

Common External Tariff and Household Welfare in Nigeria

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ABSTRACT

Economic integration into the global markets offers the opportunity for rapid growth and poverty reduction, particularly in developing countries. It is believed that lowering trade barriers on imported goods provides the consumers with welfare gains, access to better-quality products and lower prices. Therefore, this paper investigated the impact of common external tariff on household welfare in Nigeria within the period of 2005 to 2021. This study is a quantitative research and the data were sourced from World Bank Integrated Trade Solution database, World Bank Commodity Price data and National Bureau of Statistic. The data collected were analyzed using Auto Regressive Distributive Lag (ARDL). The results of the study show that common external tariff are significant and positively impacted on household welfare while tariff changes has significant but negative impact on household welfare. The study, therefore, strongly recommends that all closed borders should be opened in order to discourage smuggling and illegal routes of importing goods while advocating the adoption of Africa's free trade agreement for better opportunities for export of domestic manufactures

Keywords: common external tariff, household welfare, rural Nigeria Jel Classification Codes: H2, F13, D6, O18

INTRODUCTION

International trade serves as an important tool with which any country, especially developing country like Nigeria, could integrate with the rest of the world. Its importance in globalization offers developing countries the opportunity and potential for rapid growth and poverty reduction. Nigeria and other developing countries continue to participate in the global market because of the embedded opportunities in global trade among others (Kareem, 2015). It is believed that lowering trade barriers on imported goods provides the consumers with welfare gains, lower prices and access to better-quality products. (Kareem, 2015). According to Nigerian Bureau of Statistics (2020), the economy of Nigeria advanced 2.55% year-on-year in the Fourth Quarter of 2019 compared to an upwardly revised 2.28% rise in 2018 which is the previous period. It was the strongest expansion since the Third Quarter of 2015, mainly driven by the oil sector. The growth in the Gross Domestic product of 2.55% in Nigeria has not trickled down to the majority of the population, thus this strengthens the status of Nigeria as a rich country with majority of the population in poverty (Kareem, 2015). For instance, according to the world poverty clock (2019) more than 91 million Nigerians are extremely poor and live on less than 1\$ a day.

Nigeria has made effort to liberalize trade with a view to reaping trade-related benefits. One of such effort was Nigeria's acceptance of the Economic Community for West African States (ECOWAS) Common External Tariff (CET) in 2005. A Common External tariff suggests that the same rate of customs duty should be charged on all goods entering the customs region of any country of the union. During the transition period of 2006 to 2007, ECOWAS-CET reduces tariff rates from 0% – 150% to 0% – 50%. These tariffs stand as ECOWAS Most Favored Nation (MFN) rates to non-member countries and are part of the

trade liberalization scheme (Olayinka, 2018). Five tariff band was established by ECOWAS-CET namely 0% duty on capital goods, machinery and essential drugs not produced locally, 5% on imported raw materials, 10% for intermediate goods, 20% for finished goods that are not produced locally and 35% on goods in certain sectors that the Nigerian government seeks to protect(Olayinka,2018). Nigeria accounts for more than half of the sub-region's imports, its total imports increased from \$6billion in 1990 to \$64billion in 2011, while ECOWAS' total imports rose from \$14billion in 1990 to \$111billion in 2011 (UNCTAD, 2013). In terms of imports composition, Nigeria accounted for 40% of ECOWAS' agricultural import in 2009 and 79% in 2011, while it had 79% and 65% of industrial import in 2009 and 2011, respectively. In 2019, its total import grew by 28.8% compared to 2018. However, the value of imported agricultural goods decreased to 2.8 % in 2019 as against an increase of 6.6% in 2018. These statistics show the huge trade impact of Nigeria in the sub-region and explain its late and reluctant acceptance of the trade liberalization scheme of ECOWAS (World Integrated Trade Solution, 2013).

In Nigeria, many households are producers and consumers of goods (Nzeka,2014). However, ECOWAS CET does not reflect intended progress towards trade liberalization as individual countries still have sovereignty over imposition of levies, taxes, quotas, import bans etc, Member countries including Nigeria are also allowed to continue to employ restrictive trade policy on many agricultural and food products (Nzeka, 2014). Recently, a number of restrictive trade measures have been used, such as high tariffs, special levies and import bans, to protect domestic industries with minimal output but adverse side effects (World Bank 2010). With import bans and levies sustained, the price of the average consumption bundle for all consumers at the same income level were inflated by the CET-induced price changes by up to 0.7% on average, disproportionately affecting the poor. If there is an increase on imported product tariff, households will shift consumption away from imported products to domestic products. A significant share of this loss could be offset by expected revenue gained from increased formalization of imports because the CET may reduce the incentives for informal trade. In CET scenario, the removal of import bans and levies, would significantly benefit Nigerian consumers, who could expect to see the price of their consumption bundle decline. The main channel of impact would be the removal of the levy on rice. For instance, the reduction of the price of rice would be the main driver of this welfare gain, notably for the poor, but the poor cannot even afford to buy a bag of rice. This poses a serious problem to the poor (Antonie & Erik, 2015). Again, CET implementation would benefit the majority of manufacturing firms in Nigeria (between 60 and 75 percent), accounting for the majority of manufacturing jobs(Antonie & Erick, 2015). Their profits are expected to be higher after the reform due to lower prices on intermediate inputs, and in some cases higher protection for these firms' outputs. Firms that are already exporting can also be expected to gain through cheaper access to intermediate inputs, greater preferential market access. To improve the household welfare, the income from sales constitute the larger proportion of household income because sales of agricultural and manufacturing goods constitute the larger proportion of household income. Expenditure on agriculture, especially food items often form bulk of the household expenses. In the rural areas, agricultural sales often constitute the bulk of the income to the household. Food goods from local and imported sources must be chosen by households. As a result, the primary factor in choosing a speculative investment remains the price of food products. Consumers' households will switch away from imported goods if the levy on imports rises. Therefore, it is important to draw attention to how changing tariffs affect consumers' wellbeing and the impact of common external tariff on welfare.

Having introduced the study in Section 1, Section 2 is on overview of the structure of Nigeria CET trade policy. Section 3 is a review of both theoretical and empirical literature while Section 4 discusses methodology. The Section 5 contains analysis of data and discussion of findings while the summary and conclusion is discussed in Section 6.

OVERVIEW OF STRUCTURE OF NIGERIAN CET TRADE POLICY

Nigeria is Africa's most populous nation, endowed with abundant hydrocarbon resources and offering large

potential opportunities for international trade and investment (Metu et al, 2019). Nigeria’s trade policy has been rather protective. Only recently, the country has made efforts, along with other sub-regional partners, to liberalize trade in order to reap benefits related to trade liberalization. One such effort was Nigeria’s acceptance of the ECOWAS-CET. Prior to consenting to the CET, Nigeria had a maximum tariff peak of 150%, which was reduced to 50% during the transition period. This indicates that the country liberalized its trade by about 67% following the ECOWAS-CET. Imports responded accordingly, with a 85% increase in 2011 compared to the 1990 level (Trade Policy Review,2017).

In April, 2015, Nigeria started the implementation of the ECOWAS CET for a period of five years i.e. (2015-2019). The government introduced a fifth band CET at a rate of 35% on specific goods for the development of the economy. Adding to CET, some other national measures were taken such as Import Adjustment Tax (IAT) and Special Protective Tax (SPT) in order to allow them adjust to the system of tariff. The IAT can be imposed where the duty of a nation is higher than the duty specified under the ECOWAS CET which can be applied for a period of three to four years.it is also designed through a smooth process to adjust to a lower tariff. On the other hand, SPT is applied where the volume of import of products coming into the customs territory of member state equals or exceeds 25% of the average import for the preceding 3 years of which data could be found (Hassan Bello, 2017).Nigeria also maintains several supplemental levies and duties on selected imports that significantly raise effective tariff rates. For example, Nigeria has an effective duty tariff, levy, excise and value added tax (VAT) of 50% or more on over 80 tariff lines. These include about 35% tariff lines whose effective exceed the 70% limit set by ECOWAS. Most of these items are luxury goods such as motorboats, vehicle (75%), Alcohol (75-95%), tobacco products (95%). Also there is high effective duty rate on imports into some strategic sectors to boost the competitiveness of the local industries. Such sectors are agriculture where wheat has rate of 85%, sugar (75%), rice (70%), Tomato paste (50%), Salt (70%) and cement (55%)(Nigeria country commercial guide, 2019)

Table 1: Structure of Nigeria ECOWAS Common External Tariff

Category	Description of goods	Rate	Existing Tariff Lines	CET Tariff
1	Essential social goods	0%	374	85
2	Basic raw materials and capital goods	5%	2001	2146
3	Intermediate product	10%	680	1373
4	Final consumer goods	20%	2582	2165
5	Specific good for economic development	35%	193	130

Source: Nigeria customs service

In Nigeria, the current structure of CET is inadequately protective of domestic industries as it offers less nominal protection to the intermediate and finished consumer goods in the sub-region. The lowering of tariffs to 35% from a high of 150% would hit Nigerians industrial capacity. Before the introduction of CET in 2015, some raw materials attracted 2.5%. But today, with the fixing of raw materials at 5% under CET, the duty on raw materials has been increased by 100%. However, with this cost disadvantage, Nigeria will not be able to compete with other countries.

As categories of imports for which access to foreign exchange from CBN is banned, the government engaged in import prohibitions and restrictions to protect domestic industries. For instance, the government prohibited imports of specified goods such as rice in 2013 and vehicles in 2016. These measures meant to combat smuggling but it indirectly affected the prices of domestic goods (Trade Policy Review, 2017).

Few studies on the economic impact of CET on households in Nigeria exist. Such studies include Balogun and Dauda (2012); Oyejide (2012); Urama, et al., (2015); Kareem, (2015), but these studies did not pay specific attention to the effect of tariff changes on the welfare of households in Nigeria. Hence, this study examined the impact of CET on household welfare as well as the effect of tariff changes on the welfare of households in Nigeria.

REVIEW OF RELATED LITERATURE

Theoretical Literature

This study adopts the Theory of Optimum Tariff propounded by Robert Heller, Scammel and Kindelberger in 1844. The theory is concerned with determining the rate of tariff that can ensure the improvement in terms of trade consistent with the maximization of welfare. It argues that a country who has monopsony power and imports more of their product can shift the economic burden from domestic consumers to foreign suppliers. This implies that the supply will be relatively inelastic which forces exporters to reduce their pre-tariff prices. Thus, in order to maintain the same level of supply and allows countries importing to capture revenue which the exporters received previously, they have to increase tariff. The theory assumes that the extent a country indulges in increasing tariff will improve its terms of trade and also economic welfare. When a country imposes tariff to improve its trade, the country gains but if there is reduction in the volume of imports and exports, it incurs cost. Therefore, if the gain from tariff is greater than the cost, the country's welfare improves. On the other hand, if tariff cost is greater than the gain, there will be reduction in the level of economic welfare thereby worsening the terms of trade. Hence in such scenario, it is appropriate for the country imposing tariff to reduce it. Optimum Tariff theory also suggests that if a country has so much market power to influence the prices of goods, the country would be better off through imposition of tariff than being operating under the free trade system. The theory believes that the point of optimum tariff is reached when tariff does not increase the net benefit further to a given country and where a maximum economic welfare is achieved.

Empirical literature review

Trade liberalization is generally believed to be a crucial component of the macroeconomic policy necessary for socio-economic wellbeing and growth. Tariff results in global welfare gains as each trading country will maximize output based on comparative advantage (Balogun & Dauda, 2012). The adoption of the CET has had different effects on households, depending on whether they are net consumers or producers of commodities. The literature on the welfare impact of this type of trade policy does not provide clear conclusions. For instance Kareem, (2015) using micro and macro data investigated the distributional effects of Common External Tariff (CET) of the Economic Community of West African States (ECOWAS). The findings indicate that domestic prices declined due to the higher tariff pass-through. This decline was higher in states closer to ports and borders, which face lower trade costs. The ECOWAS CET had net positive effects on the welfare of households, largely due to the gains from the outflow basket. The outflow gains were got from the adoption of the trade policy through lower prices, which offset losses incurred in their purchasing power through lower income. Further, it was discovered that richer households experienced less welfare gains than the poorer ones, while the income of urban households was better than rural. Nicita (2009) examined the effect of trade liberalizations on Mexican households through consumption, production and wage earnings channels. Reductions in import tariff lowered the prices of agricultural and manufacturing goods and household income was increased through the consumption channel. The study found that as the poor relied more on self-produced goods, the welfare gains through consumption

outweighed the welfare losses through production. He also found that households closer to United States border had more benefit of the trade reform. Porto (2006) studied the effect of the MERCOSUR, the Common Market of the South on urban Argentine households through consumption and earnings channels. The study found that import tariff reductions induced by MERCOSUR benefited poor households in Argentina. There is reduction in Poor households' welfare through the consumption channel because they consume relatively more of the goods whose price increased. However, through consumption, the welfare gains through earnings exceeded the welfare losses, thereby increasing welfare gains for the poor.

Some literature also examined the welfare impact of CET on household, for instance Bahta and Groenewald (2015) using a computable General Equilibrium determined the impact of Southern Africa Common External Tariff (CET) on the welfare and economy of Lesotho. The result indicate that CET for non-SACU (Southern African Custom Union) members were likely to cause significant decrease in exports of textile which is their main export product. The study also found that CET also causes a decline on the capital, labour and welfare of Lesotho household. Orkoh (2015) assessed the welfare effects of changes in the domestic prices of commodities as a result of Ghana's adoption of the common external tariff of the Economic Community of West African States (ECOWAS), with specific interest to gender differences. He found that price changes would improve the welfare of poor and female-headed households as consumers, but reduce the welfare of both poor and rich households as producers, with male headed households being the most affected. Wonyra, Ametoglo and Guo, (2017) using non-parametric regression evaluates the welfare outcomes of implementing the ECOWAS common external tariff in Togo, with a specific focus on gender. The study found that the share of household expenditure allocated for food declines as the income level increases, in both urban and rural areas and for both male- and female-headed households. The results also show that for self-employed farmers, ECOWAS-CET negatively affects welfare of consumer households in Togo. Seshan (2005) empirically analyzed the distributional impact of trade policies on households in a low-income country with a large rural economy where labor markets are imperfect with special focus on international market integration in Vietnam's rice sector and fertilizer market between 1993 and 1998. The study found that Vietnam's agricultural trade reforms did not contribute to a significant improvement in overall household welfare or decline in poverty over this period. Johnson and Dorosh (2017) analyzed the welfare implications of alternative tariff rates in Nigeria given the government's goals of spurring domestic production and reducing imports. Results showed that tariff rates that exceed about 40% introduced some smuggling through the north when it becomes more profitable than importing through official channels in the south. It is also at this tipping point that government tariff revenues are maximized. With smuggling, there is higher tariff rates in which the south (urban areas) experienced greater welfare losses.

There are few studies in Nigeria on the economic impact of CET and they include Balogun and Dauda (2012); Oyejide (2012); Urama, et al., (2015). Kareem, (2015) examined the impact of CET on household welfare in Nigeria but neglected the effect of the tariff changes on welfare of households. This study will fill the gap by studying the effect of the tariff changes on the welfare of households in Nigeria

RESEARCH METHODOLOGY

This study used quantitative research method. This study adopted Kareem (2015) approach to measure the impact of CET on household welfare in Nigeria. However, our model differs from the one used in the aforementioned work because we estimated household welfare as a function of consumer price index, common external tariff and world price index. Data were sourced from World Bank Integrated Trade Solution database, World Bank Commodity Price data and National Bureau of Statistics from 2005 to 2021.

Household expenditure was the proxy used for household Welfare. This study utilized annual data while adopting ARDL (Auto Regressive Distributive Lag Model) to estimate the parameters of the model. The model estimated in this paper is specified below:

$$HHW = f(CPI, WPI, TAR) \quad 1$$

Where HHW is household welfare proxied by household expenditure; CPI is consumer price index for aggregate commodity; WPI is world price index and TAR is tariff

The functional form of the model is summarized in an econometric form as

$$HHW = \alpha_0 + \alpha_1 CPI_t + \alpha_2 WPI_t + \alpha_3 TAR_t + e_t \quad 2$$

$$\ln HHW_t = \alpha_0 + \alpha_1 \ln CPI_t + \alpha_2 \ln WPI_t + \alpha_3 \ln TAR_t + e_t \quad 3$$

Where the symbols HHW, CPI, WPI and TAR are as earlier defined while e_t is the error term that is assumed to be normally distributed with the mean of zero and constant variance; α_0 is constant term/intercept; α_1 ; α_2 ; α_3 ; are the respective slope coefficients.

EMPIRICAL RESULTS AND DISCUSSIONS

Test for Stationarity

Table 2 : Summary of ADF Unit Root Test Result

Variables	ADF Statistics	5% Critical Value	Probability	Order of Intergration
HHW	-7.743850	-3.065585	0.0000	1(0)
CPI	4..016082	-3.098896	1.0000	1(0)
TAR	-3.360179	-3.098896	0.0317	1(1)
WPI	-3.691726	-3.119910	0.0188	1(1)

Source: Authors' Computation using E-views 10

From Table 2 household welfare HHW a proxy of household expenditure and consumer price index (CPI) are stationary at levels that is, they are integrated of order zero 1(0) while tariff (TAR) and world price index (WPI) are stationary at first difference, that is, integrated of order I(1).

Table 3 The Regression Result

Variables	Coefficient	Std. Error	t. stat	Prob.
HHW (-1)	-0.09943	0.29719	-0.33458	0.755
HHW (-2)	-0.35282	0.297399	-1.18635	0.301
WPI	-14.3214	3.456202	-4.14367	0.014
WPI(-1)	11.97764	5.642293	2.122832	0.101
TAR	-24.8973	16.17876	-1.53889	0.199
TAR (-1)	-19.1179	6.881101	-2.77832	0.05
TAR (-2)	8.983522	7.657412	1.17318	0.306
CPI	7.383813	1.794292	4.115168	0.015
CPI(-1)	-16.084	5.844032	-2.75221	0.051
CPI(-2)	9.061771	4.690768	1.931831	0.126
C	391.2173	173.406	2.256078	0.087

R-sq.	0.935958			
Adj. R-sq.	0.775853			
F-stat	5.845911			
Prob.	0.051746			

From Table 3, the dependent variable (HHW) had a negative impact on itself for the two lag periods. World price index (WPI) had a negative impact on household welfare, a one percent change in WPI will bring about 14.32 decrease in welfare of households. But it has also a positive impact on welfare in the first lag: – a one percent change in WPI will lead to 11.9776 increase in HHW. Tariff had a negative impact on welfare, still a negative impact in the first lag and then a positive impact in the second lag. CPI has a negative impact in lag one and then a positive impact on HHW in lag two. Our R square indicates that the independent variables (CPI, TARIFF and WPI) have 93.5% explanatory power on the dependent variable (HHW). Again R square adjusted of 77.6% shows that our independent variables are good and fit for the regression.

Table 4: JOHANSEN CO-INTEGRATION TEST

DIAGNOSTIC TEST

This subsection shows the results of the residual diagnostic tests conducted after estimation. Serial Correlation Test

Table 4: Breush-Godfrey Serial Correlation LM Test

Breush-Godfrey Serial Correlation LM Test			
F-statistic	12.05126	Prob. F(2,2)	0.0076
Obs*R-squared	13.85069	Prob. Chi-Square (2)	0.001

Source: Author’s computation using E-views 10

From the result in table 4, the F-Statistic and Obs*R-squared values of 12.05126 and 13.85069 with p values of 0.0076 and 0.0010 respectively are lesser than the critical values of 0.05 level of significance. Hence, we conclude that there is serial correlation in the model.

Heteroscedasticity Test

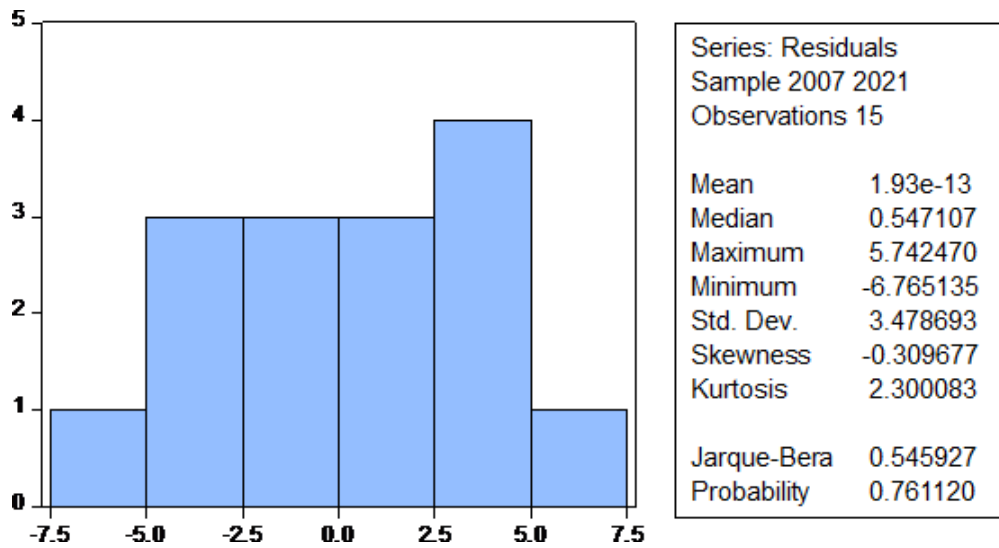
Table 5: HETEROSKEDASTICITY TEST: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.833122	Prob. F (10,4)	0.6309
Obs*R-squared	10.1343	Prob. Chi-Square(10)	0.4288
Scaled explained SS	0.46846	Prob. Chi-Square(10)	1

Source: Author’s computation using Eviews 10

The P values of F-statistics and Obs* R- squared 0.6309 and 0.4288 respectively are greater than the critical value of 5% level of significance. It means that the model is significance and is free from heteroscedasticity, that is, the mean, variance and covariance are constant over time.

NORMALITY TEST



NORMALITY TEST: – From our result, our data are normally distributed

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.954947	88.80788	47.85613	0.0000
At most 1 *	0.831764	42.30923	29.79707	0.0011
At most 2 *	0.575265	15.57342	15.49471	0.0487
At most 3	0.166347	2.729072	3.841466	0.0985
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.954947	46.49865	27.58434	0.0001
At most 1 *	0.831764	26.73580	21.13162	0.0073
At most 2	0.575265	12.84435	14.26460	0.0828
At most 3	0.166347	2.729072	3.841466	0.0985
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegrating Coefficients (normalized by b'S11*b=I):				

STABILITY Tests

To test whether the model is stable or not, both the cumulative sum and the cumulative sum of squares tests are conducted.

CUSUM Test

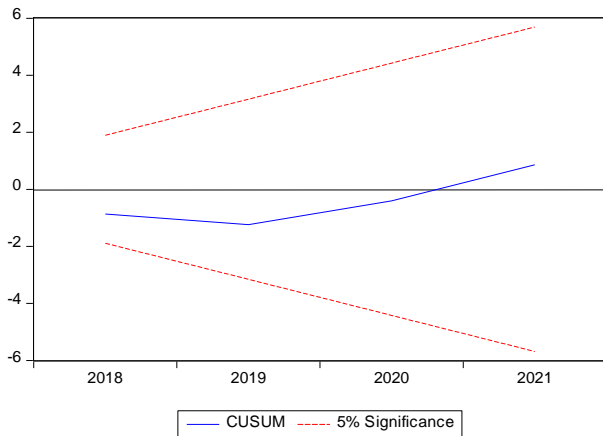


Figure 1 Plot of Cumulative sum

From our Cusum test result, the blue line lies within the 5% critical line proving that the residual variance is stable. For our Cusum of squares test, the blue line still lies within the 5% critical line telling us that the model is stable

CUSUM OF SQ

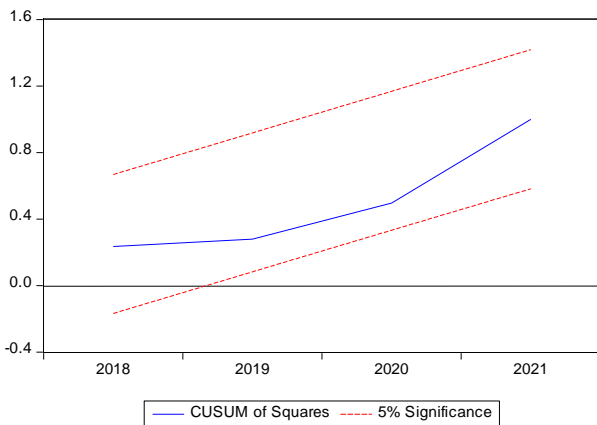


Figure 2 Plot of Cumulative sum of squares

Source: Author’s computation using E-view

The result of both the CUSUM and CUSUM sum of squares indicated that the recursive residuals are within the critical 5% significant lines, this implies that there is absence of structural change or misspecification in the estimated model which suggests that the stability of the estimated coefficients is verified. This results conforms to the findings of Marchand (2012), because Marchand work revealed that the magnitude of tariff on agricultural consumer goods predicted reduction in the CET.

CONCLUSION AND RECOMMENDATION

Most frequently, trade policies affect domestic prices. The increase in domestic prices will in turn have an effect on the consumption and production decisions of households. The impact on goods and factor prices depends on characteristics of household such as household expenditure pattern. For a household who produces, a decrease in price of product due to changes in tariff rate, will definitely affect the household. On the other hand, if the household is a consumer, a decrease in price of the product as a result of changes in tariff will definitely benefit such household. This study examined the impact of CET on household welfare. The study was able to find that CET has a significant positive impact on households in Nigeria while

the study found that despite the protection given to domestic industries, it has not improved their welfare. The study recommends that the government should open all the borders so that smuggling and illegal routes of importing products should be discouraged. This will help reduce the domestic prices of goods and help reduce the household expenditure thereby improving their welfare. The government in order to improve competitiveness, should also use other non-tariff measures such as low transportation cost, port charges etc. The outcome of this study is relevant to policy as regards transformation agenda in the area of trade protection and welfare in Nigeria.

REFERENCES

1. Antoine, C. & Erik, V., U. (2015). Benefits of the ECOWAS CET and EPA will outweigh costs in Nigeria but competitiveness is the real issue. Policy Note No 43.
2. Bahta, Y., T. & Groenewald, J., A.(2015). The potential impact of a southern African common external tariff regime on the economy of Lesotho. *International Journal of Food and Agricultural Economies* .3(2),75-81.
3. Balogun, E., D. & Dauda, R., O. (2012). Poverty and employment impact of trade liberalization in Nigeria: Empirical evidence and policy Munich Personal RePEc Archive Paper No. 41006.
4. Hassan Bello (2017), Understanding ECOWAS common external tariff (CET) and its implementation in Nigeria. Retrieved from mmsplusng.com
5. Johnson M.E, & Dorosh, P. (2017). Tariffs, smuggling and economic welfare: A spatial analysis of Nigerian Rice policy options. *Journal of African Economies*, 1-23
6. Kareem, O. I. (2015). The impact of Common External Tariffs on household's welfare in a rich African country with poor people. Retrieved from https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=CSAE2016&paper_id=332
7. Metu, A. G., Nwogwugwu, U. C. C. & Okeyika, K. O. (2019). An overview of the structure of Nigerian economy. In U.R. Ezenekwe, A. G. Metu, E. S. Nwokoye & O. L. Maduka (eds.), *Structure and problems of the Nigerian Economy* (17-43). Awka: Fab Aniehi Nig
8. Nicita, A. (2009). The price effect of tariff liberalization: Measuring the impact on household *Journal of Development Economics*. 89(1), 19-27.
9. Nigeria country commercial guide (2019).Nigeria-import tariffs. Retrieved from <https://www.gov>
10. Nzeka, M., U. (2014). Assessment of commodity and trade issues. Global Agricultural information Network. Retrieved from <https://www.apps.fas.usda.gov/newgainapi/api/report/downloadreport?filename=Nigeria%20o%20Adopt%20Ecowas%20Common%20Tariff%20-%20january%20>
11. Olayinka I. K. (2018). The impact of CET on household welfare in a rich African country with poor people. *Advances in Economics and Business*, 6(2), 114-124.
12. Oyejide, A. (2012). The impact of the ECOWAS Common External Tariffs (CET) on the real Retrieved from <http://www.manufacturingtodaynigeria.com/index.php/cover/154-casestudy/5318-the-impact-of-the-ecowas-common-external-tariffs-cet-on-the-real-sector>
13. Orkoh, E. (2015). Gender welfare effects of regional trade integration on households in Ghana. UNCTAD Virtual Institute (Vi) regional workshop on trade and gender analysis. Retrieved from <http://vi.unctad.org/tag/docs/tagmr/vimrtagghana16.pdf>
14. Porto, G. (2006). Using survey data to assess the distributional effects of trade policy. *Journal of International Economics*, 70(1), 140-160.
15. Seshan, G. (2005). The Impact of Trade Liberalization on Household Welfare in a Developing Country with Imperfect Labor Markets. World Bank Policy Research Paper No.3541. Washington: World Bank.
16. Trade Policy Review (2017). Nigeria: Report by the secretariat. Retrieved from <https://www.tralac.org>
17. United Nations Conference on Trade and Development (UNCTAD) 2013. Trade and development report series. Retrieved from <https://unctad.org/en/publicationchapters/tdr2013chl-en.pdf>
18. Urama, N. E., Nwosu, E. O. & Aneke, G. C. (2012). Lost revenue due to trade liberalization: Can

Nigeria recover her own? *European Journal of Business and Management*, 4(10), 134– 142

19. Wonyra, K., O, Ametogolo M., E.,S, and Guo, P.(2017). A gender welfare impact of the Ecowas Common External Tariff on households in Togo. *International Journal of Food and Agricultural Economics*. 5(4),121-134.
20. World Integrated Trade Solution (database). <http://wits.worldbank.org/witsweb/>. World Bank, Washington, DC.
21. World Bank, (2010). *Putting Nigeria to work – A strategy for employment and growth*. Washington DC: The World Bank.

APPENDIX

ARDL RESULT

Dependent Variable: HHW				
Method: ARDL				
Date: 09/29/22 Time: 11:39				
Sample (adjusted): 2007 2021				
Included observations: 15 after adjustments				
Maximum dependent lags: 2 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (2 lags, automatic): WPI TARIFF CPI				
Fixed regressors: C				
Number of models evaluated: 54				
Selected Model: ARDL(2, 1, 2, 2)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
HHW(-1)	-0.099434	0.297190	-0.334582	0.7547
HHW(-2)	-0.352820	0.297399	-1.186353	0.3011
WPI	-14.32137	3.456202	-4.143673	0.0143
WPI(-1)	11.97764	5.642293	2.122832	0.1010
TARIFF	-24.89730	16.17876	-1.538888	0.1987
TARIFF(-1)	-19.11790	6.881101	-2.778320	0.0499
TARIFF(-2)	8.983522	7.657412	1.173180	0.3058
CPI	7.383813	1.794292	4.115168	0.0147
CPI(-1)	-16.08402	5.844032	-2.752213	0.0513
CPI(-2)	9.061771	4.690768	1.931831	0.1256
C	391.2173	173.4060	2.256078	0.0871
R-squared	0.935958	Mean dependent var	5.659553	
Adjusted R-squared	0.775853	S.D. dependent var	13.74624	
S.E. of regression	6.508039	Akaike info criterion	6.728864	
Sum squared resid	169.4183	Schwarz criterion	7.248101	
Log likelihood	-39.46648	Hannan-Quinn criter.	6.723333	
F-statistic	5.845911	Durbin-Watson stat	2.208977	
Prob(F-statistic)	0.051746			
*Note: p-values and any subsequent tests do not account for model selection.				