



## Enhancing the Profitability of Manufacturing Firms through the Transfer Pricing Policies in Nigeria

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**Abstract:** This study examined the effect of transfer pricing policies on the profitability of manufacturing firms in Nigeria. The study covered ten years from 2013 to 2022 and sampled eleven (11) companies engaging the production of goods across the country. The study used secondary data to source for data from the financial statements of the sampled companies. The data collated were estimated using panel regression models. Based on the random effect result, the study found that market-based transfer pricing has positive and insignificant effect on profitability of manufacturing firms in Nigeria with coefficient value of (0.582779), the study also found that cost-based transfer pricing has positive and significant effect on profitability of manufacturing firms in Nigeria with coefficient value of ( $p=0.0408<0.05$ ). The study therefore concluded that both market-based and cost-based transfer pricing policies improve the profitability of manufacturing firms in Nigeria positively. Hence, the study recommended that management of manufacturing firms should pay more attention to transfer pricing policies since it has positive effect on their profitability level.

**Keywords:** Transfer pricing policies; profitability; manufacturing firms in Nigeria

**JEL Classification:** E64; L25; L6

### 1. Introduction

Globalization of business has necessitated the application of transfer pricing policies in the multinational companies. Transactional transfer prices may take place between a parent company and its foreign subsidiary; or among the divisions of similar business entities in the same country. These financial transactions may include production sales of goods, delivery of services, money lending, rent of properties and the like. Since the transfer pricing is relevant for the profits allocation between the different business entities and among the branches of various multinational firms, it is imperative to further understand how the policies affect the wellbeing of an international businesses. Trading across boarder is identified as the major influencing factors for increasing firms' profitability. Among the influential factors of transfer pricing is profitability (Mutua, 2012). Profitability is the firm's ability to make a profit. An increasing firms' level of profitability is a signal of the management quality and better performance (Kusuma, Hadri, Bhayu & Wijaya, 2017). The transfer price policies adopted by the multinational branch have direct effect on the profits

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attached to their respective host countries by each branches (Kusuma et al, 2017). These transactional transfers pricing across the border is regulated by the rule of arms-length stating that the terms and conditions of exchange between one unit to another in the same firm should be stated as if they are of different entities including the transactions that occur within the network of separate entities (Tebogo, 2011). It is based on the background that is research is investigating the enhancing the profitability of manufacturing firms through the effective transfer pricing policies in Nigeria.

### **1.1. Statement of the Problem**

A review of related studies round the world indicated that the rapid growth in the international transactions has resulted into a greater increase in the numbers of cross-boarder's businesses calling for more attentions (Cooper, Fox, Leopruck & Mohindra, 2016). Most of the reviewed literature on this study's area indicated their concentrations on the effect of transfer pricing on tax, tariffs, financial reporting and economic development instead of on firms' profitability. For instances, Abu-Serdaneh, Al-Okdeh and Gauher (2008) examined the effect of transfer Pricing in Jordanian Manufacturing Companies. Gupta (2012) studied the transfer pricing impact on taxes and tariffs in India. Adum (2015) investigated the impact of transfer pricing on the financial reporting using Nigerian as a study. Cooper, Fox, Leopruck and Mohindra (2016) conducted a research on transfer pricing and developing economies, while Liu, Tim and Dongxian (2017) carried out a study on international transfer pricing and tax avoidance: evidence from linked trade-tax statistics in the United Kingdom. But this study concentrated on enhancing firms' profitability through transfer pricing policies in Nigeria as a gap that needs to be filled.

### **1.2. Objectives of the Study**

The main objective of this research is to examining the enhancement of manufacturing firms' profitability through the transfer pricing policies in Nigeria. The Study specifically:

- a. determine the effect of market-based transfer price policy on profitability of manufacturing firms in Nigeria.
- b. evaluate the effect of cost-based transfer pricing price policy on profitability of manufacturing firms in Nigeria.

### **1.3. Hypotheses of the Study**

The research hypothesized that:

- a. Market-based transfer pricing policies has no effect on profitability of manufacturing firms in Nigeria.
- b. Cost-based transfer pricing policies does not affect profitability of manufacturing firms in Nigeria.

## **2. Conceptual Review**

### **2.1. Transfer Pricing Policies**

Transaction transfer pricing is the price charged by one division of a business organization to another division of the similar organization as a result of the provision of goods and or services or for the use of the property like intangible property (Lamtiar, Arnas, Rusdiyanto, Kalbuana, Prasetyo, Kurnianto & Utami, 2021). In the other hand, any price charged against the branches of a similar company by another branch or head office in difference country is referred to as an international transfer pricing. Hence, it could be could be the price attached to multi-national transactions. Transfer pricing is the price charged by the sales division, department or subsidiary of the international firms for the supply of goods and services to the procuring divisions, subsidiary or department of the similar multinational firms (Lamtiar et al, 2021).

There are different methods of transactional transfer pricing such as market based transfer pricing; cost based transfer pricing, negotiated transfer prices; arbitrary transfer pricing and standard transfer pricing (Kusuma, Hadri, Bhayu & Wijaya, 2017). However, this research work is limed to market and cost based transfer pricing systems. The price of the products or services serves as a yardstick to determine the price of transferring transaction to another branch while the cost of the product or services serves as base for the cost-based transfer pricing (Lamtiar et al, 2021). The cost-based transfer pricing system is suitable for situations where the market prices are unavailable or unappropriate for the same products (Falk, 2010). This policy is good for making the effective decision, control of costs and assessment of firms' performance but in Inflating economies, using the system may switch up the cost to be too high which buying branches may reject. Market-based transfer pricing is useful for decentralized businesses. It objectively measures the quality of the transferred goods or services and raises alarms on the threat of internal competitors (Gupta, 2012). A business can achieve an autonomy using market-based transfer pricing method in the competitive markets that is perfect (Nilufer, 2012).

#### **2.1.1. Firms' Profitability**

The profitability of a firm is the analyzed ratios used to measure the entities' abilities to generate profits from their normal activities (Liu, Tim & Dongxian. 2017). Profitability is a measure of how well a company has utilized its assets to profit. Return on assets is among the criteria for measuring the firms' profitability (Liu et al, 2017). Additionally, multinational firms' profitability means the capability of a cross-border business to generate profit through its assets, sales, and capital employed. Thus, profitability describes the ability of an entity to generate profit from its capital (Abu-Serdaneh, Al-Okdeh & Gauher, 2008). It serves as a basis for determining the dividend distributable to shareholders. The common profitability ratios include return on sales (ROS), return on assets (ROA) and return on equity (ROE) among others (Abu-Serdaneh et al, 2008). ROA measures how well a firm has made use of its assets to generate returns to the business .

### **2.2. Theoretical Framework -Internalization Theory**

This study is anchored on the internalization theory proposed by Jensen and Meckling in Dürr and Göx (2013). The theory explains the reason a firm to conducts business activities abroad because so many well performing companies are established as multinational enterprises (Dürr & Göx, 2013). This theory makes use of a comparative institutional approach to assess the behavior of international

businesses (ITNBUS). The main assumption of this theory is on the existence of the institutional comparative approach that can be applied to attain the effectiveness and efficiency of transfer pricing policies faced by the ITNBUS. These range from choosing business boundaries, creating external relationships and environments and selecting particular international organizational forums to conduct international businesses (Dürr & Göx, 2013). The theory explained that transfer of prices can be implemented among the holding companies and their subsidiaries or between the head office and its branches for maximization of profit (Dürr & Göx, 2013). From the review of the theory above, it is apparent that cross-border transactions have created business expansion; enable many firms to decentralize their business operations and implement transfer pricing policies as the theory described the reason for carrying out international businesses. Thus, internalization theory is worthy of discussion in this study.

### **2.3. Empirical Review**

Abu-Serdaneh, Al-Okdeh and Gauher (2008) examined the effect of transfer pricing on Jordanian Manufacturing Companies. The study employed secondary data source to obtain data from the annual accounts and reports of the companies. The data gathered were analyzed using multiple regression analysis. Findings from the study revealed that transfer pricing policies have positive effects on the performance of Jordanian Manufacturing Companies. The research recommended market-based transfer pricing policy for the Jordanian companies. Adum (2015) investigated the impact of transfer pricing on the financial reporting using Nigerian as a study. The outcome of the study showed that transfer pricing positively impact the firms in Nigeria. Also, Cooper, Fox, Leoprick and Mohindra (2016) conducted a research on transfer Pricing and developing economies. The result from the study indicated a positive effect of transfer pricing of the economies of developing countries. Similarly, Augustine and Abdulrahman (2023) examined the effect of transaction transfer pricing policies on performance of corporate organization, the study sampled 5 companies out of 21 food and beverage companies, the study employed secondary data and the data were sourced from financial statements of sampled companies for a period of 10 years. The study employed panel data analytical techniques. The study found that transaction transfer policies have both positive and negative influence on performance of corporate organization.

### **3. Methodology**

This research work focused on manufacturing industry and used quantitative research design because the design involve determining the study's population, taking the samples, collecting and estimating data, with testing of hypotheses to draw inference (Liu, Tim & Dongxian. 2017). Secondary data sources were employed to collect data from the annual reports of the sampled firms for a period of ten (10) year from 2013 to 2022. The population of the study is the entire manufacturing firms in Nigeria. A sample of twelve (12) firms was selected based on the availability of data. Fixed effect model, pooled ordinary least square and random effect model were used for data estimation. The independent and dependent variable of the research are international transfer pricing and profitability respectively. The independent variable is proxies by market-based transfer pricing policies (MBTPP) measured in term of related accounts receivables to total accounts receivable (RAR/TAR), and cost-based transfer

pricing policies (CBTPP) measured in term of related production cost to total production costs (RPC/TPC), while the dependent variable profitability is measured in term of return on assets (ROA).

### 3.1. Model Specifications

This study's model comprise the explanatory variable of market-based transfer price policies (MBTPP) and cost-based transfer price policy (CBTPP), and the dependent variable of profitability is measured in term of return on assets (ROA). The model is specified below:

$$ROA_{it} = f(MBTPP_{it}, CBTPP_{it},) \quad (3.1.)$$

Where

$ROA_{it}$  = Return on assets of manufacturing firms in Nigeria I in year t;

$MBTPP_{it}$  = The ratio of related production costs to total production costs of manufacturing firms in Nigeria I in year t;

$CBTPP_{it}$  = The ratio of related accounts receivables to total accounts receivables of manufacturing firms in Nigeria I in year t;

$f$  = Function

## 4. Results and Discussion

This section consists of the results of data estimation.

**Table 4.1. Pooled Ordinary Least Square Analysis Result**

**SERIES: ROA, MBTPP, CBTPP**

Total number of 110 observations with 10 cross-sectional units and 11 time-series length				
Variables	0.425560	0.0666696	6.383	0.0001
Constant	-1.43957	0.339675	-4.238	0.0001
MBTPP	-0.446921	0.117229	-3.812	0.0002
CBTPP	0.425560	0.0666696	6.383	0.0001

Source: Data Analysis (2023)

The results in table 4.1 reflects that the market-based transfer pricing has negative and significant effect on profitability of manufacturing firms with coefficient value of  $-0.446921$  ( $p=0.0002<0.05$ ). This meaning that a unit increases in the market-based transfer prices of the manufacturing firms in Nigeria will lead to 45% decrease in the profitability level of the firms. Also, cost- based transfer price has positive and significant effect on profitability of manufacturing firm with coefficient value of  $0.425560$  ( $p=0.0001<0.05$ ), this implying that a unit increase in the cost-based transfer prices of the manufacturing firms in Nigeria will improve their profitability by 43%.

**Table 4.2. Fixed Effect Model Analysis Result****SERIES: ROA, MBTPP, CBTPP**

Total number of 110 observations with 10 cross-sectional units and 11 time-series length				
Variables	Coefficient	Std. Error	z	p-value
Constant	0.272445	0.0908041	3.000	0.0027
MBTPP	-0.582779	0.404477	-1.441	0.1496
CBTPP	-0.186679	0.126734	-1.473	0.1408

Source: Data Analysis (2023)

Table 4.2 shows the results of fixed effect model where the coefficient of market-based transfer prices (-0.582779) is insignificant and negative ( $p=0.1496>0.05$ ) meaning that a unit increase in the market-based transfer prices of the manufacturing firms in Nigeria will insignificantly decrease the profitability position the companies by 58%. Also, the coefficient value of cost-based transfer pricing (-0.186679) is also insignificant and negative ( $p=0.1408>0.05$ ) implying that a unit increase in the cost-based transfer prices of the manufacturing firms in Nigeria will decrease their profitability levels by 19%.

**Table 4.3. Random Effect Model Analysis Result****SERIES: ROA, MBTPP, CBTPP**

Total number of 110 observations with 10 cross-sectional units and 11 time-series length				
Variables	Coefficient	Std. Error	z	p-value
Constant	0.272445	0.0908041	3.000	0.0027
MBTPP	0.582779	0.404477	-1.441	0.0396
CBTPP	0.186679	0.126734	-1.473	0.0408

Source: Data Analysis (2023)

The results in table 4.3 revealed that the market-based transfer pricing has positive and insignificant effect on profitability of manufacturing firms with coefficient value of 0.582779 ( $p=0.0396<0.05$ ). This means a unit increase in the market-based transfer pricing of the manufacturing firms in Nigeria will lead to 58% insignificant increase in their profitability levels by 58%. Also, the study revealed that cost-based transfer pricing has positive and insignificant effect on profitability of manufacturing firms with coefficient value of 0.186679 ( $p=0.0408<0.05$ ) implying that a unit increase in the cost-based transfer price of the manufacturing firms in Nigeria will improve their profitability levels by 19%.

**Table 4.4. Diagnostic Test Results**

Tests	Result (P-value)	Decision	Fitted Model
F- Test (FE VS POLS)	7.19108 (0.009 < 0.05)	Reject $H_0$	Fixed effect (FE)
Lagrange Multiplier: (RE VS POLS)	45.0432 (0.011 < 0.05)	Reject $H_0$	Random effect (RE)
Hausman: (RE VS FE)	4.59208(0.1006 > 0.05)	Accept $H_0$	Random Effect
Cross-section Dependence Test: Pesaran CD	:Z= -0.85334 (0004<0.05)	Reject $H_0$	No CD

Source: Data Analysis (2023)

From table 4.4, the result of F-test of 7.19108 (0.009 < 0.05) rejected the null hypothesis that fixed effect (FE) is not appropriate in favor of pooled ordinary least square (POLS). Thus, the FE is considered. The result of Lagrange multiplier test of 45.0432 (0.011 > 0.05) rejected the null hypothesis of no random effect and it is considered appropriate. Also, the result of Hausman's test of

0.1477(0.928>0.05) accepted the null hypothesis that fixed effect is not appropriate in favor of random effect, thus random effect is considered the most appropriate data estimator among the three data estimators. The result of Peseran CD test -0.85334(0004<0.05) rejected the null hypothesis indicating the absence of fundamental errors that need correction in the level of significant (5%) used for data estimations.

## 5. Conclusion and Recommendations

From the results obtained through the effective random effect model, the study discovered that market-based transfer pricing as well as cost-based transfer pricing will significantly improve the profitability of manufacturing firms in Nigeria. The study therefore concluded that both market-based and cost-based transfer pricing policies improve the profitability of manufacturing firms in Nigeria positively. Hence, the study recommended that management of manufacturing firms should pay more attention to transfer pricing policy since it has positive effect on their profitability level.

## References

- Abu-Serdaneh, J. A.; Al-Okdeh, S. K. & Gauher, K. A. (2008). Transfer Pricing in Jordanian Manufacturing Companies. *Jordan Journal of Business Administration*, 11, pp. 313–330.
- Adams, L & Drtina, R. (2010). Multinational Transfer Pricing: Management Accounting Theory versus Practice. *Management Accounting Quarterly*, 11(3), pp. 20-28.
- Adum, O. S. (2015). The Impact of Transfer Pricing on Financial Reporting: A Nigerian Study. *Research Journal of Finance and Accounting*, 6 (16), pp. 208-218.
- Augustine, E.O. & Abdulrahman, S (2023). Transactional Transfer Pricing Policies and Performance of Corporate Organizations in Nigeria. *The Journal of Accounting and Management*, 13(1), pp. 1-11.
- Cooper, J.; Fox, R.; Leoprick, J. & Mohindra, K. (2016). Transfer Pricing and Developing Economies. *A Handbook for Policy Makers and Practitioners*. Washington DC; World Bank, pp. 18-21.
- Dürr, O. M. & Göx, R. F. (2013). Specific Investment and Negotiated Transfer Pricing in an International Transfer Pricing Model. *Schmalenbach Business Review*, 65, pp. 27-50.
- Falk, D. (2010). *Transfer Pricing: Alternative Practical Strategies*. 19<sup>th</sup> Tax Management (BNA) Transfer Pricing Report at 89 Measuring and Monitoring BEPS.
- Gupta, P. (2012). Transfer Pricing: Impact of Taxes and Tariffs in India. *Vikalpa*, 37(4), p. 29.
- Kusuma, Hadri, dan Bhayu & Wijaya. (2017). Drivers of the Intensity of Transfer Pricing : An Indonesian Evidence. *Paper dipresentasikan di the Second American Academic Research Conference*. New York, USA 28-30 April.
- Lamtiar, S.; Arnas, Y.; Rusdiyanto, A. A.; Kalbuana, N.; Prasetyo, B.; Kurnianto, B. & Utami, S. (2021). Liquidity Effect, Profitability Leverage to Company Value: A Case Study Indonesia. *European Journal of Molecular & Clinical Medicine*, 7(11), pp. 2800-2822.
- Liu, L.; Tim, S. D. & Dongxian. G. (2017). International transfer pricing and tax avoidance : Evidence from linked trade-tax statistics in the UK. *CESifo Working Paper Series 6594*. <https://ssrn.com/abstract=3025275>.
- Mutua, N. (2012). Transfer Pricing Management Strategies by MNEs within the Main Investments Segment of NSE. *MBA Research Project*, University of Nairobi, pp. 23-26.
- Nilufer, U. (2012). Transfer Prices: A Financial Perspective. *Journal of International Financial Management & Accounting*, 23(1), pp. 34-87.

Tebogo, B. (2011). *The Transfer Pricing Problem: When Multinational Corporations Shift Profits Across International Borders.*