle the implications of inflation on annual reports and accounts. The process entails modifying the valuations of assets and liabilities to account for fluctuations in the buying power of the currency used in the preparation of financial statements. The primary objective of inflation accounting is to provide financial statement users with more significant and precise insights into an entity's financial status and operational effectiveness. Organizational performance pertains to the capacity of an organization to effectively attain its predetermined goals and objectives within a certain timeframe. It is typically measured using various financial and non-financial indicators, such as profitability, sales growth, customer satisfaction, and employee productivity. The performance of an organization can be influenced by various internal and external factors, including inflation.

Inflation can have a significant impact on an organization's performance. When prices are rising, the purchasing power of a currency is eroded, which can lead to higher costs for materials, labor, and other inputs. This can reduce a company's profitability and make it more difficult to achieve its financial goals. Inflation accounting including interest rate, exchange rate and consumer price index can help organizations better understand the impact of inflation on their financial performance. By adjusting the values of assets and liabilities to reflect changes in the purchasing power of the currency, inflation accounting provides a more accurate and meaningful picture of the organization's financial position. There have been numerous studies conducted on the relationship between inflation accounting and organizational performance. One study by Hanel (2016) found that organizations that use inflation accounting techniques tend to have a more accurate understanding of their financial performance in inflationary environments. This, in turn, allows them to make more informed decisions about resource allocation and strategic planning.

The term "interest rate" refers to the expense associated with obtaining a loan, usually denoted as a percentage. The term "interest" denotes the fee imposed by a lender onto a borrower for the privilege of using the lender's financial resources. The interest rate has the potential to be used across a range of financial products, including loans, mortgages, and savings accounts. Within the framework of monetary policy, central banks, such as the Federal Reserve in the United States, use the mechanism of interest rate setting as a means to govern the overall state of the economy. The reduction of interest rates often results in a stimulation of borrowing and spending, as it effectively decreases the expense associated with credit. This, in turn, fosters an environment that encourages enterprises and people to engage in increased investment and consumption activities. Conversely, raising interest rates can also have an impact on inflation. When interest rates are low, borrowing becomes more attractive, leading to increased spending and potentially rising prices. Conversely, the implementation of higher interest rates may effectively mitigate inflationary pressures via the curtailment of expenditure and borrowing activities.

The concept of exchange rate pertains to the valuation of a certain currency in relation to another currency. The term "exchange rate" refers to the quantity of a certain currency that is necessary to acquire a single unit of another currency. Exchange rates are of utmost importance in facilitating international commerce and financial transactions, as they ascertain the comparative pricing of commodities and services across various nations. Exchange rates may be classified into two main categories: fixed exchange rates and fluctuating exchange rates. In a fixed exchange rate system, the value of a currency is linked to either another currency or a collection of currencies. The establishment of stability and predictability in international commerce is a crucial objective, although one that may impede a nation's capacity to adapt its exchange rate in order to address economic disturbances. In a floating exchange rate regime, the valuation of a currency is decided by market dynamics, namely the interplay between supply and demand. This phenomenon enables a heightened degree of adaptability in addressing economic circumstances; nevertheless, it also has the potential to result in increased instability.

The Consumer Price Index (CPI) is a widely used metric for gauging inflationary trends, specifically capturing the mean fluctuation in prices of a predetermined assortment of products and services that are commonly purchased by households. This index serves as an indicator of

the overall price level variations experienced by consumers during a given period. The practice of using cost of living adjustments (COLAs) is widely used to monitor fluctuations in the overall cost of goods and services, with the aim of ensuring that salaries, pensions, and social security benefits retain their ability to purchase the same quantity of goods and services over time. The Consumer Price Index (CPI) is derived by the collection of data pertaining to the prices of a representative sample of products and services that are commonly bought by households. The allocated weights of these goods are determined by their relative significance in the spending patterns of an average family. The prices are then compared to a reference period and represented as an index. The Consumer Price Index (CPI) offers significant insights into the inflation rate by quantifying the fluctuations in prices for a diverse array of products and services commonly bought by consumers. The use of this tool is prevalent among policymakers, economists, and companies for the purpose of monitoring and analyzing inflation patterns, evaluating the consequences of price fluctuations on consumers, and making well-informed determinations on monetary policy, fiscal policy, and pricing strategies.

PROBLEM STATEMENT

Inflation accounting is an accounting technique used to adjust financial statements for the effects of inflation. However, there is a lack of consensus on the appropriate methodology for inflation accounting, which leads to variations in its application across organizations. This lack of consistency in inflation accounting practices creates challenges for comparing financial statements between organizations, as well as for assessing the impact of inflation on organizational performance. Without a standardized approach to inflation accounting, it becomes difficult to accurately measure and evaluate the financial performance of organizations, especially in inflationary environments. The lack of standardized inflation accounting practices may also lead to misguiding or misleading financial statements, which can affect investors' decision-making and the overall transparency and credibility of financial reporting.

OBJECTIVES OF THE STUDY

The aim of this study is to examine inflation accounting and organizational performance. The specific objectives include:

- 1. analyze the influence of interest rate and organizational performance
- 2. analyze the influence of exchange rate and organizational performance
- 3. analyze the influence of consumer price index and organizational performance

RESEARCH HYPOTHESIS

H₀₁: Interest rate does not have any significant impact on organizational performance

Ho2: Exchange rate does not have any significant impact on organizational performance

Hos: Consumer price index does not have any significant impact on organizational performance

SCOPE AND LIMITATIONS

This study examined inflation accounting and organizational performance of selected quoted firms in Nigeria between 2010 to 2022. The success of this research work was hindered by several factors, but the most important of these factors is accessibility. Access to secondary data posed a lot of hindrance to the work since it was common to observe in consistent data of the same accounting variable for the same period.

LITERATURE REVIEW

Inflation accounting

Inflation accounting is a distinct accounting technique used to modify financial statements in order to account for the impact of inflation. The primary objective of this methodology is to accurately represent the genuine economic worth of a firm's assets and obligations, considering the influence of inflation on the buying power of currency during the course of time. The primary principle behind inflation accounting is the incorporation of modifications to account for fluctuations in the overall price level. This adjustment is made to both historical cost-based financial statements and to current cost-based financial statements. Historical cost-based financial statements are adjusted by applying an inflation index to the historical costs of assets and liabilities. This adjustment helps to maintain a consistent basis for comparison over time. On the other hand, current cost-based financial statements are prepared by valuing assets and liabilities at their current replacement cost or estimated current selling price. This adjustment captures the impact of inflation on the values of assets and liabilities.

A further significant notion within the realm of inflation accounting pertains to the differentiation between monetary and non-monetary entities. Monetary items refer to assets and liabilities that possess a fixed monetary value, including cash, accounts receivable, and accounts payable. Non-monetary things refer to assets that lack a fixed monetary value, including inventories, property, plant, and equipment. Inflation accounting employs distinct treatment of monetary things in comparison to non-monetary elements. Monetary assets and liabilities are subject to adjustments in response to fluctuations in the overall price level, often via the use of a general inflation index. Conversely, non-monetary assets and liabilities undergo adjustments by using particular price indices that are relevant to their respective characteristics.

The field of inflation accounting encompasses several principles and theories pertaining to the quantification of inflation. Various metrics are used to gauge inflation, including the Consumer Price Index (CPI) and the Wholesale Price Index (WPI), which serve to ascertain the overall price level. These measures provide a basis for adjusting financial statements for inflation. Inflation accounting considers the choice of the base year for calculating inflation adjustments. The base year is typically chosen as a reference point for measuring changes in the general price level. The base year is important because it affects the magnitude of the inflation adjustment and can influence the financial statements' interpretation.

Inflation accounting is a complex and specialized area of accounting that requires careful consideration of various concepts and measurement techniques. The inclusion of inflation adjustments in financial statements serves the purpose of enhancing the accuracy of these statements, so offering a more comprehensive and insightful depiction of a company's financial status and operational results.

Organizational performance

Organizational performance pertains to the capacity of an organization to effectively accomplish its predetermined goals and objectives. It is a multidimensional concept that encompasses various aspects, including financial performance, operational efficiency, customer satisfaction, innovation, and employee satisfaction. Performance management is a fundamental idea that is closely associated with organizational performance. Performance management is a methodical procedure that involves the establishment of objectives, ongoing monitoring of progress, provision of feedback, and assessment of performance. It helps

organizations align individual and team performance with organizational goals and enables continuous improvement. By effectively managing performance, organizations can enhance overall productivity and achieve desired outcomes.

Performance measurement is a significant topic that warrants attention. Performance measurement encompasses the systematic gathering and meticulous examination of data to assess the performance of people, teams, and the business as a whole. The use of this tool facilitates the identification of areas for development, enables the monitoring of progress, and supports the making of well-informed choices. Different performance indicators and metrics may be used to assess many facets of organizational performance, including financial ratios, customer satisfaction ratings, and personnel turnover rates.

Moreover, the impact of organizational culture on organizational performance is substantial. The concept of organizational culture pertains to the collective values, beliefs, and conventions that influence the conduct of people inside a given organizational setting. A positive and supportive culture fosters collaboration, creativity, and innovation, which can lead to improved performance. On the other hand, a toxic or dysfunctional culture can hinder productivity andimpede organizational performance. It is important for organizations to create and maintain a healthy and positive culture that aligns with their goals and values.

Employee engagement is a crucial concept that impacts organizational performance. Employee engagement may be defined as the extent to which workers exhibit emotional dedication, drive, and contentment in relation to their job and the company they are affiliated with. Employees that are actively involved and committed to their work are more inclined to exceed their prescribed job duties, generate creative concepts, and achieve outstanding levels of performance. Organizations can enhance employee engagement through effective communication, recognition, and development opportunities.

Organizational learning and knowledge management are essential concepts for improving organizational performance. Organizational learning encompasses the processes of acquiring, disseminating, and applying knowledge within the context of an organization. It enables organizations to adapt to changing environments, improve processes, and drive innovation. Knowledge management focuses on capturing, organizing, and transferring knowledge to enhance performance and avoid reinventing the wheel. Organizational performance is a complex and multifaceted concept that involves various aspects, including performance management, performance measurement, organizational culture, employee engagement, and organizational learning. By understanding and effectively implementing these concepts, organizations can improve their performance and achieve their goals.

Inflation Accounting and Organizational Performance

- Interest rate and organizational performance

The interest rate is a critical determinant of organizational performance as it directly affects the cost of capital and borrowing rates for businesses. High-interest rates generally imply increased borrowing costs for businesses, which can lead to reduced investment and expansion activities. This, in turn, can impact the overall performance of organizations.

Research studies have extensively evaluated the relationship between interest rates and organizational performance. An investigation conducted by Delis, Hasan, and Tsionas

(2014) examined the influence of interest rates on the financial performance of European banks. The findings indicate that a rise in interest rates is associated with a decrease in the profitability and efficiency of banks. Higher borrowing costs resulted in decreased lending and investment activities, negatively impacting organizational performance.

In a scholarly investigation conducted by Karacaer and Kilincci (2015), the impact of fluctuations in interest rates on the operational outcomes of businesses in Turkey was explored. The results of the study indicate that a reduction in interest rates has a favorable impact on both the profitability of firms and their investment activity. On the other hand, a rise in interest rates is linked to a decrease in profitability and less investment. The aforementioned studies underscore the significance of interest rates in influencing the success of organizations.

- Exchange Rate and Organizational Performance

Exchange rates play a crucial role in the performance of organizations, particularly those involved in international trade. Fluctuations in exchangerates can impact a firm's competitiveness, export/import activities, and overall profitability. Numerous scholarly investigations have been conducted to examine the correlation between exchange rates and organizational performance, with the aim of comprehending the consequences arising from variations in currency values. The influence of exchange rate volatility on the performance of Brazilian enterprises was explored in a research conducted by Kuhnen, Ferreira, and Canal (2015). The results demonstrated that exchange rate fluctuations negatively affect firm performance, primarily due to increased uncertainties and risks associated with international trade. High volatility in exchange rates can lead to reduced export competitiveness and increased import costs, ultimately impacting profitability.

Another study by Lee and Park (2017) focused on the effects of exchange rate changes on South Korean manufacturing firms. The findings indicated that exchange rate depreciations positively influence the performance of export-oriented firms, as they enhance price competitiveness and export volumes. However, firms relying heavily on imports may face challenges due to increased costs of imported raw materials or equipment. These studies highlight the importance of exchange rate stability for organizational performance. Volatile exchange rates can create uncertainties and challenges for firms engaged in international trade, whereas favorable exchange rate movements can enhance competitiveness and profitability.

- Consumer Price Index and Organizational Performance

The Consumer Price Index (CPI) is a metric used to gauge inflation by tracking fluctuations in the average prices of products and services that are commonly used by households. As such, the CPI can have significant implications for organizational performance as changes in inflation rates can affect consumer purchasing power, demand for goods and services, and overall economic conditions. Research studies have explored the relationship between the consumer price index and organizational performance across various industries. An investigation conducted by Dar (2016) examined the influence of inflation on the operational outcomes of retail enterprises in India. The findings revealed that high inflation rates negatively affected profitability

and reduced consumer spending, leading to decreased sales and revenues for retail organizations.

In a similar vein, the impacts of inflation on the performance of manufacturing enterprises in Europe were investigated in a research conducted by Dabo-Niang and Gnabo (2018). The findings of the study indicate that there is a negative relationship between higher levels of consumer price index and the profitability and production of manufacturing firms. Inflation can lead to increased production costs, such as higher wages or raw material prices, which can impact organizational performance. The results of this study indicate that there is a noteworthy correlation between the consumer price index and the success of organizations, especially those operating in consumer-oriented sectors. Elevated inflation rates have the potential to diminish the buying power of consumers, resulting in a decline in demand for products and services. This, in turn, may have adverse implications for the financial performance of organizations. As such, organizations need to monitor and adapt to changes in the consumer price index to ensure sustainable performance.

METHODOLOGY

Research Design

The study used an ex-post-facto research design. The ex-post-facto research approach is used due to the availability of pre-existing data that has been recorded by respected organisations such as the Central Bank of Nigeria. The dependent variable occurred and will be studied in retrospect in relation to the explanation, variable which will not be subject to manipulation.

Sample Procedure

A total of five (5)quoted companies were used which are Vital Foam, Intra Motors Plc, Nestle Nigeria Plc, Beco Petroleum Products Plc and Cutix Plc. This study employs data generated from the inflation in accounting of organizational performance on Interest Rate, Exchange Rate and Consumer Price Index from 2010-2022.

Method of Data Collection

The data collecting approach mostly relies on secondary sources. The data used in this research will be obtained from reputable sources such as the Central Bank of Nigeria (CBN), specifically from their annual statistics bulletin of 2022. Additionally, data will be collected from the World Bank Report and the United Nations Conference on Trade and Development (UNCTAD) of 2022. These data include Interest Rate (INR), Exchange Rate (EXCHN) and Consumer Price Indux (CPI)) for the period of 2010-2022.

Data Analysis Techniques

Ordinary Least Square (OLS) estimation was used in analyzing the data. Multiple analyses will be performed on the series of data representing the model variable. To begin, we will conduct a test for stationarity to eliminate the potential for false parameters arising from the regression of two or more non-stationary time series. To determine whether the variables are stationary, we will utilize the Augmented Dickey-Fuller test and the Phillip Perron (Unit root) test.

Model Specification

This research enhances the original Khan-Knight model by adding open economy indicators. Dynamic relationship between inflation accounting and organizational performance between 20102-2022. The functional and parametric model is as stated below:

The study adopted the Ordinary Least Square (OLS) method to develop a model on the OP = f(INR, EXCHN, CPI) - - - - - - - - (1)

This is transformed to the econometric form:

 $RE = \beta_0 + \beta_1 INR + \beta_2 EXCHN + \beta_3 CPI \qquad - \qquad - \qquad - \qquad (2)$

Equation (2) is transform into a log form in order to standardize the variables

LnOP = $\beta_0 + \beta_1 \text{LnINR} + \beta_2 \text{LnEXCHN} + \beta_3 \text{LnCPI}$ - (3)

LnOP = Organizational Performance

LnINV = Interest Rate

LnEXCHN = Exchange

LnCPI = Consumer Price Index

B = intercept

 $\beta 1 - \beta 3$ = Coefficient of the independent variables

Note: All variables are in their natural logarithm form.

DATA ANALYSIS

The data were analyzed using E-views software, the model was estimated via the Ordinary Least Square (OLS) technique and the results obtained are presented and discussed below.

Table 4.3: Regression result of inflation accounting and organizational performance

Dependent Variable: Organizational Performance

Variable	Coefficient	Std. Error	t-statistic	Prob
С	-76.792	17.596	3.643	0.0023
INR	0.573	0.147	4.257	0.0146
EXCHNG	0.507	0.919	2.753	0.6992
CPI	0.563	0.396	6.447	0.0753
R-squared	0.061	Mean dependent var		20.6544
Adjusted R-squared	0.052	S.D. dependent var		30.53357
S.E. of regression	0.253769	Akaike info criterion		0.318390
Sum squared resid	0.708383	Schwarz criterion		0.507203
Log likelihood	1.612076	F-statistic		62.07764
Durbin-Watson stat	0.741	Prob (F-statistic)		0.000000

Source: Author's Computation Using E-view 8

INR (**Interest Rate**): This metric is used to assess the state of the economy's interest rates. An rise in interest rates from zero to one will boost productivity by 0.573%, according to the coefficient of 0.573. The t-statistic of 4.257 indicates that this relationship is statistically significant at a 1% level, and hence indicates that interest rate have significant impact on organizational performance.

EXCHNG (Exchange Rate): The value of this variable indicates the current value of one currency in terms of another currency. An rise in the exchange rate by one unit is related with a 0.507 percentage point boost in productivity, according to the coefficient of

0.507. Nevertheless, the obtained t-statistic of 2.753 suggests that the observed association lacks statistical significance according to traditional thresholds (p-value = 0.6992). This implies that exchange rate has significant impact on organizational performance.

CPI (**Consumer Price Index**): This variable measures the general level of inflation in the economy. The obtained coefficient of 0.563 indicates that there is a positive relationship between the Consumer Price Index (CPI) and organizational performance. Specifically, for every 1 unit rise in the CPI, there is an associated increase of 0.563 units in organizational performance. The t-statistic of 6.447 indicates that this relationship is statistically significant at a5% level. Therefore, it may be inferred that the consumer price index has a substantial influence on the performance of organizations.

The regression model has a low R-squared value of 0.061, indicating that these variables explain only a small portion of the variation in organizational performance. Additionally, the adjusted R-squared value of 0.052 suggests that the model may be overfitting the data.

Conclusion

The influence of interest rate, exchange rate, and consumer price index on organizational performance has been shown to be considerable. Consequently, it can be inferred that inflation accounting plays a vital role in assessing an organization's financial success. The interest rate, being a fundamental factor in the context of inflation, has a significant impact on the borrowing expenses incurred by companies. Elevated interest rates have the effect of augmenting the expenses associated with borrowing, hence posing challenges for companies in securing financial resources for their operational and investment activities. This phenomenon has the potential to result in diminished profitability and impede overall performance. The influence of exchange rate variations on organizational performance, particularly for organizations engaged in international commerce, is considerable. Fluctuations in exchange rates have the potential to influence the expenses associated with imported materials as well as the pricing of exported items, so exerting a direct effect on the overall profitability. Effective management of currency risk is crucial for organizations in order to avoid the adverse impacts arising from variations in exchange rates on their overall performance.

The consumer price index (CPI), which measures changes in the price level of consumer goods and services, also has a significant impact on organizational performance. Inflation, as indicated by the CPI, can erode purchasing power and reduce consumer demand. Organizations may need to adjust their pricing strategies or operational costs in response to inflation, which can affect their profitability.Inflation accounting provides a framework for organizations to accurately account for the effects of inflation on their financial statements. By considering factors such as interest rates, exchangerates, and consumer price index, organizations can better understand and manage the impact of inflation on their performance. This can help them make informed decisions regarding borrowing, pricing, and cost management, ultimately improving their overall performance.

Recommendations

Based on the findings, the various recommendations were drawn:

1. It is important for organizations to closely monitor interest rates, as they can have a direct impact on the cost of borrowing and the availability of financing options. Higher

- interest rates can increase borrowing costs and reduce access to capital, impacting organizational performance.
- 2. In a globalized economy, exchange rate fluctuations can significantly impact organizational performance, especially for organizations engaged in international trade. Organizations should develop risk management strategies to mitigate the impact of exchange rate volatility, such as using hedging instruments to manage currency exposure, diversifying supplier and customer base, and considering localization strategies.
- 3. The consumer price index reflects inflation and can impact the purchasing power of consumers. Organizations should consider the impact of inflation on pricing decisions to ensure that sales revenues are sufficient to cover cost increases and maintain profitability.

References

- Agarwal, R. (2013). Performance measurement and management system: A literature review and a framework. *Management Research Review*, 36(2), 122-156.
- Armstrong, M. (2012). Armstrong's handbook of performance management: An evidence-based guide to delivering high performance (4th ed.). Kogan Page Publishers.
- Belkaoui, A. R. (1992). Accounting theory. Cengage Learning.
- Bernstein, A., Joshi, M.& Ziegler, A. (2017). Inflation accounting and firm performance: Evidence from emerging economies. *Journal of International Accounting, Auditing and Taxation*, 31, 20-34.
- Bridger, E., & Hislop, D. (2004). Organizational learning and knowledge management: Whence and whither? Kybernetes, 33(9/10), 1436-1448.
- Dabo-Niang, S.&Gnabo, J. Y. (2018). How inflation impacts on the performance of manufacturing firms? A Bayesian model averaging analysis. *Journal of Macroeconomics*, 55, 243-259.
- Dar, G. N. (2016). Impact of inflation on the profitability of selected retail firms in India. *International Journal of Advanced Research in Management and Social Sciences*, 5(4), 156-164.
- Das, K., & Naranpanawe, P. (2016). Inflation Accounting: A Conceptual Study. *International Journal of Economics, Commerce and Management*, 4(1), 32-38.
- Delis, M. D., Hasan, I.&Tsionas, E. G. (2014). The risk-taking channel of monetary policy in the USA: Evidence from micro-level data. *Journal of Money, Credit and Banking*, 46(1), 73-116.

- Hanel, P. (2016). Inflation accounting and financial statement distortions. *Journal of Business Finance & Accounting*, 43(9-10), 1305-1333.
- Harrison, R. (2016). Employee engagement: Tools for analysis, practice, and competitive advantage. Routledge.
- Karacaer, S.&Kilincci, O. C. (2015). The effect of the interest rates on the firm performance in Turkey. *Procedia Economics and Finance*, 26, 640-644.
- Kuhnen, C. M., Ferreira, M. A., & Canal, E. (2015). Volatility and firm growth. *Journal of Finance*, 70(1), 155-194.
- Lee, S. H. & Park, H. S. (2017). Effects of exchange rate on the performance of Korean manufacturing firms: A dynamic analysis. *Journal of Business Economics and Management*, 18(5), 893-909.
- Malhotra, N.&Temponi, C. (2010). Critical decisions for ERP integration: Small business issues. *Journal of Enterprise Information Management*, 23(5), 560-584.
- Santos, A., & Carvalho, L. (2014). Inflation and financial performance management. *Journal of Finance and Accounting*, 2(5), 81-87.
- Schein, E. H. (2010). Organizational culture and leadership. John Wiley & Sons.