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Transfer Pricing Manipulation and Economy: Evidence from Nigeria

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Abstract: *This research uses Auto-Regressive Distributed Lag models (ARDL) to investigate the effect of transfer pricing manipulation on Nigerian economy. Time series data from 1970 to 2016 obtained from World Bank data base on transfer pricing manipulation (TPM), trade openness (TO), exchange rate (EXH) and real gross domestic product (RGDP). The results of the regression showed that real GDP reacted negatively and significantly to rise in transfer pricing in Nigeria. If transfer pricing increases by one standard deviation, the average value of real GDP goes down by 0.24 standard deviation units in the long-run. In the short run, the sign of the error correction term is correct and it shows that about 13.9% of disequilibrium in real GDP due to one-time temporary shock is corrected within a year. The correctness and significance of the error correction term proves the convergence of the estimated ARDL model. This result affirms Organization for Economic Co-operation and Development (OECD) and United Nations (UN) that Transfer pricing manipulation deplete tax revenue in developing countries. The study recommended that Nigeria government should come up with enabling tax laws to enforce Nigeria income tax transfer pricing Regulations, 2018 in other to curb transfer pricing manipulations among Multinational Enterprises (MNEs) in Nigeria.*

JEL Classification: G18

Keywords: Gross domestic product, transfer pricing manipulation, Trade openness, exchange rate.

I. Introduction

Transfer pricing is on the radar in both developed and developing countries. It could be defined as the structuring and pricing of transactions between members of the same controlled group. Specifically, the concern is with cross-border transaction between parent companies and the subsidiaries or among different companies where income and expenses are allotted between or among tax payers in different countries.Transfer Pricing (TP) is fast becoming a stay-awake issue for Multinational Enterprises (MNEs) in Nigeria with the recent changes in the TP landscape and the increased TP audits being conducted by the tax authorities. To ensure better compliance among taxpayers and provide clarity on certain TP issues, the Federal Inland Revenue Service (FIRS) released the new TP Regulations which imposes stiff penalties for non-compliance with TP rules.Many countries including Nigeria also consider domestic transactions between affiliates. Transactions between parent companies and its subsidiaries cover the sale of tangible goods and the leasing or sale of intellectual property to provision of services. The abuse of transfer pricing by the foreign investors' has become a concern of Nigeria because of the significant amount of money in play.

Globally, there have been various developments in the TP space with more countries having signed up to implement various initiatives of the Organization for Economic Co-operation and Development's (OECD) Base Erosion and Profit Shifting (BEPS) project. A number of these countries have enacted laws to tackle harmful tax practices related to manipulative pricing of goods and services for the purpose of BEPS.

Significant transfer pricing takes place in Nigeria via over-invoicing of imports and under-invoicing of exports (see Ajayi 1992). Over-invoicing of import is used by the multinational companies to repatriate profits from Nigeria which creates room for low company tax, while under-invoicing of export transaction is used by the foreign investors' to avoid or reduce export surcharges or to evade income tax to facilitate capital flight. This resulted to abusive transfer pricing or transfer pricing manipulation and the consequent tax revenue loss it entails is proving to be a big problem in many countries in Africa.

2.0 Transfer Pricing Regulationsin Nigeria

In August 2012, Nigeria introduced her first TP Regulations joining the list of African Countries with TP Legislation. Prior to 2012, taxpayers and tax authorities in Nigeria relied on the General Anti-Avoidance Rules (GAAR) in the Nigerian tax laws in determining the appropriate pricing of related party transactions. The GAAR provisions empowered the tax authorities to adjust the pricing of related party transactions where it appeared that such transactions were artificial or fictitious and did not reflect the arm's length principle. However, the GAAR provisions were not very effective given that there were no clear guidelines and parameters for its application.

The 2012 TP Regulations provided a more structured approach to assessing intra-group structures and determining the appropriate pricing of related party transactions. However, the 2012 TP Regulations was characterized with relatively minimal compliance by taxpayers. Some of the factors identified for low compliance include the inability of taxpayers to understand the relevance of TP and its associated risk to their businesses as well as the non-inclusion of TP specific penalties required to drive compliance. In addition, the 2012 TP Regulations failed to provide adequate guidance on the appropriate treatment of certain related party transactions; thus, making the administration of the TP regime cumbersome and quite adversarial.

To address some of the issues raised by taxpayers on the 2012 TP Regulations, to ensure greater compliance with TP rules and to implement OECD BEPS project recommendations; in 2018, the Nigerian tax authority came up with the new TP regulations purposely to implement some of the recommendations of the OECD BEPS project. These changes include the introduction of the Income Tax (Country-by-Country Reporting) Regulations 2018 (CbC Regulations), and Income Tax (Transfer Pricing) Regulations 2018 (Revised TP Regulations).

The CbC Regulations requires Multinational Enterprises (MNEs) that have a Consolidated Group Revenue of ₦160 billion or above to furnish the Federal Inland Revenue Service (FIRS) with the tax and financial information of the Group in a specified format, provided that such MNEs are resident in Nigeria for tax purposes. The CbC Report should be filed not later than 12 months after the last day of the accounting year of the MNE Group.The CbC Report will contain information such as revenue, the allocation of income, taxes, stated capital, number of employees and the nature of business activities of the MNE Group across tax jurisdictions. The CbC Regulations seeks to increase transparency of MNEs' business transactions as it provides the FIRS with access to the requisite information required to carry out TP risk assessments.

3.0 Methodology and Model Specification

This study utilized time series data on real GDP in million dollar, foreign direct investment and trade from the World Bank data base for the period of 1970-2016. The data were standardized to remove scale bias. Unit root test is carried out to investigate the presence of unit root in the data.

In order to achieve the set objectives, this study follows the work of Obasi (2015), but with modification. In Obasi (2015), the following model was stated to investigate the effect of transfer pricing on economic growth in Nigeria.

$$lnGDP_t = \beta_0 + \beta_1 TP_t + \beta_2 UN_t + u_t \dots (1)$$

$$TP_t = FDI_t - CA_t$$

Where GDP is the real gross domestic product, TP is trade mis-invoicing (proxy for transfer pricing), while UN is the unemployment rate. FDI is the foreign direct investment, and CA is the current account balances. This study modifies the above equation (1) by replacing unemployment rates (UN) with exchange rates and trade openness. Reasons for this is that trade and exchange has more impact on transfer pricing than unemployment used by Obasi.

The model is thus stated in algebraic ARDL form below;

$$\nabla GDP_t = \sum_{i=0}^{m} \alpha_i \nabla TP_{t-i} + \sum_{j=0}^{n} \beta_j \nabla EXR_{t-j} + \sum_{k=1}^{o} \gamma_k \nabla TO_{t-k} + \sum_{l=1}^{p} \delta_l \nabla GDP_{t-l} + \theta Ecm_{t-1} + v_t \ldots (2)$$

$$Ecm_t = GDP_t - \vartheta_1 TP_t - \vartheta_2 EXR_t - \vartheta_3 TO_t \ldots (3)$$

Equation 2 represents the short-run error correction model, while equation 3 depicts the long-run relationship between GDP, TP, EXR, and TO. Where EXR is the exchange rates, and TO is the degree of trade openness. Notice that equation (3) has no constant term due to the standardized transformation.

4.0 Data Analysis and Presentation

Table 1: Phillips-Perron unit root test result

	Phillips-Perron @ level			
	gdp_t	exr_t	to_t	tp_t
t-Statistic	**-1.3219**	**-1.1750**	**-1.8690**	**-2.6354**
Prob.	**0.8679**	**0.9022**	**0.6517**	**0.2677**
	Phillips-Perron @ first difference			
t-Statistic	**-4.8921**	**-4.2539**	**-8.7848**	**-9.0076**
Prob.	**0.0017*** **	**0.0090*** **	**0.0000*** **	**0.0000*** **

Source: Author's computation.
(***) denotes significance at 1% level

Table 1 above shows the Phillip-Perron unit root test for standardized real GDP, exchange rates, trade openness, and transfer pricing. We can see from the table above that the variables are difference stationary. The implication of this is that we have to resort to a model that can accommodate integrated variables. Based on above result, we decide to employ an ARDL model in order to achieve the major objective of this study.

Table 2 below shows the ARDL bound test for ARDL(2,0,0,0) model. The calculated bound test F-statistics are significant at 5% and 10% conventional levels; hence, we may conclude that the long run relation expressed in part three of this study above is empirically valid.

Table 2: ARDL Bound test result

Test statistics	**Value**	**Significance**	**I(0)**	**I(1)**
F-statistics	**4.74**	**10%**	**2.01**	**3.10**
K (dof)	**3**	**5%**	**2.45**	**3.63**
Sample size	**39**	**1%**	**3.42**	**4.84**

Source: Authors' computation.

Table 3 below shows the estimated long run relationship between between real GDP and transfer pricing in Nigeria with exchange rates and trade openness as control variables. We can see from table 3 below that real GDP reacted negatively and significantly to rise in transfer pricing in Nigeria. If transfer pricing increases by one standard deviation, the average value of real GDP goes down by 0.24 standard deviation units in the long-run. Interestingly, appreciation of dollar-naira exchange rates impacted positively and significantly on real GDP in the long-run. If exchange rates appreciate by one standard deviation, the average value of real GDP goes up by 0.87 standard deviation units in the long-run. We can also see from the table 3 that, if trade openness rises by one standard deviation, the average value of real GDP goes down by 0.23 standard deviation units in the long-run; a magnitude almost equivalent to that of transfer pricing.

Table 3: Estimated long-run parameters

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
tp_t	**-0.248011**	**0.115657**	**-2.144372**	**0.0395****
exr_t	**0.872404**	**0.122997**	**7.092914**	**0.0000*****
to_t	**-0.238402**	**0.106860**	**-2.230969**	**0.0326****

Source: Authors' computation.
(**)& (***) denotes significance at 5% and 1% levels

Table 4 below shows the short run relationship between real GDP and transfer pricing in Nigeria with exchange rates and trade openness as control variables. The sign of the error correction term is correct and it shows that about 13.9% of disequilibrium in real GDP due to one-time temporary shock is corrected within a year. The correctness and significance of the error correction term proves the convergence of the estimated ARDL model.

Table 4: Estimated short-run parameter

Variable	Coefficient	Std. Error	t-Statistic	Prob.
∇gdp_{t-1}	0.886573	0.127753	6.939737	0.0000***
∇tp_t	-0.034576	0.018032	-1.917462	0.0639*
∇exr_t	0.121625	0.039361	3.089947	0.0040**
∇to_t	-0.033236	0.017940	-1.852613	0.0729*
$dummy$	-0.557932	0.114159	-4.887346	0.0000**
ecm_{t-1}	-0.139413	0.030661	-4.546978	0.0001***
Regression diagnostics tests				
LM(1)-test = 0.10 [0.7469]				
LM(2)-test = 4.19 [0.1228]				
RESET(1) = 1.42 [0.2427]				
HETE(2) = 0.63 [0.9958]				

Source: Authors' computation.
(*), (**), & (***) significance at 10%, 5% and 1% levels.

We can see from table 4 above that real GDP reacted negatively and significantly to rise in transfer pricing in Nigeriain the short run; just like in the long run as shown in the table 3 above. If transfer pricing increases by one standard deviation, the average value of real GDP goes down by 0.035 standard deviation units in the short-run. Also, appreciation of dollar-naira exchange rates impacted positively and significantly on real GDP in the long-run; just like in the long run as shown in the table 3 above. If exchange rates appreciate by one standard deviation, the average value of real GDP goes up by 0.12 standard deviation units in the short-run. We can also deduce from the table 3 that, if trade openness rises by one standard deviation, the average value of real GDP goes down by 0.033 standard deviation units in the short-run; a magnitude almost equivalent to that of transfer pricing. The dummy variable represents the outlying point of year 2004, and this year effect is negative on the economy. The second segment of table 4 above shows the three test statistics adopted to verify the viability of the estimated model. Based on the computed statistics and the significant level, the null hypothesis of no autocorrelation of errors, homoscedasticity, and stability are accepted.

5.0 Discussion of Findings and Recommendations

As we have seen from the body of literature above, transfer pricing effects on an economy is so adverse. Despite the importance enquiries into this area, very little had been done to investigate this effects empirically. This study employ an ARDL model in order to test empirically both the short-run and long-run effects of transfer pricing on Nigeria economy. The results from the unit root test reveal the variables we employ contained unit root, and we conducted a co-integration test to avoid spuriosity. The computed bound test result reveal that there is a long-run relation between real GDP and transfer pricing with exchange rates and trade openness as control variables. Interestingly, we were able to deduce empirically that transfer pricing is indeed dangerous to Nigeria economy both in the short-run and long-run; the effects are negative both in the short-run and long-run. Our findings here is in agreement with the work of Obasi (2015) who also found negative impact of transfer pricing on Nigeria economy both in the short-run and long-run. As expected, we deduced that exchange rates appreciation contributes positively and significantly to the economy both in the short-run and long-run. We can see that trade openness is abused in Nigeria as its estimated coefficient is negative and significant both in the short-run and long-run. Our estimated model is stable and viable as the diagnostic tests of autocorrelation, stability, and heteroscedasticity all accepted their respective null hypothesis.

Conclusively, since we were able to conclude that transfer pricing impacted negatively on Nigerian economy, thus, there is need for policy makers to shift policy in this direction. Government should try to go beyond arm's length method of checking transfer pricing and adopt other methods such as reduction in: ad valorem tariff, capital gain tax, petroleum profit tax and company tax to curtail foreign direct investment engagement in transfer pricing. This in effect will act as an incentive to investment and increase economic growth in Nigeria.

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