Sarcouncil Journal of Economics and Business Management

ISSN(Online): 2945-3593

Volume- 02| Issue- 01| 2023

Research Article

Received: 20-01-2022 | Accepted: 08-12-2022 | Published: 21-01-2023

The Role of Oil Prices in the Pass-Through of Exchange Rates to Consumer Prices: A comparative Analysis of Nigeria and South Africa

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Abstract: This study postulates that changes in oil prices matters in the magnitude and direction ERPT in the context of the oil-importing and oil-exporting perspectives. This hypothesis is motivated by the growing evidence of the significant response of the exchange rate to changes in oil prices. The short-run and long-run dynamics of the ERTP are jointly captured by the study using an ARDL modeling framework. Using quarterly date from 1990 (quarter one) to 2022 (quarter one), the study's findings imply that the incomplete dynamic of the ERPT can be generalized in the short run regardless of the oil-exporting and/or oil-importing characteristics of the economy under consideration. In South Africa, changes in oil prices tend to lessen the inflationary effects of ERPT by reducing the magnitude of the EPRT over both the short and long terms, but same cannot be said for Nigeria.

Keywords: Pass-through; Exchange rates; Consumer prices; Oil prices; Nigeria; South Africa.

INTRODUCTION

Concerned by the abrupt and large changes in exchange rate movements, there has been considerable effort in the literature to quantify the extent to which exchange rate fluctuations are passed through to domestic prices, given the clear implications of the pass-through for macroeconomic stability in general. Essentially, the magnitude and speed of the exchange rate pass-through (ERPT) are critical in the design and implementation of inflation-targeting monetary policy. For instance, while price stability continues to be the fundamental objective of monetary policy worldwide, obtaining low inflation is a challenging undertaking, in part because domestic prices are susceptible to forces outside the control of monetary policy. One such source of domestic inflation is the transmission of exchange rate variations to consumer prices.

There has been a large volume of empirical debate on whether exchange rate pass-through is complete or partial (see Zubair, *et al*., 2013; Uddin, *et al*., 2014; Kumar, 2014; Saha & Zhang, 2014; He, 2015; Yanamandra, 2015; Mohammed, *et al*., 2015; Karagoz, *et al*., 2016; Donayre & Panovska, 2016; Baharumshah, 2017; Cheikh & Zaid, 2019; Ha, *et al*., 2020). Despite their disparate methodologies and focus on economies with diverse structures and institutional settings, the bulk of these studies largely confirm that the ERPT is partial or incomplete. In the case of Choudri (2020), in particular, the pass-through to consumer prices was reported as generally small and lower than the pass-through to import or export prices. However, it has been argued that the weak and declining pass-through in developed and emerging countries is a result of the low inflation environment created by more sophisticated, stable, and credible monetary policies, which better anchor inflation expectations (Taylor, 2000; Gagnon and Ihrig, 2004; McCarthy, 2007; Zyurt, 2016). Furthermore, the majority of these extant studies mostly focus on developed economies with little or no consideration for the fundamentals that have been identified as the underlying sources of fluctuations in exchange rates.

Indeed, there is a growing consensus in ERPT dynamics that the underlying shock that causes changes in exchange rate movement is important (Comunale & Kunovac, 2017; Forbes, *et al*., 2018). This notwithstanding, a sizable chunk of the literature that is currently available on ERPT treats the exchange rate in their pass-through regression as wholly exogenous. Particularly where it matters, failure to account for the shock-dependent characteristics of exchange rates can lead to bias in the measurement of its pass-through and, thus, impair the ability of monetary authorities to forecast inflation. Market conditions and macroeconomic conditions have been identified as the major factors influencing the degree of transmission in the exchange rates. More importantly, the increasing reliance of the world economy on crude oil as a key driver of growth and industrialization also makes the global economy potentially vulnerable to changes in oil prices.

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DOI-https://doi.org/ 10.5281/zenodo.7632442

Several studies have confirmed their findings that changes in oil prices have a significant impact on exchange rates (see Park & Ratti, 2008; Le & Chang, 2011; Roberodo, 2012; Ahmad & Hernandez, 2013; Aloui, *et al*., 2013; Turhan, *et al*., 2014; Fowowe, 2014; Bal & Rath, 2015; Chou & Tseng, 2015; Atems, *et al*., 2015; Bouoiyour, *et al*., 2015). Building on this evidence, we extended the traditional ERPT regression to control for oil prices, not just as an additional variable in the regression but as a potential predictor of exchange rates. Theoretically, a rise in oil prices is predicted to manifest as a transfer of income from oil-importing countries to oil-exporting countries. In other words, a rise in oil prices will result in a transfer of income from oil-importing countries to oil-exporting countries via the trade balance, resulting in a positive current account for net oil exporting countries and a negative trade balance for oil-importing countries (Krugman, 1983; Golub, 1983; Turhan, *et al*., 2014; Buetzer, *et al*., 2016).

From the above theoretical position, comes the suspense that the exclusion of oil prices in exchange rate pass-through regression might lead to incorrect estimates of the magnitude of the ERPT since the exchange rate has been proven to be the channel through which shocks to the oil price are transmitted into the economy. Further, derived from the above theoretical illustration of the shift in wealth is an indication that the extent to which changes in oil prices constitute an underlying source of fluctuations in exchange rates and the extent to which they influence the estimate of ERPT is likely to vary for oil-importing and oil-exporting economies. On this note, this study is revisiting the pass-through of exchange rates to consumer prices in the context of the oil-exporting/oil-importing dichotomy using the cases of the Nigerian and South African economies, respectively. The choice of these countries is not based only on the fact that Nigeria is an oil exporting country which South Africa is an oil importing country; oil plays a significant role in the economies of these two countries and tends to have much impact on their external sector. More importantly, we innovatively follow a two-step procedure in both the methodological and empirical sections of the study to disentangle the specific and direct effects of changes in oil prices on domestic markets from the indirect role of oil prices as the underlying source of fluctuations in exchange rates and their pass-through implications.

The remainder of this paper is organized as follows: Section two presents the model and estimation procedure. Section three explains the data and offers some preliminary analyses. Section four presents and discusses the empirical findings of the study, while Section five concludes the study.

Model and Estimation Procedure

The Model

In order to model ERPT to domestic inflation, we alter the modern Keynesian formulation of short-run aggregate supply, that is, the short-run Phillip curve equation. Rather than imposing a perfectly inelastic constraint, as suggested by the long run Phillips curve, this model is chosen specifically to define the short run relationship between output gap and inflation. Romer (1996) specifies the short-run Phillips curve as below:

$$\pi_t = \alpha + \gamma(\pi_{t-1}) + \lambda\left(\ln Y - \ln \bar{Y}\right) + \varepsilon_t \quad (1)$$

Equation (1) is our baseline model, where inflation (π_t) is expressed as a function of two components, namely, its past values (π_{t-1}) and output gap (yg). The latter measured as $(\ln Y_t - \ln \bar{Y}_t)$ is a proxy for the demand-side economic condition such that Y_t is the actual output and $\bar{Y}_t$ is the potential output that is being measured using the Hodrick Prescott Filter. Moving forward, we augment the Phillips curve model in equation (1) with additional components to capture, in particular, the pass-through effect of exchange rate fluctuations.

$$\pi_t = \alpha + \gamma(L)\pi_t + \lambda\left(L\right) yg_t + \delta(L) exr_t + \varepsilon_t \quad (2)$$

where $\gamma(L)$, $\lambda(yg)$, and $\delta(exr)$ are the polynomial in the lag operator of inflation rate, the output gap and changes in exchange rates, respectively. However, while the estimated coefficients of all parameters, for instance, γ, λ and δ are predicted to be positive, it is

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instructive that the magnitude of the parameter (i.e. δ) might be sensitive to the underlying source of fluctuation in exchange rates. One of such fundamental that have been widely established in the literature is changes in oil prices. Often considered as a default source of fluctuations in exchange rate is monetary policy, so we expand the model in equation (2) to include not just the role of oil prices (*op*) but to also control for monetary policy rate (*mpr*) in the specification.

$$\pi_t = \alpha + \gamma(L)\pi_t + \lambda(L)yg_t + \delta(L)exr_t + \eta(L)op_t + \phi(L)mpr_t + \varepsilon_t \quad (3)$$

However, in addition to the likely explicit pass-through effect of oil prices on domestic inflation from the supply-side effect of the economy, the implicit role of oil prices, such as its potential role as the underlying source of exchange rate fluctuations and the resulting pass-through effects of exchange rate to domestic inflation, is equally of interest in this study. To do this, we modified the extended model in equation (3) once more to incorporate an interaction term between the exchange rate and oil prices (*exr*op*), as indicated in the equation below.

$$\pi_t = \alpha + \gamma(L)\pi_t + \lambda(L)yg_t + \delta(L)exr_t + \eta(L)op + \phi(L)mpr_t + \psi(L)exr*op + \varepsilon_t \quad (4)$$

The magnitude and direction of the parameter (ψ) in equation (4) is of great importance in this study to determine the extent to which changes in oil prices matters in particular in the magnitude of ERPT into domestic inflation.That said, the probable effect of the role of oil prices on the magnitude of ERPT is likely to be sensitive to the oil-exporting and/or oil-importing peculiarities of the investigated economy. Hence, the innovation herein is to analyze the parameters of interest in equation (4), for instance (ψ), in the context of oil-exporting and oil-importing economies using the cases of Nigeria and South Africa, respectively.

ESTIMATION METHOD AND DATA

For the estimation of equation (4), we chose the ARDL model developed by Pesaran, *et al*. (2001) because it captures the anticipated short-run and long-run dynamics of the ERPT while accounting for the role of oil prices as the probable underlying source of exchange rate variations. Thus, the ARDL representation of equation (4) is as given below.

$$\Delta\pi_t = \alpha_0 + \beta_1\pi_{t-1} + \beta_2 yg_{t-1} + \beta_3 exr_{t-1} + \beta_4 op_{t-1} + \beta_5 mpr_{t-1} + \beta_6 exr*op_{t-1} + \sum_{i=1}^{N1}\gamma_i\Delta\pi_{t-i} + \sum_{j=0}^{N2}\lambda_j\Delta yg_{t-j} + \sum_{j=0}^{N3}\delta_j\Delta exr_{t-j} + \sum_{j=0}^{N4}\eta_j\Delta op_{t-j} + \sum_{j=0}^{5}\phi_j\Delta mpr_{t-j} + \sum_{j=0}^{6}\psi_j\Delta exr*op_{t-j} + \varepsilon_t \quad (5)$$

where π_t is the logarithm of consumer price index used as a proxy for inflation; yg_t is the logarithm of difference of actual output (Y_t) and potential output ($\overline{Y}_t$)measured using industrial production index with the Hodrick Prescott Filter the method used to obtained the output gap.

Following Salisu, *et al*. (2017) procedure, the long run parameters for the constant variable and slope coefficients are computed as: The long run parameters for the intercept and slope coefficients are computed as: $-\frac{\alpha_0}{\beta_1}$; $-\frac{\beta_2}{\beta_1}$; $-\frac{\beta_3}{\beta_1}$; $-\frac{\beta_4}{\beta_1}$; $-\frac{\beta_5}{\beta_1}$ and $-\frac{\beta_6}{\beta_1}$ since in the long run it is assumed that $\Delta\pi_{t-i} = 0$ and same holds for other variable in the specification such as: $\Delta yg_{t-j} = 0$; $\Delta exr_{t-j} = 0$; $\Delta op_{t-j} = 0$; $\Delta mpr_{t-j} = 0$ and $\Delta exr*op_{t-j} = 0$. The short run estimates are in particular obtained as: γ_i for the past value of inflation; λ_j for economic condition measured in terms of output gap; δ_j for exchange rate pass-through effect; η_j for the changes in oil price; ϕ_j for monetary policy rates and ψ_j for the interaction effects of exchange rate and oil prices.

Since the variables in first differences can accommodate more than one lag, determining the optimal lag combination for the ARDL becomes

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necessary. To determine the optimal lag length, the Schwartz Information Criterion (SIC) lag length selection method is used, and the preferred ARDL is then explored to determine the presence of long run estimates in the model. The procedure for performing cointegration tests or determining long-run relationships within the ARDL modelling framework is known as the Bounds test. However, the ARDL model in equation (5) is further re-written as shown below to include an error correction term.

$$\Delta\pi_t = \alpha_0 + \xi\upsilon_{t-1} + \sum_{i=1}^{N1}\gamma_i\Delta\pi_{t-i} + \sum_{j=0}^{N2}\lambda_j\Delta yg_{t-j} + \sum_{j=0}^{N3}\delta_j\Delta exr_{t-j} + \sum_{j=0}^{N4}\eta_j\Delta op_{t-j} + \sum_{j=0}^{5}\phi_j\Delta mpr_{t-j} + \sum_{j=0}^{6}\psi_j\Delta exr*op_{t-j} + \varepsilon_t \quad (6)$$

The term υ_{t-1} is the linear error correction term with the parameter ξ measuring the speed of adjustment.

In terms of variable definition, and with respect to the exchange rate variable, the common practice in the literature is the use of the log of the nominal effective exchange rate calculated as the trade-weighted average of the domestic currency of the investigated economy against a basket of other currencies. But, given the dominance of the US dollar as a reference currency in the individual economies being investigated in this study, a natural logarithm of the bilateral exchange rate with USD as the reference currency is considered the most appropriate. The fact that oil prices, another variable of interest in this study, are usually quoted in US dollars adds to the appropriateness of this approach as a measure of exchange rate. Finally, while oil prices as a global variable are measured in terms of the log of the Brent crude oil prices given the relatively large market coverage of the Brent compared to other global oil price benchmarks, the monetary policy variable, on the other hand, is measured using the interest rate, which is widely utilized by central banks as a tool for market intervention.

The data for the study span from 1990 to 2022. All the variables for both Nigeria and South Africa are quarterly time series spanning quarter one (March) 1990 to quarter one (March) 2022. The data were mainly sourced from the online databases of the International Financial Statistics (IFS) and Federal Reserve Bank (FED). The only exceptions are the Nigerian exchange rates and interest rates, which were sourced from the online database of Nigeria's Central Bank.

DESCRIPTIVE ANALYSIS

Table 1 contains the descriptive statistics both for Nigeria (an oil exporting economy) and South Africa (an oil importing economy), respectively. A cursory look at the table shows that the consumer price index, a measure of domestic inflation in the context of this study, is on average higher in Nigeria compared to South Africa. This indication of probable varying inflationary trends in Nigeria and South Africa is not scientifically established at this juncture just yet, but offers pre-evidence that supports our quest to understand the dynamics of exchange rate pass-through from the comparative perspectives of oil-exporting and oil-importing economies. In another development, the mean statistic on economic conditions, which at this point is merely measured in terms of an industrial production index, appears to be higher for Nigeria compared to South Africa. However, while this tends to affirm Nigeria as the bigger of the two economies, the depreciation of their respective currencies relative to the US dollar is on average significantly higher for Nigeria compared to South Africa. The mean statistic shows that the interest rate in Nigeria is 100% higher compared to that of South Africa, while the average quarterly oil price, which is a global variable in the context of this study, is \$50 per barrel for the period under consideration.

With respect to other statistics of interest in the table, the standard deviation, for example, is reasonably large for all the variables and irrespective of the oil-exporting and/or oil-importing dynamics of the economy, thus suggesting there is substantial dispersion between maximum and minimum values. In terms of the skewness statistic, the values are mainly positive for all the variables with the output gap the only exception in the case of South Africa. In the case of kurtosis statistic, the results are mixed across the variable in the case of Nigeria but largely platykurtic in the case of Nigeria. In conformity to the non-zero of the skewness statistics across both economies and the fact that the kurtosis statistic exhibits feature of left-tail and right-tail, the Jarque-Bera (JB) statistic in both economies

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consistently exhibits the series as not normally distributed.

Table 1: Summary Statistics

	Mean	**Std. Dev.**	**Skewness**	**Kurtosis**	**JB Stat.**	**Obs.**
Oil-exporting country: Nigeria						
π_t	97.54	97.14	1.22	3.63	34.14***	129
gap_t	103.06	15.56	0.29	1.81	9.25**	129
exr_t	158.34	94.98	1.32	3.71	39.98***	129
op_t	50.32	32.34	0.67	2.26	12.51***	129
mpr_t	18.89	4.28	1.42	6.97	127.27***	129
Oil-importing country: South Africa						
π_t	87.99	43.34	0.44	2.03	9.25**	129
gap_t	90.43	10.79	-0.39	2.29	5.97**	129
exr_t	8.15	3.99	0.51	2.25	8.55**	129
op_t	50.27	32.22	0.68	2.28	12.65***	129
mpr_t	9.53	3.97	0.63	2.42	10.40***	129

Source: Computed by the Authors

Note: In order to sustain the real statistical values of the variables particularly in the context of the preliminary analysis, the descriptive statistics presented in the table were performed with the variables in their level form. More so, while the term Std. Dev. In the table represents Standard Deviation statistic, the term JB on the other hand denotes Jarque-Bera

One of the prerequisites for modelling with time-series is to determine the integration dynamics of the variables of interest by subjecting them individually to a unit root testing procedure. To this end, we utilize both the Augmented Dickey-Fuller (ADF) unit root test and its extended variant, for instance, Dickey-Fuller GLS (DF-GLS), to test the stationarity property of each of the individual series under consideration. Thus, presented in Table 2 are unit root testing results. However, where there is conflict regarding the outcomes of the two alternative unit root tests performed, the DF-GLS would be favored as superior to the ADF. For example, despite the prominence of the ADF as the workhorse of unit root testing in the literature, the low power associated with the ADF null against the stationary alternative, particularly when trend is included in the specification, has been the major shortcoming of the ADF test. As a result, Eliott, *et al*. (1996) proposed an extension to the conventional ADF and the outcome of the augmented ADF test. For instance, DF-GLS showed significantly greater power than the traditional ADF. However, while a look at table 2 shows some few instances of such conflict regarding the outcomes of the two tests, quite an interesting finding is the fact that the order of integration falls between I(0) and I(1), thereby justifying our choice of the ARDL framework as the most appropriate estimation technique irrespective of the unit root test considered.

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Table 2: Unit Root Results

	ADF test			DF-GLS test		
	Level	First Difference	I(d)	Level	First Difference	I(d)
Oil-exporting country: Nigeria						
π_t	-5.239^b***	NA	I(0)	-1.597^b	-2.546^b**	I(1)
gap_t	-4.130^b***	NA	I(0)	-4.003^b***	NA	I(0)
exr_t	-1.439^b	-9.986^b***	I(1)	-1.473^b	-9.915^b***	I(1)
op_t	-2.574^b	-9.450^a***	I(1)	-2.566^b	-8.055^b***	I(1)
mpr_t	-3.411^b**	NA	I(0)	-3.450^b**	NA	I(0)
Oil-importing country: South Africa						
π_t	-4.142^b***	NA	I(0)	-0.724^b	-5.949^b***	I(1)
gap_t	-4.142^a	-13.800^b***	I(1)	-1.752^b	-4.450^b***	I(1)
exr_t	-2.415^b	-9.112^a***	I(1)	-2.218^b	-9.009^b***	I(1)
op_t	-2.574^b	-9.450^a***	I(1)	-2.566^a	-8.055^b***	I(1)
mpr_t	-3.643^b**	NA	I(0)	-3.566^b**	NA	I(0)

Note: The syntax ***, ** & * implies rejection of the null hypothesis of unit root at 1%, 5% and 10% levels of significance, while the term NA mean 'not applicable'.

Source: Computed from the Authors Estimation

EMPIRICAL RESULTS

Presented in Table 3 is regression estimates on the pass-through effects of exchange rate fluctuations to domestic inflation rates in Nigeria (oil-exporting economy) and South Africa (oil-importing economy). Thus, while there are other important variables included in the estimated regressions, such as; the output gap to control for economic condition and interest rates to control for monetary policy, of utmost importance in this study are the coefficient on the exchange rate, which is all that matters for determining the direction and magnitude of the ERPT, and the coefficient on the interaction term (*exr*op*) which as demonstrated in our subsequent discussion provide us with a veritable insight on the extent to which changes in oil prices matters in the magnitude and direction of ERPT.

Starting with the former, a cursory look at the ARDL estimates in table 3 shows there is both short and long run dynamics of explicit pass-through of exchange rate fluctuations into domestic inflation in Nigeria and South Africa. But while the effect of the pass-through is inflationary in both economies given the positive sign on the coefficients, the short run and long run dynamics of the magnitude of the effect tends to vary and across the oil-exporting and oil-importing peculiarities of the investigated economies. First, we find the short run magnitude of the ERPT at 0.09% and 0.03% for Nigeria and South Africa as largely in conformity to that of the majority of the previous studies whose finding suggests that fluctuations in exchange rate are only partially transmitted to domestic inflation (see Aisen, *et al*., 2021, for detail review on the findings of previous studies). However, while this is an indication that the pass-through at least in the short run is incomplete in both economies, it must be equally pointed that the magnitude yet seems higher in Nigeria compared to South Africa.

Second, in addition to the Bounds testing results, where the null hypothesis of no integration of long run relationship is significantly rejected statistically both in Nigeria and South Africa, the long run coefficients on ERPT are evidently larger in both economies in terms of the magnitude compared to what is obtainable in the short run dynamics of the regression. In fact, at 0.95% in Nigeria it can be both theoretically and empirically infers that, unlike in the short run situation, fluctuations in exchange rate is likely to be completely transmitted into domestic inflation in oil-exporting economy. With respect to South Africa an oil-importing economy, the magnitude of the pass-through at 0.66% can still be considered partial or incomplete even in the long run, but what is clearly undeniable is the fact that compared to the short run situation, the magnitude of the ERPT are likely to be significantly higher in both economies in the long run.

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Table 3: ARDL estimates on exchange rate pass-through into domestic inflation rates

Short-Run	Oil-exporting country: Nigeria			Oil-importing country: South Africa		
	Coefficient	***SE***	***T-stat.***	***Coefficient***	***SE***	***T-stat.***
Constant	0.7891**	0.3398	2.3218	0.2897***	0.0439	6.5895
$\Delta\pi_{t-1}$	-0.0319***	0.0098	-3.2532	-0.0384***	0.0070	-5.4988
Δgap_t	0.0316	0.0546	0.5803	0.0345**	0.0108	3.1923
Δexr_t	0.0943***	0.0334	2.8234	0.0254	0.0110	2.3081
Δop_t	0.1744***	0.0509	3.4232	0.0141**	0.0067	2.1102
Δmpr_t	-0.0132	0.0276	-0.4795	0.0143***	0.0036	3.9886
$\Delta exr_t * op_t$	0.0367***	0.0113	3.2401	0.0159***	0.0033	4.7260
ECM_t	-0.0319***	0.0002	-13.5718	-0.0384	0.0014	-27.4949
Long-Run						
gap_t	0.9923	1.7437	0.5691	0.8973**	0.3494	2.5677
exr_t	0.9550**	0.3836	0.1357	0.6615**	0.3095	2.1369
op_t	5.4625***	2.0412	2.6760	0.3686**	0.1692	2.1787
mpr_t	-0.4150	0.8151	-0.5091	0.3736***	0.1371	2.7240
$exr_t * op_t$	1.1509***	0.4360	2.6395	0.4136***	0.0882	4.6851
Bound Test Cointegration Results						
Level of Significance	**Nigeria**			**South Africa**		
	F-stat	***I(0)***	***I(1)***	***F-stat***	***I(0)***	***I(1)***
10%	5.07***	2.30	3.15	10.89***	2.30	3.15
5%		2.55	3.60		2.55	3.60
1%		3.35	4.59		3.35	4.59

Diagnostic and Post-Estimation Results

	Adj-R2	***F-stat.***	***Linearity test*** **Ramsey RESET**	***Autocorrelation test*** **Q-Stat.**
Nigeria	0.94	25043.18 (0.0000)	24.697 (0.131)	24.697 (0.194)
South Africa	0.52	451.977 (0.0000)	2.348 (0.128)	14.455 (0.210)

Source: Computed from the Authors Estimation

Note: SE represents standard error, while ***, **, and * imply significant at 1%, 5%, and 10% levels of significance.

From a non-technical point of view, deciphered from our finding thus far, suggests that the magnitude of the effect of the pass-through of exchange rate fluctuations into domestic inflation is relatively higher at least in absolute terms for a net oil-exporting economy (Nigeria) compared to a net oil-importing economy (South Africa). More so, the dynamic of the pass-through is wholly partial(incomplete) in the short run irrespective of the oil-exporting and/or oil-importing peculiarities of the investigated economies. Whereas the results are rather mixed in the long run, such that the pass-through is complete in the case of Nigeria (oil-exporting economy) but yet incomplete in the case of South Africa (oil-importing economy). What is however, largely unanswered and therefore constitute a major innovation in this study's finding is the hypothesis that oil prices matter in the partial or complete dynamics of the pass-through of exchange rate fluctuations into domestic inflations.

Regarded as potential underlying source of fluctuation in exchange rate, a further look at table 3 not only reflects the significant explicit effects of changes in oil prices on domestic inflation rates, but also its implicit role as evident with the statistically significance of the coefficients on the interaction terms. However, unlike in South Africa

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where changes in oil prices appear to reduce the magnitude of ERPT both in the short and long run situations and by implication further enhancing the incomplete or partial dynamics of ERPT in South Africa, the reverse appears to be the case in Nigeria particularly in the long run. For instance, while changes in oil prices also appears to enhances the short run incomplete dynamic of ERPT in Nigeria, the reverse is largely the case in the long run where the coefficient on ERPT is 1% suggesting that changes in oil prices tend to induces the pass-through effects of fluctuations in exchange on domestic inflation in oil-exporting country.

CONCLUSION

This study explored a comparison approach to evaluate the explicit and implicit role of oil prices in the pass-through of exchange rates to domestic inflation rates in Nigeria (an oil-exporting economy) and South Africa (an oil-importing economy). The study uses an ARDL modelling framework to capture simultaneously the short-run and long-run dynamics of the ERTP. Findings from the study suggest that, regardless of the oil-exporting and/or oil-importing characteristics of the investigated economy, the ERPT's incomplete dynamic can be generalized in the short run. However, while the degree of the EPRT is likely to be significantly higher in the long run in both economies, quite instructive is the fact that the dynamic of the pass-through varies for Nigeria (an oil-exporting economy) compared to South Africa (an oil-importing economy). Essentially, there is potential for complete pass-through of the fluctuation effects of the exchange rate to domestic inflation in the oil-exporting economy (Nigeria). However, the ERPT is likely to remain partial or incomplete in the case of South Africa, even in the long run.

Furthermore, changes in oil prices, which double as a probable underlying source of fluctuations in exchange rates, tend to reduce the inflationary implications of ERPT in South Africa by causing the magnitude of the EPRT to fall in both the short and long runs. The opposite is likely to be true in Nigeria, especially in the long run where changes in oil prices show the tendency to increase the long run degree of ERPT. This latter indication of the varying roles of oil prices in the dynamics of ERPT in an oil-exporting economy compared to an oil-importing economy has further fueled a new strand of debate and suggestions for future study. For instance, changes in oil prices have been proven to be asymmetric, such that the economy reacts differently to positive changes in oil prices compared to negative changes. Future research studies might find it interesting to investigate further whether the varying role of oil prices in the ERPT in oil-exporting countries compared to oil-importing countries is due to the asymmetric feature of oil prices.

The study's findings provide some directions for further investigation into the potential inflationary effects of exchange rate pass-through to domestic pricing in both oil-exporting and oil-importing nations. A pre-evidence-based policy option that considers changes in oil prices as an accelerator of exchange rate pass-through should form the core of the monetary policy for a country or countries that rely on oil, either as a major oil importer or major oil exporter, to mitigate any potential negative effects of exchange rate pass-through. Second, monetary policy aiming to offset the possible negative impacts of exchange rate fluctuations on inflation in the researched oil-importing and oil-exporting countries should be based on a knowledge of the ERPT's varying dynamics in short-run and long-run scenarios.

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Publisher: SARC Publisher

Source of support: Nil; **Conflict of interest:** Nil.

Cite this article as:

Lawal-Arogundade, S.O., Salami, L.O. and Amaghionyeodiwe, L.A. "The Role of Oil Prices in the Pass-Through of Exchange Rates to Consumer Prices: A comparative Analysis of Nigeria and South Africa." *Sarcouncil Journal of Economics and Business Management* 2.1 (2023): pp 1-10.

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