



Implications of Isolationist Policies on Regional Integration in Africa¹

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Abstract

The renewed isolationist rhetoric among countries in the global north has implications for international trade integration. This study investigated the effect of isolationist measures on regional trade integration in Africa. The export supply function was estimated with a dynamic Markov switching model utilizing data between January 2005 and December 2018 for five African countries (Nigeria, Kenya, South Africa, Uganda, and Morocco). The results showed that the current isolationist policies have made Kenya and Uganda conduct more of intra-African trade; Uganda and South Africa to be more integrated into their regional economic trade blocs; and have generated a significant shift in the trade direction of Nigeria, South Africa, and Morocco in favor of non-traditional extra-African trade directions. The key drivers of intra-Africa trade integration are industrial production and relative prices. Hence, African countries need to deepen and synchronize industrial policies, target low inflation and reform their equity markets to foster higher industrial performance required for deeper intra-African trade integration.

Keywords: Isolationist Policies, Intra-African Trade Integration, Export Supply Function, Extra-African Trade, Markov Switching Model.

JEL Classification: F13, F14, F15.

Introduction

The renewed fierce isolationist rhetoric of some countries in the global north has implications for global trade integration. For instance, American hostilities with China, Russia, Iran, India, and North Korea are influencing trade policies in many forms. Besides, Brexit offers little comfort because the possibility of the UK renegotiating its existing trade agreements remains significant. Africa is not left out in the scheme of recent isolationism measures. An example of such a measure is the threat to review the eligibility of African countries in trade preference benefits under the African Growth and Opportunity Act (AGOA).

On the one hand, African countries may see the need to tackle barriers hindering intra-regional trade integration from insulating themselves against the isolationist challenges. Recent isolationist policies is expected to have positive outcomes on regional integration in Africa in this case. On the other hand, countries engaging in "beggar-thy-neighbor"² policies and other countries bearing the burden of these policies may see Africa as an alternative market. In this case, the isolationist measures may further weaken African trade integration, given the weak competitive abilities of most African economies. Hence, the implications of recent isolationist's efforts on regional integration in Africa can only be unraveled through research.

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2. This refers to international trade policy that benefits the country that enacted it, while harming its neighbours or trade partners.

Related studies such as Ogunkola (1998), Oyejide and Njinkeu (2001), Lee (2002), Negasi (2009), Draper (2010), Tanyanyiwa and Hakuna (2014) have accessed bilateral trade flows among the regional groupings in Africa and the consequences of inadequate intra-African trade integration. However, the renewed isolationist measures are a recent development, and their implications on regional integration in Africa are yet to be given adequate attention in empirical studies. This study, therefore, investigated the dynamics of African regional trade integration in the recent waves of isolationism, thus contributing to the empirical literature. To achieve this objective, this study assessed intra- and extra-Africa trade regime shifts of the sampled African countries (Nigeria, Kenya, South Africa, Uganda, and Morocco); and equally considered exports regime shifts of the purposefully sampled African major trading partners (USA, UK, China, and Russia).

The rest of the paper is organized as follows: besides the introductory section, section two looks at key export destinations of sampled African countries. Section 3 and 4 present the literature review and methodology, respectively. Section 5 is on results and discussion of key findings, while section six concludes the study with some policy recommendations.

Stylize Facts on the Directions of African Exports

In this section, export directions of the selected African countries are examined to develop a set of stylized facts on the implications of the rising protectionism on intra-African trade integration. Figures 1 to 5 show heterogeneity in African export directions. Nigeria's exports are highly concentrated in the European Union (EU) and BRIC (A group of emerging countries including Brazil, Russia, India, and China). 59% of Nigeria's trade is conducted with these two trade blocs leaving 13.0% and 6.0% for Intra-African and Intra-ECOWAS (Economic Community of West African States) trade (Figure A1).

South Africa's exports are reasonably diversified across its trade partners, and it equally demonstrates higher intra-African trade of 20.9% (Figure A2). Within the regional trade blocs, South African trade within SACU (Southern African Customs Union) and SADC (Southern African Development Community) is also higher than what Nigeria records in intra-ECOWAS trade. While Morocco's exports is extremely concentrated in EU accounting for average of 63% of its trade within the period of the study (Figure A3), Kenya's and Uganda's trade are highly concentrated in Africa. 40.0% and 44.0% of Kenya's and Uganda's exports, respectively are to other African countries destinations (Figure A4 and A5). Within regional trade blocs, Kenya conducts average of 21.0% of its trade within EAC (Eastern African Community). Similar trend was noticed with Uganda with 22.0% intra-EAC exports.

The above shows that Nigeria and Morocco are likely to be more susceptible to exogenous trade shocks from the EU. Hence, any protectionist measures that hinder exports of Nigeria and Morocco to the EU may have significant consequences. Trade shocks to Kenya and Uganda are likely to be endogenously synchronized with shocks within the rest of Africa. South Africa is significantly insulated against exogenous trade shocks because of the diversification of its exports across trading partners. Overall, regional integration is higher in Kenya and Uganda and lowest in Nigeria and Morocco. It is equally noticed that emerging economies in the BRIC are significant in export directions of Nigeria (23%), South Africa (13%), and Morocco (10%) (Figures A1, A2, and A3).

Literature review

Theoretical literature

The theories of regional integration have mainly been developed to explain European integration in the early 1950s (Laursen, 2008). There have been efforts to apply these theories

to integration in other parts of the world, including Africa. The thinking of regional integration started from functionalism theory as a pioneer globalization theory and strategy in the inter-War period. This theory states that regional integration develops its internal dynamics as states integrate into limited functional, technical, and or economic areas. While states are required to incorporate, a single state has limited power and political influence on the integration process. Three basic assumptions underpinning functionalism school include human freedom, availability of knowledge and expertise to meet the needs for which the functional agencies are built, states loyalty to the integration process.

Functionalism theory was criticised by neo-functionalism theory on the ground that states do not necessarily need to integrate but a transnational corporations do. Neo-functionalism theory was developed by Hass in 1958 in the post-war period. It assumes that transnational corporations, interest groups and supranational actors are empowered by the regional integration process to generate spill-over (political and economic). While political spill over is the creation of supranational governance models such as the European Union, ECOWAS, EAC, SACU, or as voluntary as the United Nations, economic spill over is an integration in one policy-area spilling over into others. In sum, it is supranational markets that integrate and rule the regional integration process and not states.

However, regional integration process experienced a crisis in Europe in the mid-1960 due to important national interests, which sabotaged the integration process. This is against the assumption of functionalism school and led to the modification of neo-functionalism to take account of this development. It stressed the intergovernmental aspects of the European communities. This later led to the development of liberal intergovernmentalism which suggest the combination of a liberal theory, to explain national preference formation, and an intergovernmental theory of interstate bargaining, to explain substantive outcomes (Laursen, 2008). With national intergovernmentalism theory of regional integration, the state should play a key role in external policies to maximize their national security and economic interests but delegate authority to regional organizations to secure their bargaining outcomes.

In recent time, post-functionalism theory was developed to explain the backlash mechanism of regional integration. It assumes that regional integration creates economic and cultural losers, leading to the development of identity-based/nationalism formation. These constrain regional integration and may cause disintegration. This theory has implications for global integration including Africa, especially given that Africa conducts a significant proportion of its trade with countries leading the protectionist stance.

Empirical Literature

There have been several attempts at explaining regional integration in Africa. United Nations Economic Commission of Africa (UNECA) has done a lot in this regards in its Assessing Regional Integration in Africa (ARIA) reports. The first issue of UNECA in the regards (ARIA I), published in 2004, provided a comprehensive assessment of the status of regional integration in Africa, with subsequent editions focusing on thematic areas. The 2006 ARIA II of UNECA examined rationalization of regional economic communities and their overlapping memberships as a challenge to regional integration in Africa, while ARIA III (2008) addressed macroeconomic policy convergence, as well as monetary and financial integration in the regional economic communities as a means of fostering desired regional integration in the continent. ARIA IV (2010) focused on enhancing intra-African trade by assessing the progress of African regional integration and highlighting achievements, challenges and constraints. ARIA V (2012) provided analytical research and empirical evidence to support the establishment of the Continental Free Trade Area (CFTA) and the benefits African countries stand to gain from it. ARIA VI (2013) was on harmonizing policies to transform the trading environment. It carries forward the momentum of January

2012's Decision and Declaration by addressing the issue of harmonizing rules of origin and trade facilitation instruments to facilitate Continental Free Trade Area negotiations by member States. The 2016 edition of ARIA—ARIA VII (2016)— examined the interlinked among three elements of regional integration, innovation and competitiveness. It explores the prospects for harnessing them within the framework of Africa's normative regional integration development model. The two latest editions of ARIA—ARIA VIII and IX— are on bringing the CFTA about in the context of changing world trade environment in which people's scepticism of trade agreements has become common.

The focus of this study aligns with ARIA VIII, by looking at regional integration in Africa in the recent international economic order of rising protectionism and by extension gives insight into the potentials of CFTA in achieving its objective of enhancing African growth through intra-regional cross border trade.

Also, related studies such as Ogunkola (1998), Oyejide and Njinkeu (2001), Lee (2002), Negasi (2009), Draper (2010), Tanyanyiwa and Hakuna (2014) have accessed bilateral trade flows among the regional groupings in Africa and the consequences of inadequate intra-African trade integration. For instance, Tanyanyiwa and Hakuna (2014) conducted a qualitative study on the challenges and opportunities for regional integration in the Southern African Development Community (SADC). It was reported that the low intra-SADC trade is attributed to lack of industrial capacity participation, geographical proximity and presence of institutional framework. Besides, Negasi (2009) evaluated trade effects of regional economic integration in Africa using the augmented gravity model. The results show evidence of displacement of some SADC members despite the intra-SADC trade agreement. This was attributed to the increased openness of the SADC countries with the rest of the world. Using the explorative approach, Draper (2010) showed that the expression of African regional integration in the European form of economic integration does more harm than good. This is similar to Lee (2002) who found that market integration based on EU model has been counterproductive for regional integration in Africa.

Archawa and Townsend (2019), used a unique long-panel data of households in Thailand to construct household financial accounts, the village economic accounts, and the village balance of payments account in order to investigate pressure of isolation policies across population. It focuses on its effects on the gains and losses of economic integration, both real as from trade in a common market and financial as in a monetary financial union. The basic result, using counterfactual experiment, is that both real and financial factors are at play, and impacts are significant heterogeneous with both gains and losses and non-monotone movement across wealth classes and occupations.

This study deviates from the previous studies by assessing the dynamics of regional integration in Africa in the recent international economic order of isolationism. This is an essential contribution to the literature.

Methodology and Data

A framework based on export supply function is estimated with the Autoregressive Markov¹ switching regression technique that allows for dynamic structures assuming different behaviour (structural break) in one sub-sample (regime) to another as:

$$x_{jt} = y'_{jt}\beta S_t + u_t, \quad t = 1, \dots, T \quad (1)$$

$$u_t \sim NID(0, \delta_{S_t}^2)$$

x_{jt} is export and y_t is a $(k \times 1)$ vector of explanatory variables which includes lag values of

1. In a Markov chain, the future depends only upon the present and not upon the past. In other words, the present depends upon the past.

x_t in the autoregressive specification. Other explanatory variables includes real gross domestic product (RGDP)¹ of domestic economy, relative prices² (that is, export prices as a ratio of domestic prices), export subsidy³, real exchange rate and real effective exchange rate. S_t is the state variables which is unobserved and are assumed to evolve according to a Markov chain with transition probabilities: $P(S_t = i | S_{t-1} = j, z_t) = P_{ij}(z_t)$. Hence, the transition probabilities are influenced by a vector of observed predetermined variables including element of dependent variable (denoted by z_t).

The two unobserved state variable are coefficient parameter vector: $\beta S_t = \beta_0(1 - S_t) + \beta_1(S_t)$ and error variance: $\delta^2 S_t = \delta^2_0(1 - S_t) + \delta^2_1(S_t)$. Hence, under regime 1(0), the coefficient parameter vector is $\beta_1(0)$ and error variance $\sigma^2_1(0)$.

Following the popular two-regime case in empirical literature, x_t is a series which involves two Autoregressive (AR (1)) specifications:

$$x_{ijt} = \begin{cases} \alpha_0 + \gamma x_{ijt-1} + \epsilon_{it}, & S_t = 0 \\ \alpha_0 + \alpha_1 + \gamma x_{ijt-1} + \epsilon_{it}, & S_t = 1 \end{cases} \quad (2)$$

x_t is a stationary AR(1)⁴ process with mean $\alpha_0/1 - \gamma$ when $S_t = 0$, and it switches to another stationary AR(1) process with mean $(\alpha_0 + \alpha_1)/1 - \gamma$ when S_t changes from 0 to 1. As long as $\alpha_1 \neq 0$, this model admits two dynamic structures at different levels, depending on the value of the state variable S_t . In this case, x_t are governed by two distributions with distinct means, and S_t determines the switching between these two distributions (regimes). Hence, $S_t = 0, 1$ represents the Markovian state variables.

While the model presented in equation (2) is capable of characterizing the export behaviours in two regimes, it is very restrictive because only one change is allowed. It is easy to extent this model to allow for multiple changes but estimation and hypothesis testing could be cumbersome (Bai and Perron, 1998; Bai, 1999). Also, changes in model represented in equation (2) is determined by exogenous time.

One way of solving the above challenge is to specify a different model for S_t by assuming that S_t follows a first order Markov chain with two transition probabilities:

$$P = \begin{vmatrix} p(S_t = 0/S_{t-1} = 0) & p(S_t = 1/S_{t-1} = 0) \\ p(S_t = 0/S_{t-1} = 1) & p(S_t = 1/S_{t-1} = 1) \end{vmatrix} \quad (3)$$

Equation (3) implies transition probabilities as that can be described as follows:

$$P = \begin{vmatrix} p_{00} & p_{01} \\ p_{10} & p_{11} \end{vmatrix} \quad (4)$$

where p_{ij} ($i, j = 0, 1$) denote the transition probabilities of $S_t = j$ given that $S_{t-1} = i$. It is important to note that the transition probabilities satisfy $p_{i0} + p_{i1} = 1$. The transition matrix contains only two parameters (p_{00} and p_{11}) which explains the random behaviour of the state variable. That is, the possible two states in equation (4) are state of low values of the export

1. This measures domestic economy's productive/supply capacity. This is proxy with industrial productivity and activities in the stock markets (Stock values).

2. This captures possibility of substituting between domestic and foreign supply when relative export prices increases. For instance, production for export becomes more profitable and, hence, exporters will supply more as export prices increases relative to domestic prices.

3. Since no meaningful data is available for the export subsidy in the countries under consideration, this variable is excluded from the export supply estimations.

4. Markov switching AR models, unlike dynamic Markov switching, allow a gradual adjustment after the process changes state and are suitable and often used to model quarterly and lower-frequency data.

(state 1: state of low volatility) and state of high values of the export (state 2: state of high volatility). In terms of transition probabilities represented in equation (3), there is probability of transiting to low export in the next (current) period given that the current (past) state is low export flows (P_{00}), probability of transiting to low export in the next (current) period given that the current (past) state is in high export (P_{01}), probability of transiting to high flows in the next (current) period given that the current (past) state is in low export flows (P_{10}) and probability of transiting to high export flows in the next (current) period given that the current (past) state is in high export (P_{11}).

In terms of sequencing, the study employed ARIMA model-based X-13ARIMA-SEATS seasonal adjustment method to test for seasonality in the series. Also, to attribute the state switch to recent isolationism, the state means and variances are used as switch parameters. While only exports were allowed to switch, the AR terms and other exogenous variables were assumed to be non-switching regressors. The hypotheses of independent state variables (means and volatility shifts) was tested using standard likelihood-based Wald test, while Akaike info criterion (AIC) criterion was used to establish adequate numbers of lags of endogenous variable(s).

To confirm whether the recent protectionism represents a temporary or a complete reversal of the past globalization trend, this study examined the expected duration of state of low export and high export with any of the paired trading partners and compare the results with co-variate of protectionism dummy with state probabilities. If the expected duration of high export flows is longer (lower) than low export flows and the covariate of isolationism and state of being in high export flows is significant and positive (negative), it is assumed that isolationist policies will have permanent effect in favour of (against) such direction of export. The impact was assumed temporal if expected duration of high export flows is shorter than low export flows but the covariate of isolationism and state of being in high export flows is significant and positive. If there is no correlation between isolationism dummy and state of being in high export flows, any significant export regime shift cannot be associated with isolationist policies.

Due to data availability and the kind of data required¹ by Markov estimations, the study sampled at least one Sub-Saharan African country from each of the regional economic communities recognized by African Union. The sampled countries are Nigeria (from the Economic Community of West African States, ECOWAS); South Africa (from Southern African Customs Union, SACU); Morocco (from the Community of Sahel-Saharan States, CEN-SAD); as well as Kenya and Uganda (from East African Community, EAC). The 5 sampled economies in Africa demonstrate high trade flows in each region (given information from the World Trade Map) and equally reflect the continent's regional representatives. To account for possible intra-African trade switch following the recent isolationist measures, each African country's estimations include intra-regional export (within the RECs and African-wide).

Data

This study utilized logged-transformed of monthly data of export, real exchange rates, real effective exchange rate, export prices, domestic consumer prices, industrial production (measured in USD at 2010 constant value) and stock market values of exporting countries between January 2005 and December 2018. Data was sourced mainly from ITC trade map database, International Monetary Fund commodities database and Global Economic Monitor (GEM) database of the World Bank. Export values are measured in thousand US dollars. RGDP is proxy with stock market and industrial production. This is justified because the stock market directly linked to real GDP for an economy with significant companies listed in the stock exchange market, while industrial productivity is a component of aggregate output.

1. Markov switching regression requires series with no missing data.

Results and Discussions

Seasonality Tests

The tests of seasonality show variations across countries and series (Table A1 to A5). However, Nigeria's series show very weak seasonality prices series (REER and RER) as well as equity market. The reason for this outcome for Nigeria is that its export is dominated by crude oil exports that has little or no connection with seasons. Series of other sampled African countries all indicated seasonality at one level of test or the other except export to ASEAN and NAFTA in the case of Kenya. This implies that, the majority of the series across sampled African countries are characterised with gradual seasonal changes in a fashion evolving from month to month in a non-constant manner. Hence, all variables at one or more significant seasonality level are adjusted for season. The implications of other forms of unit root tests are less significant for Markov switching estimation because the model characterised dynamic autoregressive specification, which is suitable for non-stationary series¹.

Isolationism and Dynamics in Export Directions of Sampled Countries

One of the basic assumptions of Markov Switching model is the possible difference between mean (μ_1 and μ_2) and heteroscedasticity/volatility shift (σ_1^2 and σ_2^2) across regimes. Hence, the hypotheses of independent state variables are tested using standard likelihood-based Wald test. Given the significant chi-square statistics across, the null hypotheses that the switch parameters are the same between regimes are rejected (Table 1). These show that Nigeria export flows have experienced significant shifts between high and low export volatility across the directions of trade.

On the aggregate, there is considerable state dependence in the transition probabilities with a relatively higher probability of remaining in the origin regime (0.88 for the low aggregate export state, 0.96 for the high aggregate export state, Table 1). The corresponding expected durations in a regime are approximately 8.3 and 35.3 months, respectively. There are variations across exports directions. For instance, there is 0.98, 0.93, 0.78 and 0.64 probabilities, respectively for remaining at low exports state in the direction of BRIC², USA, NAFTA³ and UK; and corresponding 0.99, 0.86, 0.78, 0.95 probabilities for the high export state). The corresponding expected durations in a regime are approximately 44.9, 13.6, 4.5, 3.0 and 76.9, 7.5, 5.7, 20.0 months, respectively. Other trade directions such as Nigeria's export to Africa, ECOWAS, ASEAN and Middle East⁴ exhibit state independent transition probabilities. That is, Nigeria's exports to these directions are knife-edge, not remaining at either state of high export or low export for long. These are also indicated by the respective expected durations.

The significant regime shifts in Nigeria's exports across directions of trade is associated with rising isolationism, especially with the USA and BRIC. The covariance of dummy of rising protectionism and state probabilities indicates less trade with USA but more trade with BRIC. The rising protectionism has no significant relationship with state probability in the case of Nigeria trade with UK. However, Nigeria is not leveraging on the recent international economic order of isolationism to be more integrated within Africa. Rather, it's getting more integrated with new and emerging trade partners in BRIC. These outcomes have significant policy implications for Nigeria's trade integration within Africa as well as directions at which regional integration should be reconsidered. The drivers of export as estimated shed some lights.

1. However, to ensure that the series are not I(2), the study carried out unit root tests on the all the series utilizing intermediate augmented Dickey–Fuller test (ADF).

2. The leading importing market of Nigeria's export in BRIC is China.

3. This excludes USA. That is only Canada and Mexico.

4. Egypt was removed from Middle East countries being an African country.

Table 1. Markov Switching Estimates for Nigeria

Switch parameters	Africa	ASEAN	BRIC	ECOWAS	EU	NAFTA	USA	UK	MIDDLE EAST	TOTAL EXPORT
μ_1	0.028 (0.451)	0.178 (0.268)	17.397*** (5.061)	0.482*** (4.042)	1.377 (1.532)	7.267*** (7.268)	8.448*** (5.432)	0.244 (0.253)	0.230*** (294.57)	-0.017 (-0.184)
μ_2	0.084*** (32.29)	-0.031 (-0.411)	6.618*** (3.646)	-0.727*** (-6.730)	1.950*** (71.85)	6.724*** (4.044)	6.984*** (2.894)	0.027 (0.258)	0.212* (1.763)	0.021 (1.382)
σ_1^2	-0.730*** (-7.858)	0.679* (2.472)	-0.834*** (-4.901)	-0.614*** (-4.220)	-1.477*** (-15.81)	-1.302*** (-7.044)	-0.91750*** (-7.182)	1.004*** (3.397)	-6.750*** (-17.099)	-1.124*** (-5.232)
σ_2^2	-5.666*** (-12.93)	-0.745*** (-6.034)	-1.415*** (-13.08)	-0.923*** (-5.104)	-5.138*** (-12.79)	0.286* (2.342)	0.046 (0.279)	-0.394*** (-3.370)	-0.074 (-0.802)	-2.302*** (-21.54)
AR (1) (state 1)	-	-	-0.208 (-0.874)	-	0.908*** (14.41)	0.398*** (4.670)	0.347*** (2.866)	-	-	-
AR (1) (state 2)	-	-	0.512*** (3.821)	-	0.835*** (454.02)	0.337* (2.104)	0.380* (1.841)	-	-	-
Non-switching regressors										
D(STOCKMRT)	2.0361*** (42.007)	1.364 (0.826)	-0.027 (-0.046)	-2.281* (-1.760)	0.818 (24.360)	1.328 (1.360)	-1.887 (-1.029)	3.413 (1.603)	2.403 (216.805)	0.252 (0.831)
D(EXPRDP)	0.232*** (4.481)	-1.403 (-0.705)	-0.399 (-0.365)	4.435* (1.961)	2.058 (23.899)	1.696 (0.994)	-2.688 (-1.228)	1.648 (0.531)	10.780 (627.045)	1.141 (2.521)
D(REER)	-	-	-	-	-	-	-2.722 (-1.016)	-	-	-
D(REER)	-	-	-	-	-	-	-	-	-	0.338 (0.808)
State Probabilities										
P(low/low)	0.937	0.488	0.978	0.425	0.944	0.776	0.926	0.670	0.000	0.879
P(low/high)	0.063	0.511	0.022	0.575	0.056	0.224	0.074	0.330	1.000	0.121
P(high/low)	1.000	0.090	0.0130	0.949	0.944	0.175	0.133	0.050	0.057	0.043
P(high/high)	0.000	0.910	0.987	0.051	0.056	0.825	0.867	0.950	0.943	0.957
State 1 (low)	15.0	1.956	44.900	1.740	17.905	4.461	13.597	3.030	1.000	8.297
State 2 (high)	1.0	11.100	76.877	1.054	1.059	5.720	7.513	20.037	17.438	23.134
Log-likelihood	-41.148	-75.933	-16.713	-74.435	4.086	-94.075	-72.929	-95.283	-83.963	35.256
DW	2.314	2.167	1.960	2.324	2.124	1.830	1.969	2.373	2.366	2.407
Tests of Equality across states (F-statistics)										
$\mu_1 = \mu_2$	0.779	0.096	7.866**	84.587***	0.406	0.078	0.240	0.050	0.022	0.173
$\sigma_1^2 = \sigma_2^2$	122.74***	26.154***	8.366**	1.781	78.833***	0.115***	20.293***	23.19***	271.99***	24.654***
Covariance (Rising protectionism-State probabilities)										
Prob1	0.022	0.19	-0.60***	0.01	-0.03	-0.02	0.40***	0.22*	0.03	-0.52***
Prob2	-0.022	-0.19	0.60***	-0.01	0.03	0.02	-0.40***	-0.22*	-0.03	0.52***
Observations	70	71	71	71	71	71	71	71	71	71

Source: Research finding.
Note: In the parentheses of aconstant switch, parameters and non-switch parameters are z-statistics. Also, * ** *** indicates significant at 10%, 5% and 1% respectively.

In theory, activities in the stock exchange should exactly match real GDP growth. However, growth in the stock market was only found to significantly enhance export flows to Africa. Hence, positive growth in the equity of companies producing export commodities in Nigeria to African countries will enhance its trade integration in the region. The commodities Nigeria traded intensively within Africa include cement, tobacco products and electrical energy. The state independent AR (1) terms¹ show significant inelastic positive signs across estimations for EU, other NAFTA members and USA in state 1 as well as BRIC and EU in state 2. These suggest tendencies for future export to increase less proportionately to EU, other NAFTA.

In sum, the results for Nigeria show that the recent waves of isolationism represent a complete reversal of the past globalization trend of Nigeria's trade in favour of BRIC countries but less trade with the USA.

There are significant volatility shifts across South Africa estimations (except export to ASEAN). On the aggregate and like the results for Nigeria, there is a considerable state dependence in the transition probabilities with a higher probability of remaining in the origin regime (0.98 for the low aggregate export state, 0.77 for the high aggregate export state, Table 2). The corresponding expected durations in low and high export regime are approximately 44.8 and 4.3 months, respectively. There are variations across estimations, however. Duration of remaining in high export regime to other African countries is higher than duration of remaining in low export state. Similar result was obtained for intra-SACU exports. While there is considerable state dependent in the transition probabilities of South Africa in all its export directions, its export to EU (excluding UK) and SACU shows a state independent in the transition probabilities. That is, export of South Africa to other EU members (excluding UK) and SACU are less stable.

Further, the recent isolationist stance was found to be associated with high South Africa export flows favouring intra-SACU and Middle East given the covariance results. The opposite results were found for BRIC and ASEAN. Meanwhile, the recent isolationist stance is not associated with South African trade with USA and UK.

In assessing the non-switching regressors as key drivers of South African exports, South African industrial production has elastic and significant positive relationship with exports across its key trade directions except in the case of its export to ASEAN where industrial production was not found to significantly influence export. Hence, improvement in industrial production will improve South African exports flows significantly. Relative export prices are important driver of South Africa trade integration with the rest of Africa and UK with elasticities of 0.29 and 1.13, respectively.

Overall, the results show that the recent waves of protectionism represent a complete reversal of the past globalization trend of South Africa's trade in favour of SACU and Middle East countries but less trade with the BRIC, in opposite directions.

1. Other estimations did not converge including AR(1) terms. Hence, the first difference of the dependent variable(s) were taken. This is justified since the dependent variable in the Markovian framework should be a stationary AR process and the structure of the AR (1) process is equivalent to having a differenced stationary process.

Table 2. Markov Switching Estimates for South Africa

Switch parameters	Africa	ASEAN	BRIC	USA	EU	NAFTA	SACU	UK	MIDEAST	TOTAL EXPORT
μ_1	0.030 (0.768)	1.174* (1.661)	2.421*** (3.781)	0.001 (0.053)	-0.033*** (-4.652)	-0.009 (-0.399)	1.819 (1.066)	7.148*** (4.229)	0.008 (0.105)	0.024 (0.398)
μ_2	0.004 (0.766)	4.177 (4.401)	3.890* (2.736)	0.019 (0.154)	0.074*** (4.029)	0.016 (0.356)	1.632*** (16.199)	3.617*** (4.897)	0.002 (0.185)	0.001 (0.254)
σ_1^2	-1.764*** (-8.376)	-2.130* (-1.972)	-2.225*** (-33.304)	-2.033*** (-20.456)	-2.769*** (-33.70)	-1.873*** (-10.762)	-0.071 (-0.338)	-1.280*** (-8.595)	-1.056*** (-4.584)	-1.578*** (-7.057)
σ_2^2	-2.956*** (-34.158)	-1.267* (-2.100)	-1.057*** (-9.903)	-0.856** (-2.826)	-2.584*** (-18.743)	-0.917*** (-8.242)	-2.650*** (-24.921)	-2.066*** (-19.583)	-1.921*** (-24.792)	-3.056*** (-46.356)
AR (1) (state 1)	-	0.903*** (16.392)	0.826*** (17.906)	-	-	-	0.876*** (6.199)	0.435** (3.263)	-	-
AR(1) (State 2)	-	0.653 (0.735)	0.697 (6.278)	-	-	-	0.880*** (117.33)	0.714*** (12.262)	-	-
Non-switching regressors										
D(INDRP)	1.165*** (6.234)	1.803(1.480)	1.427*** (3.766)	2.438*** (5.534)	1.447*** (6.108)	1.568** (2.202)	1.225*** (3.097)	-0.269 (-0.565)	2.060*** (3.943)	1.602*** (11.388)
D(EXPRDP)	0.293*** (2.501)	0.275 (0.919)	0.203 (0.718)	0.479 (1.630)	0.226 (1.619)	0.834 (1.547)	0.341 (1.295)	1.126** (2.595)	0.359 (1.216)	0.165* (2.651)
D(RER)	-	-	-	-0.067 (-0.178)	-	-	-	-	-	-
D(REER)	-	-	-	-	-	-	-	-	-	0.365*** (2.472)
State Probabilities										
P(low/low)	0.604	0.877	0.995	0.964	0.483	0.774	0.172	0.889	0.759	0.978
P(low/high)	0.396	0.123	0.005	0.036	0.517	0.226	0.828	0.111	0.241	0.222
P(high/low)	0.064	0.279	0.009	0.395	1.000	0.187	0.172	0.064	0.041	0.234
P(high/high)	0.936	0.721	0.991	0.605	0.000	0.813	0.828	0.936	0.959	0.766
Expected durations										
State1 (low)	2.528	8.098	188.105	27.757	1.935	4.429	1.207	9.000	4.148	
State 2 (high)	15.718	3.591	116.222	2.529	1.000	5.338	5.826	15.685	24.231	
Log-likelihood	209.517	53.755	74.398	73.445	184.569	-34.686	36.807	46.086	50.857	
DW	2.512	2.420	2.406	2.365	2.397	2.416	2.314	2.269	2.360	2.437
Tests of Equality across states (F-statistics)										
$\mu_1 = \mu_2$	0.432	0.092	0.912	0.022	31.532***	0.221	0.012	3.683*	0.005	0.144
$\sigma_1^2 = \sigma_2^2$	35.670***	2.879*	85.959***	19.833***	1.483	35.809***	129.75***	30.731***	16.293***	43.42***
Covariance (Rising protectionism-State probabilities)										
Prob1	0.02	0.20**	0.31***	0.14*	-0.01	0.07	-0.63**	0.06	-0.18**	0.17**
Prob2	-0.02	-0.20**	-0.31***	-0.14*	0.01	-0.07	0.63**	-0.06	0.18**	-0.17**
Obs	167	167	167	167	167	167	167	167	167	167

Source: Research finding.

Note: In the parentheses of a constant switch, parameters and non-switch parameters are z-statistics. Also, *, **, *** indicates significant at 10%, 5% and 1% respectively.

There has been a significant shift in the export supply of Uganda across all its directions of trade given the results of the tests of equality of shift parameters across its trade directions (Table 3). Also, there are significant tendencies for Uganda exports to sustain the origin state of either high or low export flows after an initial shock, except for the case of export to Africa (for high export flows), and export to other NFTA members (excluding USA). That is, the situation of low intra-African export is likely to remain longer than high intra-African exports.

The significant shift in Uganda intra-African export, export to EAC, and export to USA are associated with rising protectionist policies. The high export to the USA despite its isolationist stance has implications for Ugandan exports as it indicates little means of manoeuvring in the event of unfavourable market assess in the USA. However, the isolationist stance is making Uganda to trade more within Africa and the EAC. That shows that the country is making alternative moves to be more integrated within Africa. Also, the increasing isolationist stance has not been encouraging Uganda trade more with BRIC countries.

The key drivers of export vary across the selected trade directions. On the aggregate, Ugandan industrial production significantly influences its export. The impact is, however, inelastic. That is, increase in industrial production will affect export less proportionately. This is expected since export is component of domestic output not consumed domestically. This implies that Uganda domestic consumption of its industrial output is high. The results also show that Uganda's industrial production positively influence intra-African exports, and intra-EAC exports. The insignificance of Uganda industrial production to other trade directions may be associated with the fact that the Ugandan exports is more of primary agriculture products and less of what industries produce to these directions of trade.

In all, the results for Uganda show that the recent waves of protectionism represents a temporary effect on Uganda's trade in favour of USA, Intra-Africa and EAC and Middle East countries.

Kenya demonstrates a significant shift in export regimes except for the case of other NAFTA members (Table 4). Also, the results show that a high intra-African export regime has been associated with rising protectionist policies in the Western world. The opposite was found of being the case for BRIC countries and other NAFTA members. Different trade directions do not show a significant relationship with protectionist policies. While Kenya's intra-African exports are associated with rising protectionist policies, its expected duration of export remaining at a high regime within Africa is about seven months compared to the expected period of its export to be in the low state of about 16.5 months. The insignificance of the equity market on the export of Kenya is an indication that the listed companies' exports are minimal. The impact of isolationist policies on Kenya's intra-African exports is temporary.

Table 3. Markov Switching Estimates for Uganda

Switch parameters	Africa	ASEAN	BRC	EU	UK	USA	EAC	MIDDLE EAST	NAFTA	AGGREGATE
μ_1	0.002 (0.272)	1.952* (1.677)	3.917*** (5.935)	0.690* (2.074)	-0.011 (-0.185)	3.499*** (5.594)	0.374* (1.955)	0.018 (0.310)	3.742*** (12.171)	0.578* (1.653)
μ_2	0.063 (0.474)	2.822*** (4.435)	3.368*** (2.802)	2.536** (2.802)	0.007 (0.247)	2.918** (2.925)	0.783 (0.620)	0.030 (1.106)	-1.242 (-0.944)	0.182 (1.393)
σ_1^2	-2.342*** (-32.233)	-0.629*** (-4.422)	-1.154*** (-16.590)	-2.644*** (-24.956)	-0.621*** (-6.814)	-0.706*** (-10.121)	-2.228*** (-25.137)	-0.657*** (-6.287)	-0.310*** (-3.246)	-2.334*** (-20.477)
σ_2^2	-1.112** (-3.219)	-1.573*** (-9.481)	-0.501*** (-4.976)	-1.586*** (-15.960)	-1.547*** (-12.426)	-1.296*** (-10.433)	-0.984*** (-4.623)	-1.661*** (-9.358)	0.380** (2.802)	-3.359*** (-12.552)
AR (1) (state 1)	-	0.766*** (5.358)	0.546*** (7.119)	0.934*** (29.114)	-	0.535*** (6.396)	0.965*** (52.984)	-	0.382*** (6.842)	0.952*** (32.618)
AR (1) (State 2)	-	0.656*** (8.511)	0.533*** (4.909)	0.753*** (8.530)	-	0.646*** (5.313)	0.927*** (7.803)	-	1.032*** (4.492)	0.986*** (89.453)
Non-switching regressors										
D(INDPRO_D1)	0.713*** (3.606)	0.965 (1.672)	0.712 (1.059)	0.424* (1.844)	-0.446 (-0.743)	0.835 (-1.100)	0.557*** (2.271)	-0.429 (-0.577)	0.926 (0.482)	0.366** (2.742)
D(EXPRDP_NEW_D1)	-0.050 (-0.270)	0.323 (0.558)	-0.560 (-0.710)	0.096 (0.464)	0.416 (0.595)	0.684 (0.801)	-0.200 (-0.860)	0.314 (0.478)	-1.950 (-0.873)	-0.065 (-0.535)
D(RER_D1)	-	-	-	-	-	-0.178 (-0.110)	-	-	-	-
D(REER_D1)	-	-	-	-	-	-	-	-	-	-
State Probabilities										
P(low/low)	0.966	0.665	0.995	0.883	0.958	0.993	0.929	0.921	0.642	0.726
P(low/high)	0.034	0.335	0.005	0.117	0.042	0.007	0.071	0.079	0.358	0.274
P(high/low)	0.627	0.193	0.008	0.130	0.045	0.012	0.447	0.097	0.868	0.322
P(high/high)	0.373	0.807	0.992	0.870	0.955	0.988	0.553	0.903	0.132	0.678
Expected durations										
State 1 (low)	29.015	2.985	181.919	8.543	23.677	137.839	14.006	12.622	2.796	3.645
State 2 (high)	1.594	5.175	124.065	7.692	22.266	82.302	2.236	10.319	1.151	3.109
Log-likelihood	129.551	-53.854	-83.370	93.281	-74.138	-92.153	85.011	-70.645	-247.109	199.818
DW	2.223	1.946	2.417	2.490	2.548	2.214	2.291	2.500	2.191	2.478
Tests of Equality across states (F-statistics)										
$\mu_1 = \mu_2$	0.205	0.333	0.296	3.329*	0.071	0.253	0.100	0.036	14.22***	-1.033
$\sigma_1^2 = \sigma_2^2$	13.85***	34.761***	28.460***	66.106***	49.37***	17.281***	39.29***	39.201***	18.83***	18.88***
Covariance (Rising protectionism-State probabilities)										
Prob1	-0.27***	-0.01	0.333***	-0.01	-0.03	-0.80***	-0.27***	-0.02	0.14*	0.11
Prob2	0.27***	0.01	-0.333***	0.01	0.03	0.80***	0.27***	0.02	-0.14*	-0.11
Observations	164	164	164	164	164	164	164	164	164	164

Source: Research finding.

Note: In the parentheses of a constant switch, parameters and non-switch parameters are z-statistics. Also, *, **, *** indicates significant at 10%, 5% and 1% respectively.

Table 4. Markov Switching Estimates for Kenya

Switch parameters	AFRICA	ASEAN	BRIC	EU	UK	USA	EAC	MIDDLE EAST	NAFTA
μ_1	0.001 (0.095)	11.93*** (6.030)	4.090*** (4.563)	0.018 (0.458)	0.055 (0.620)	10.265* (2.298)	0.023 (0.246)	5.122*** (4.951)	1.873* (1.806)
μ_2	-0.002 (-0.055)	5.414*** (6.061)	3.550* (1.938)	-0.003 (-0.327)	-0.012 (-1.069)	1.008** (2.266)	-0.000 (-0.002)	0.310 (0.248)	2.272** (3.033)
σ_1^2	-2.796*** (-27.143)	-1.086** (-3.011)	-1.577*** (-15.892)	-1.671*** (-6.195)	-1.382*** (-4.183)	-0.975*** (-2.826)	-1.375*** (-3.883)	-1.537*** (-14.038)	-0.792*** (-3.871)
σ_2^2	-1.828*** (-11.557)	-0.816*** (-9.548)	-2.532*** (-7.103)	-2.483*** (-14.370)	-2.280*** (-21.994)	-2.271*** (-27.248)	-2.374*** (-25.639)	-1.983*** (-8.650)	-0.878*** (-8.755)
AR (1) (state 1)	-	-0.296 (-1.253)	0.583*** (6.371)	-	-	-0.007 (-0.016)	-	0.514*** (5.227)	0.809*** (5.761)
AR(1) (State 2)	-	0.360*** (3.504)	0.643*** (3.540)	-	-	0.902*** (20.856)	-	0.968*** (7.825)	0.676*** (7.125)
Non-switching regressors									
D(STOCKMRT)	0.105 (0.735)	-1.003 (-0.857)	-0.454 (-1.113)	-0.043 (-0.227)	0.242 (1.130)	-0.013 (-0.057)	0.262 (1.350)	-0.098 (-0.205)	-1.429 (-1.547)
D(EXPPRDP)	0.077 (0.480)	-0.500	-0.340 (-0.816)	0.132 (0.618)	-0.339 (-1.345)	-0.454 (-1.801)	0.073 (0.324)	-0.335 (-0.713)	1.427 (1.313)
State Probabilities									
P(low)low)	0.939	0.117	0.931	0.706	0.487	0.616	0.511	0.977	0.000
P(Low High)	0.061	0.883	0.069	0.294	0.513	0.384	0.489	0.023	1.000
P(High Low)	0.142	0.117	0.234	0.084	0.056	0.024	0.044	0.065	0.388
P(high)high)	0.858	0.883	0.766	0.916	0.944	0.976	0.956	0.935	0.612
Expected durations									
State 1 (low)	16.502	1.133	14.565	3.402	1.948	2.602	2.046	43.064	1.000
State 2 (high)	7.025	8.527	4.266	11.902	17.828	42.049	22.580	15.341	2.580
Log-likelihood	128.341	-95.249	35.614	100.606	89.030	89.762	101.996	18.996	-90.238
DW	2.350	2.150	2.139	2.498	2.366	2.460	2.025	2.288	2.220
Tests of Equality across states (F-statistics)									
$\mu_1 = \mu_2$	0.005	9.259**	0.071	0.262	0.551	4.355*	0.058	8.096**	0.082
$\sigma_1^2 = \sigma_2^2$	35.119***	0.523	7.149**	17.085***	9.134***	15.150***	9.371***	2.388	0.180
Covariance (Rising protectionism-State probabilities)									
Prob1	-0.23**	0.12	0.22*	-0.13	0.09	-0.12	-0.06	0.03	0.20*
Prob2	0.23**	-0.12	-0.22*	0.13	-0.09	0.12	0.06	-0.03	-0.20*
Observations	127	127	127	127	127	127	127	127	127

Source: Research finding.
Note: In the parentheses of a constant switch, parameters and non-switch parameters are z-statistics. Also, *, **, *** indicates significant at 10%, 5% and 1% respectively.

Table 5. Markov Switching Estimates for Morocco

Switch parameters	Africa	ASEAN	BRIC	CEN-SAD	EU	UK	USA	MIDDLEEAST	NAFTA	AGGREGATE
μ_1	1.098 (0.725)	4.037*** (3.953)	4.405*** (5.658)	-0.098* (-2.196)	6.598 (1.323)	-0.098 (-0.394)	2.427* (2.381)	3.147*** (2.900)	4.828*** (4.607)	-0.001 (-0.004)
μ_2	0.362 (1.446)	7.472*** (8.355)	5.893** (2.957)	0.088** (3.055)	0.773* (2.101)	0.011 (0.749)	1.407*** (2.856)	0.612 (1.290)	4.395*** (5.586)	0.007 (1.045)
σ_1^2	-0.674** (-2.618)	0.512*** (4.976)	-1.410*** (-20.129)	0.834*** (5.868)	-0.668*** (-3.400)	-0.161 (-0.621)	-0.450*** (-3.746)	-0.859*** (-6.569)	-1.079*** (-11.724)	-0.580** (-2.864)
σ_2^2	-1.864*** (-21.837)	-1.281*** (-18.870)	-0.218 (-1.493)	0.934*** (7.948)	-2.506*** (-37.493)	-1.758*** (-23.908)	-1.609*** (-13.928)	-1.790*** (-12.045)	-0.129* (-1.786)	-2.604*** (-42.691)
AR (1)	0.903*** (6.728)	0.466*** (3.560)	0.637*** (9.907)	-	0.472 (1.167)	-	0.763*** (7.900)	0.710*** (7.086)	-	-
AR(1)	0.970*** (45.094)	0.285*** (3.323)	0.450* (2.428)	-	0.945*** (35.493)	-	0.876*** (19.490)	0.946*** (21.905)	-	-
Non-switching regressors										
D(STOCKMRT)	0.353 (0.909)	0.843 (0.939)	-1.525 (-2.090)	0.141 (0.287)	0.022 (0.112)	0.131 (0.262)	0.834 (1.313)	-2.485*** (-4.301)	-1.429 (-1.134)	0.073 (0.391)
D(EXPPRDP_NEW_D11)	0.215 (0.630)	-1.096 (-1.407)	0.734 (1.169)	0.231 (0.473)	0.459** (2.617)	0.230 (0.607)	-0.412 (-0.625)	1.572** (3.165)	0.025 (0.022)	0.493** (2.948)
D(RER_D11)	-	-	-	-	-	-	1.340 (0.853)	-	-	-
D(RER_D11)	-	-	-	-	-	-	-	-	-	-1.001 (-0.928)
State Probabilities										
P(Low/low)	0.575	0.992	0.978	-0.000	0.915	0.494	0.724	0.390	0.992	0.911
P(Low/High)	0.425	0.008	0.022	1.000	0.085	0.506	0.276	0.610	0.008	0.089
P(High/Low)	0.044	0.005	0.092	0.692	0.007	0.046	0.137	0.392	0.006	0.008
P(High/high)	0.956	0.995	0.908	0.308	0.993	0.954	0.863	0.608	0.994	0.992
Expected durations										
State 1 (low)	2.356	122.422	46.228	1.000	11.785	1.977	3.621	1.638	133.203	11.206
State 2 (high)	22.625	188.438	10.857	1.445	138.650	21.773	7.277	2.554	171.863	133.149
Log-likelihood	40.592	-119.334	-48.381	-0.440	146.001	14.842	-63.705	-26.726	-160.028	160.565
DW	2.529	2.258	2.232	2.491	2.032	2.513	2.449	2.481	2.213	2.330
Tests of Equality across states (F-statistics)										
$\mu_1 = \mu_2$	0.222	6.427*	0.515	0.675	1.370	0.191	0.796	4.037*	0.112	0.002
$\sigma_1^2 = \sigma_2^2$	25.340***	211.30***	54.102***	31.956***	74.091***	41.741***	69.002***	36.630***	66.309***	95.033***
Covariance (Rising protectionism-State probabilities)										
Prob1	-0.14*	-0.33***	0.23**	-0.01	-0.15*	-0.04	-0.16*	-0.09	0.64***	-0.14*
Prob2	0.14*	0.33***	-0.23**	0.01	0.15*	0.04	0.16*	0.09	-0.63***	0.14*
Observations	167	167	167	167	167	167	167	167	167	167

Source: Research finding.

The Morocco results in Table 5 show significant variance shift between period of high export and low export regimes across estimations. On the aggregate, the ratio of expected duration of high export regime to low export regime is about 12 to 1. This varies across the trade directions. While the expected duration ratio of a high intra-African export regime to low intra-African export regime is about 11 to 1, intra-CEN-SAD is about 1 to 1. This implies that Morocco is more integrated with the rest of Africa than it is within the Community of Sahel-Saharan States. Besides, the recent isolationism stance is characterized by high export regime with ASEAN. The opposite were the cases of export to BRIC and other NAFTA members. The relationship between intra-African trade and protectionist policies in the Western countries is weak.

In terms of drivers of export in Morocco, the export price ratio of domestic prices is an important driver of aggregate exports as well as export in the direction of the EU and the Middle East, while stock market growth is not export enhancing to the Middle East. Overall, the Moroccan results show that the recent waves of protectionism represent a complete reversal of the past globalization trend of Morocco's trade in favor of ASEAN and Middle East countries but less trade with the BRIC and NAFTA, in opposite directions.

The study also assessed the export switch of major African trading partners in the forefront of "beggar-thy-neighbor" policies, which is necessary to check if these countries are finding markets for traded commodities in Africa and its implications for regional integration in the continent. The results are presented in Table A6 to A9 in the appendix. The results show that the expected duration of China and Russia to be in the state of a high export regime with Africa is longer than that of a low export regime. However, the opposite was the case with the USA and UK, where the expected duration of being the state of the low export regime to Africa is longer. These show the tendencies for more of China's and Russia's exports to find their way to Africa. It was found that rising protectionist policies are significantly associated with the Chinese high export regime to South Africa while it is associated with UK high export regime to Uganda. Meanwhile, it was characterized by the low export regime of China to Uganda, Russia to Kenya, the UK to Kenya and South Africa, and the USA to Morocco.

The above implies that some countries at the forefront of beggar-thy-neighbor policies are diverting their exports to some African economies, which has tendencies of undermining regional integration in Africa in commodities that these economies export to Africa.

Conclusion and Policy Issues

The study investigated whether the recent wave of economic isolationism unraveling the world trade order is creating an incentive for Africa to be more conscious of the worth of intra-regional regional integration. The study found that the expected duration of being in the state of high or low export regimes by sampled African economies varies across different trade directions. Also, rising isolationism policies on African economies' exports to various approaches vary. In contrast, its impact on selected African trading partners such as the USA, UK, Russia, and China exports to different African countries vary. Hence, factors to be rethought about regional integration in Africa cannot be one cap. However, harmonizing relevant policies will help Africa be more integrated and insulated.

In the case of Nigeria, it is realized that the economy is less integrated within the continent, but this has limited roots in the recent development in the global trade order of rising isolationist stance. The identified key drivers of Nigeria's trade within Africa are growth in equity markets and the ratio of export prices to domestic prices. Hence, there is a need for Nigeria to reform its equity market to be more efficient. This reform should target exporting industries listed on the stock exchange. Appropriate incentives to enhance intra-African trade will be a step in the right direction. Also, an effective inflation policy by the monetary authority will go a long to make Nigerian goods penetrates African markets

significantly, given that lower domestic prices relative to export prices is a significant incentive to export for Nigeria.

South Africa's industrial productivity positively influenced intra-African, Intra-SACU export flows, and the effect is found to be elastic. Also, export prices as a ratio of domestic prices are equally an essential driver of intra-African export flows. At the same time, the rising protectionist stance is an important fact affecting the high export regime of South Africa in SACU. In terms of policy, there is a need to consolidate existing industrial policies to improve additional products that will enhance South Africa's intra-African trade. Besides, necessary domestic price policies that minimize inflation will further boost South African trade within Africa. In sum, intra-African trade in South Africa will increase, but proactive, supportive policies should consolidate the success recorded.

In the case of Uganda, high intra-African and intra-EAC export regimes are associated with a rising protectionist stance. Still, the equity market is also an essential driver of Uganda's intra-regional trade in Africa. Therefore, relevant stock market reforms will significantly enhance Uganda's trade integration within Africa. However, a higher export regime of Uganda to the USA is associated with the rising protectionist era, which implies that Uganda's intra-Africa trade may rise. Still, the country has little maneuvering means and may be vulnerable to USA trade policies. There should be a conscious effort for the government to be insulated. One of the ways of doing this is to diversify external trade partner countries rather than its extra-African trade concentrating in few countries.

While rising isolationist policies in the Western countries was found to be associated with Kenya's high export regime in Africa, the equity markets and export prices are not significant factors which means that companies listed on the Nairobi Stock exchange trade less. Hence, there is a need for reforms that will remove bottlenecks to export by these companies. Some of these bottlenecks are embedded in trade facilitation issues.

Morocco demonstrates high regional integration with the rest of Africa than the intra-CEN-SAD, but these are unconnected with recent isolationism. Hence, there may be a need for trade policy in Morocco to focus more on challenges facing regional integration; otherwise, any new regional integration initiative will yield limited expected outcomes. Generally, some of these challenges range from multiple and overlapped memberships and supply side constraints to weak evolutionary processes in linear market integration (Hartzenberg, 2011).

Given the study's findings, Africa needs to renew its commitment to regional integration and re-evaluate the worth of enhancing regional integration in the continent that is necessary to insulate itself against unavoidable isolationist policies with some of its trading partners. In terms of continent-wide policies, there is a need to deepen and harmonize industrial policies and equity markets reforms to foster better performance, especially of the companies listed on the stock exchange with capacities to export. Also, approaches to achieve low general prices to enhance intra-African trade integration should be targeted and synchronized. These should be some of the African Continental Free Trade Agreement targets to achieve the expected trade integration in Africa.

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Appendix

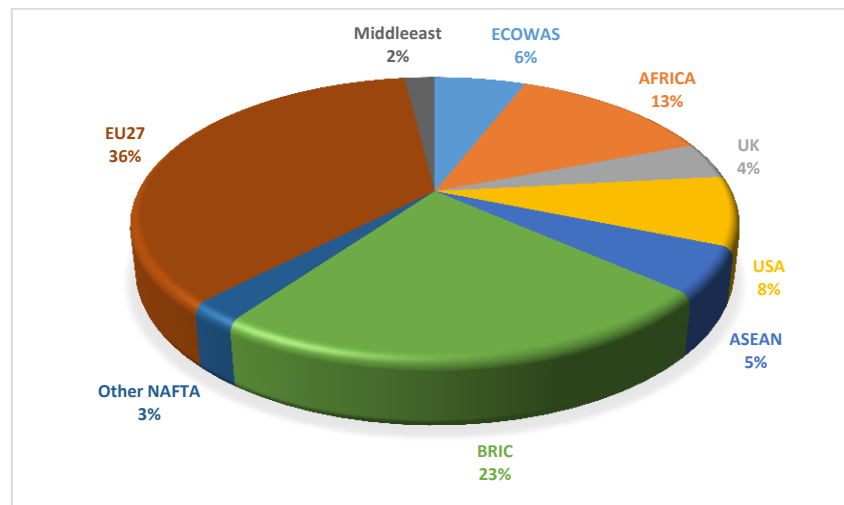


Figure I. Direction of Nigeria Exports (%)
Source: Computed based on ITC trade map database.

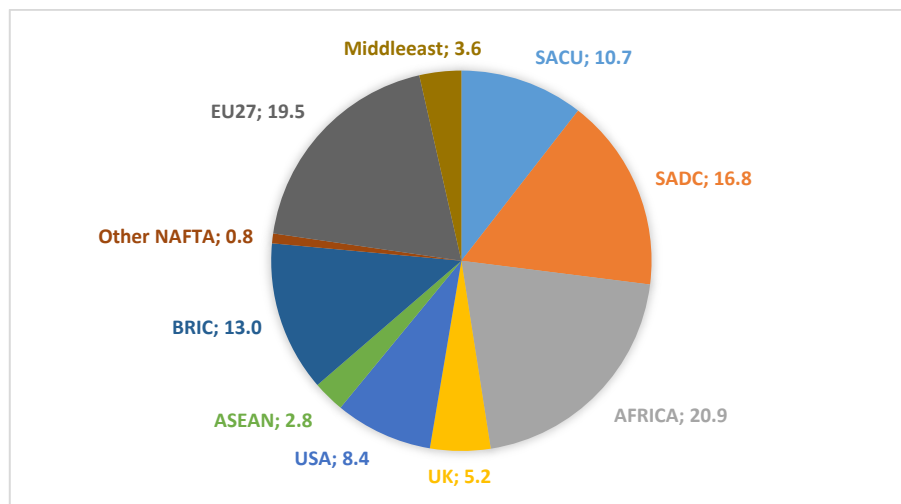


Figure II. Direction of South Africa's Exports (%)
Source: Computed based on ITC trade map database.

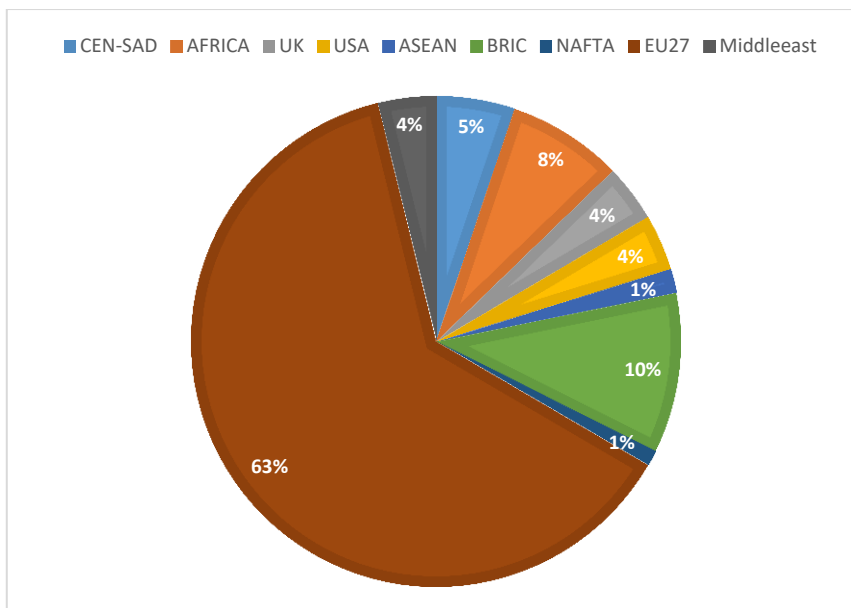


Figure III. Direction of Morocco Exports (%)
Source: Computed based on ITC trade map database.

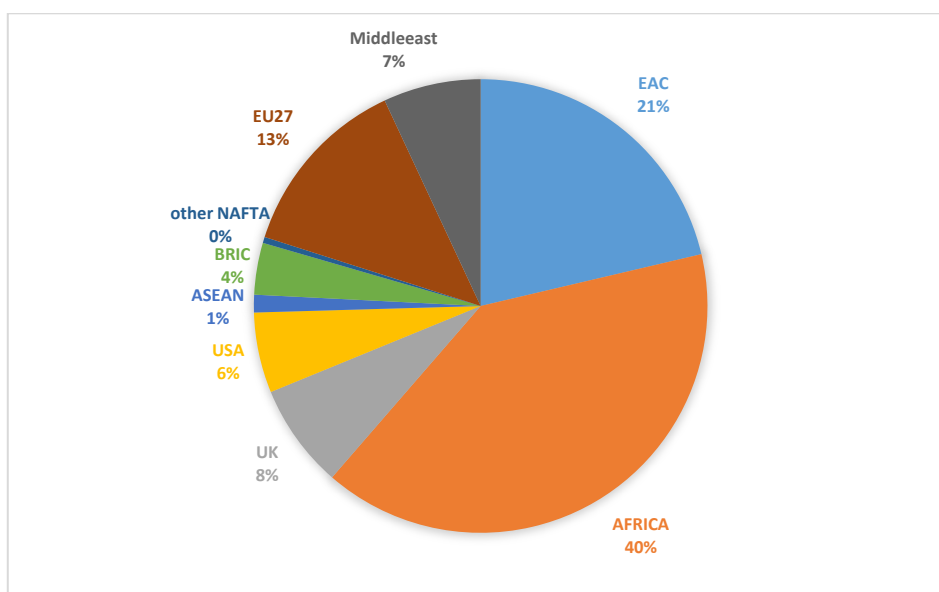


Figure IV. Direction of Kenya Exports (%)
Source: Computed based on ITC trade map database.

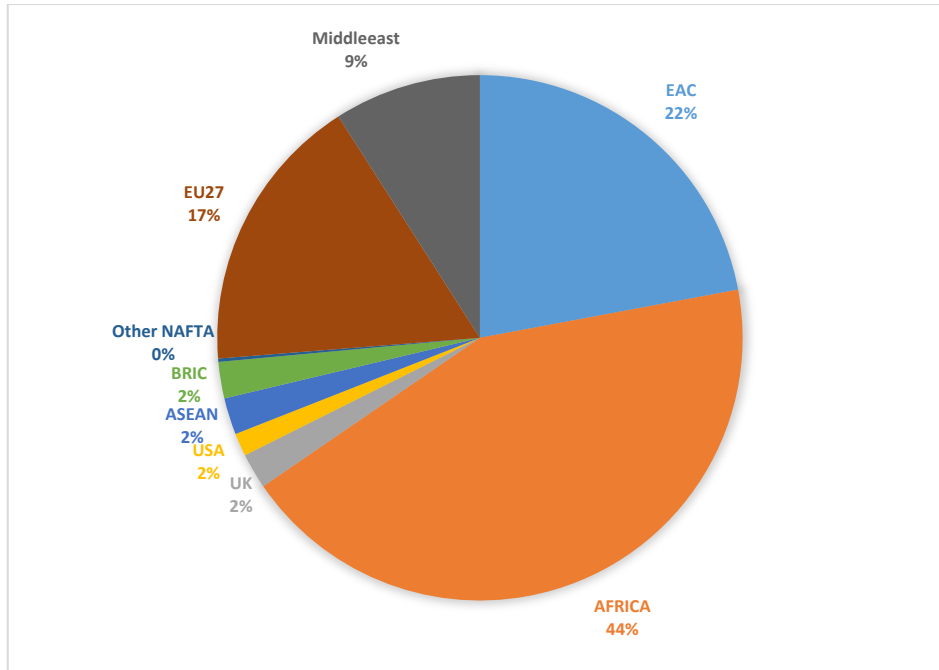


Figure V. Direction of Uganda Exports (%)
Source: Computed based on ITC trade map database.

Table I. Test of Seasonality (Nigeria)

	Africa	ASEAN	BRIC	ECOWAS	UK	USA	EU27	Exprd	MEast	Nafta	REER	RER	stockmrt	trade Total
Assuming stability (F-value)	1.279	0.515	0.941	1.032	1.113	1.093	0.573	2.072 (5%)	1.466	1.517	2.838* (5%)	3.846** (1%)	6.110** (1%)	1.151
Nonparametric Test (Kruskal-Wallis statistics)	15.061	9.2359	9.8896	8.5114	13.917	12.397	9.529	18.144	17.153	18.3729	35.064 (1%)	32.058 (1%)	35.960 (1%)	15.271
Moving Seasonality Test (F-value)	0.451	1.182	0.598	0.950	1.116	2.599 (at 5%)	0.860	1.806	2.055	0.376	8.874** (1%)	10.326** (1%)	1.623	1.176

Source: Research finding.

Table II Tests of Seasonality (South Africa)

	Africa	ASEAN	BRIC	SACU	UK	USA	EU27	Exprd	MEast	Nafta	REER	RER	Induprod	totaltrade
Assuming stability (F-value)	24.438** (1%)	2.618* (at 5%)	3.132** (at 1%)	0.917	3.334** (at 1%)	8.332** (at 1%)	6.185** (at 1%)	5.148** (at 1%)	5.766** (at 1%)	4.750** (at 1%)	2.987* (at 5%)	2.793* (at 5%)	194.240** (at 1%)	17.263** (at 1%)
Nonparametric Test (Kruskal-Wallis statistics)	93.0276 (at 1%)	30.296 (1%)	42.025 (at 1%)	20.9619	35.880 (at 1%)	63.728 (at 1%)	45.830 (at 1%)	47.395 (at 1%)	50.143 (at 1%)	52.033 (at 1%)	36.406 (at 1%)	32.186 (at 1%)	149.2361 (at 1%)	85.505 (at 1%)
Moving Seasonality Test (F-value)	1.920 (at 5%)	1.524	4.689** (at 1%)	3.554* (at 1%)	2.269* (at 1%)	1.137	1.585	5.462** (at 1%)	1.996 (at 5%)	1.636	2.372* (at 1%)	2.295** (at 1%)	1.091 (at 1%)	2.715* (at 1%)

Source: Research finding.

Table III. Tests of Seasonality (Kenya)

	Africa	ASEAN	BRIC	EAC	EU	UK	USA	Exprd	Middleeast	NAFTA	RER	stocks	totaltrade
Assuming stability (F-value)	4.429** (1%)	1.738	2.124 (5%)	3.145** (1%)	16.332** (1%)	3.881** (1%)	7.918** (1%)	1.431	1.682	1.209	8.695** (1%)	5.513** (1%)	3.229** (1%)
Nonparametric Test (Kruskal-Wallis statistics)	35.1928 (1%)	23.9947	21.3636 (1%)	30.268 (1%)	77.849 (1%)	40.576 (1%)	71.7643 (1%)	13.531 (1%)	21.1905 (5%)	14.4978 (5%)	80.1010 (5%)	51.509 (1%)	34.728 (1%)
Moving Seasonality Test (F-value)	1.455	1.103	2.014 (5%)	1.528	1.105	1.764	0.985	4.595** (1%)	0.662	1.413	4.030** (1%)	3.091* (1%)	0.701 (1%)

Source: Research finding.

Table IV. Tests of Seasonality (Uganda)

	Africa	ASEAN	BRIC	EAC	EU	UK	USA	Exprop	Middleeast	Nafta	reer	RER	indprod	totaltrade
Assuming stability (F-value)	2.858* (@5%)	20.198** (1%)	2.526* (@5%)	9.079** (1%)	7.751** (@1%)	11.135** (1%)	2.315 (5%)	6.178** (1%)	2.298 (5%)	2.539* (5%)	3.174** (1%)	4.044** (1%)	24.153** (1%)	7.776** (@1%)
Nonparametric Test (Kruskal-Wallis statistics)	31.7849 (@1%)	99.4921 (1%)	33.1560 (@1%)	89.5039 (1%)	63.6753 (@1%)	75.3215 (1%)	30.8797 (1%)	55.6999 (1%)	34.0776 (1%)	27.6956 (1%)	36.9345 (1%)	45.4077 (1\$)	88.7925 (1%)	73.6235 (@1%)
Moving Seasonality Test (F-value)	2.176 (@5%)	0.632	1.254	1.646	1.657	0.854	2.432* (1%)	4.793** (1%)	2.945* (1%)	2.162 (5%)	6.256** (1%)	4.111** (1%)	1.091	0.953

Source: Research finding.

Table V. Tests of Seasonality (Morocco)

	Africa	ASEAN	BRIC	CEN-SAD	EU	UK	USA	Exprop	Middleeast	Nafta	reer	RER	Stocks	totaltrade
Assuming stability (F-value)	5.144** (@1%)	1.248	3.503** (@1%)	2.971* (@5%)	5.965** (@1%)	1.752	4.656** (1%)	6.787** (@1%)	2.313 (5%)	1.665	6.817** (1%)	2.668* (1%)	4.707** (1%)	4.198** (@1%)
Nonparametric Test (Kruskal-Wallis statistics)	45.2395 (@1%)	9.6316	41.6431 (@1%)	28.6819 (@1%)	76.6084 (@1%)	40.5952	41.0522 (1%)	59.8033 (@1%)	25.8570 (5%)	23.2022 (5%)	58.5077 (1%)	33.1810 (5%)	44.5464 (1%)	73.2401 (@1%)
Moving Seasonality Test (F-value)	0.717 (@5%)	2.357* (@5%)	4.348** (@1%)	0.862	4.549** (@1%)	4.210** (1%)	1.764	5.331** (@1%)	1.358	2.675* (1%)	2.140 (5%)	2.788* (1%)	5.211** (1%)	3.771** (@1%)

Source: Research finding.

Table VI. Markov Switching Estimates for China

Switch parameters	c	SOUTHAFRICA	UGANDA	KENYA	MOROCCO	AGGREGAT E
μ_1	-0.009 (-0.189)	-0.007 (-0.195)	2.056 (3.043)**	0.002 (0.032)	12.943 (3.442)***	0.219 (1.439)
μ_2	0.012 (0.837)	-0.000 (0.004)	0.062 (0.125)	-0.006 (-0.387)	0.861 (2.172)*	2.542 (1.853)*
σ_1^2	-1.223 (-8.238)***	-1.406 (-11.038)***	-0.849 (-8.790)***	-1.176 (-8.872)***	-1.368(- 8.623)***	-2.912 (-26.608)***
σ_2^2	-2.446 (-21.261)***	-2.557 (-25.081)***	-2.076 (-8.298)***	-2.315 (-24.374)***	-2.192 (-27.104)***	-1.361 (-10.476)***
AR (1) (state 1)	-	-	0.801 (12.369)***	-	-0.044 (-0.146)	0.986 (101.578)***
AR(1) (State 2)	-	-	0.995 (20.736)***	-	0.929 (28.918)***	0.837 (9.507)***
Non-switching regressors						
D(INDPRO_D11)	0.812 (0.676)	1.330 (1.207)	0.478 (0.124)	2.341 (1.713)*	1.772 (1.230)	0.505 (0.615)
D(EXPPRPD_NEW_D11)	0.215 (0.882)	-0.040 (-0.192)	0.162 (0.273)	-0.063 (-0.263)	-0.451 (-1.774)	0.068(0.528)
State Probabilities						
P(low low)	0.671	0.740	0.583	0.745	0.605	0.881
P(Low High)	0.329	0.260	0.417	0.255	0.395	0.119
P(High Low)	0.130	0.118	0.583	0.109	0.097	0.343
P(high high)	0.870	0.882	0.417	0.891	0.903	0.657
Expected durations						
State 1 (low)	3.040	3.842	2.398	3.921	2.534	8.382
State 2 (high)	7.713	8.451	1.715	9.185	10.263	2.912
Log-likelihood	87.583	103.795	-46.130	68.747	76.725	148.308
DW	2.023	2.151	2.505	2.039	2.474	2.124
Tests of Equality across states (F-statistics)						
$\mu_1 = \mu_2$	0.178	0.037	5.903*	0.023	10.644**	2.824*
$\sigma_1^2 = \sigma_2^2$	75.913***	71.632***	28.889***	67.195	21.107***	120.022***
Covariance (Rising protectionism-State probabilities)						
Prob1	0.11	-0.16**	0.14*	-0.09	0.09	0.01
Prob2	-0.11	0.16**	-0.14*	0.09	-0.09	-0.01
Observations	170	170	170	170	170	170

Source: Research finding.

Table VII. Markov Switching Estimates for Russia

Switch parameters	KENYA	MOROCCO	NIGERIA	SOUTHAFRICA	UGANDA	AGGREGATE
μ_1	6.790 (6.021)***	0.026 (0.294)	-6.501 (-2.608)**	6.790 (6.021)***	0.326 (42.214)***	5.645 (1.419)
μ_2	6.910 (3.145)**	0.303 (57.448)***	5.325 (8.800)***	6.910 (3.145)**	0.097 (0.436)	3.041 (2.489)*
σ_1^2	-0.479 (-5.802)***	-0.122 (-1.697)*	-0.581 (-3.540)***	-0.479 (-5.802)***	-4.236 (-14.804)***	-0.705 (-2.801)**
σ_2^2	0.358 (2.043)*	-5.039 (-13.457)***	-0.953 (-9.185)***	0.358 (2.043)*	0.771 (10.576)***	-1.474 (-10.420)***
AR (1) (state 1)	0.285 (2.408)*	-	1.588 (6.470)***	0.285 (2.408)*	-	0.577 (1.912)*
AR(1) (State 2)	0.215 (0.857)	-	0.486 (7.889)***	0.215 (0.857)	-	0.777 (8.656)***
Non-switching regressors						
D(INDPRO_D11)	-2.959 (-0.683)	-4.607 (-14.593)***	-0.245 (-0.083)	4.699 (40.696)***	7.304 (12.796)***	5.727 (2.868)***
D(EXPPRDP_N EW_D11)	0.664 (0.335)	2.501 (12.659)***	0.001 (0.001)	-0.128 (-1.389)	17.282 (78.271)***	-0.445(-0.535)
State Probabilities						
P(low low)	0.991	0.957	0.000	0.926	0.000	0.666
P(Low High)	0.009	0.043	1.000	0.074	1.000	0.334
P(High Low)	0.022	0.957	0.406	0.926	0.067	0.091
P(high high)	0.978	0.043	0.594	0.074	0.933	0.909
Expected durations						
State 1 (low)	107.780	23.466	1.000	13.577	1.000	2.995
State 2 (high)	46.009	1.045	2.465	1.080	14.820	10.944
Log-likelihood	-123.452	-134.671	-84.850	-114.052	-226.313	-22.141
DW	1.963	2.102	2.176	2.195	2.505	2.351
Tests of Equality across states (F-statistics)						
$\mu_1 = \mu_2$	0.002	9.521***	20.910***	0.003	1.064	0.336
$\sigma_1^2 = \sigma_2^2$	19.525***	167.248***	3.517*	320.683***	288.180***	11.973***
Covariance (Rising protectionism-State probabilities)						
Prob1	0.41***	-0.04	-0.10	-0.02	0.04	-0.01
Prob2	-0.41***	0.04	0.10	0.02	-0.04	0.01
Observations	109	109	109	109	109	109

Source: Research finding.

Table VIII. Markov Switching Estimates for UK

Switch parameters	EXP TO KENYA	EXP TO MOROCCO	NIGERIA	SOUTHAFRICA	UGANDA	AGGREGATE
μ_1	6.530 (6.418)***	-0.008 (-0.268)	-0.005 (-0.304)	0.009 (0.694)	8.378 (7.099)***	0.002 (0.205)
μ_2	6.225 (5.454)***	0.025 (0.362)	0.004 (0.113)	-0.018 (-0.450)	1.276 (2.036)*	0.030 (46.565)***
σ_1^2	-1.467 (-19.722)***	-1.442 (-4.836)***	-1.956 (-13.876)***	-2.256 (-15.844)***	-1.114 (-10.751)***	-2.158 (-37.474)***
σ_2^2	-2.059 (-22.578)***	-0.680 (-3.042)**	-1.102 (-8.833)***	-1.217 (-9.753)***	-1.930 (-19.705)***	-6.548 (-23.601)***
AR (1) (state 1)	0.389 (4.095)***	-	-	-	0.053 (0.398)	-
AR(1) (State 2)	0.398 (3.605)***	-	-	-	0.851 (11.678)***	-
Non-switching regressors						
D(INDPRO_D11)	1.373 (3.320)	2.683 (2.753)***	1.196 (2.423)***	0.917 (2.476)***	1.545 (2.829)***	0.096 (4.439)***
D(EXPPRDP_NE W_D11)	0.647 (2.176)**	1.013 (1.666)	0.216 (0.626)	-0.080 (-0.266)	0.477 (1.010)	0.124 (6.855)***
State Probabilities						
P(low low)	0.993	0.845	0.882	0.841	0.861	0.950
P(Low High)	0.007	0.155	0.118	0.159	0.139	0.050
P(High Low)	0.009	0.233	0.140	0.264	0.101	0.769
P(high high)	0.991	0.767	0.860	0.736	0.899	0.231
Expected durations						
State 1 (low)	140.886	6.465	8.442	6.289	7.200	20.026
State 2 (high)	116.415	4.288	7.135	3.788	9.871	1.300
Log-likelihood	45.381	-65.224	6.201	48.388	1.176	140.617
DW	2.135	2.934	2.948	2.552	2.138	2.692
Tests of Equality across states (F-statistics)						
$\mu_1 = \mu_2$	0.040	0.175	0.046	0.369	30.313***	8.721**
$\sigma_1^2 = \sigma_2^2$	24.998***	19.058***	35.161***	49.573***	41.037***	240.873***
Covariance (Rising protectionism-State probabilities)						
Prob1	0.33***	0.08	0.02	0.21**	-0.38***	0.09
Prob2	-0.33***	-0.08	-0.02	-0.21**	0.38***	-0.09
Observations	170	170	170	170	170	170

Source: Research finding.

Table IX. Markov Switching Estimates for USA

Switch parameters	EXP TO KENYA	EXP TO MOROCCO	NIGERIA	SOUTHAFRICA	UGANDA	AGGREGATE
μ_1	12.277 (17.325)***	10.881 (8.044)***	0.481 (9.387)***	1.820 (3.412)***	0.004 (0.106)	0.006 (0.678)
μ_2	8.986 (13.677)***	2.025 (2.467)*	1.443 (3.505)***	9.629 (3.101)**	0.035 (0.091)	-0.013 (-0.370)
σ_1^2	-1.631 (-7.659)***	-1.116 (-14.383)***	-4.854 (-12.908)***	-2.466 (-31.341)***	-0.741 (-9.068)***	-2.475 (-17.467)***
σ_2^2	-0.878 (-14.746)***	-1.260 (-13.875)***	-1.738 (-30.096)***	-1.077 (-6.199)***	0.383 (1.465)	-1.773 (-8.335)***
AR (1) (state 1)	-0.006 (-0.102)	0.104 (0.934)	0.921 (229.358)***	0.860 (20.967)***	-	-
AR(1) (State 2)	0.137 (2.193)*	0.822 (11.324)***	0.886 (26.969)***	0.270 (1.155)	-	-
Non-switching regressors						
D(INDPRO_D11)	-8.600 (-1.887)*	2.610 (0.689)	3.482 (2.267)**	0.808 (0.756)	4.417 (0.725)	2.685 (1.981)**
D(EXPPRPD_NEW_D11)	-0.628 (-0.778)	-1.045 (-1.527)	-0.408 (-1.737)	-0.156 (-0.723)	1.202 (1.110)	0.078 (0.338)
D(RER_D11)	-3.271 (-1.867)	-1.814 (-1.150)	-0.607 (-5.012)***	-0.006 (-0.022)	2.121 (1.132)	-
State Probabilities						
P(low low)	0.460	0.979	0.029	0.938	0.958	0.907
P(Low High)	0.540	0.021	0.971	0.062	0.042	0.093
P(High Low)	0.044	0.026	0.029	0.333	0.393	0.323
P(high high)	0.956	0.974	0.971	0.667	0.607	0.677
Expected durations						
State 1 (low)	1.853	47.633	1.029	16.140	23.894	10.764
State 2 (high)	22.688	38.413	35.083	3.000	2.545	3.094
Log-likelihood	-119.272	-51.009	48.072	117.703	-147.773	140.266
DW	2.149	2.231	2.809	2.394	2.750	2.692
Tests of Equality across states (F-statistics)						
$\mu_1 = \mu_2$	11.909***	29.712***	5.366*	6.356*	0.006	0.253
$\sigma_1^2 = \sigma_2^2$	11.504***	1.393	66.186***	62.593***	21.431***	15.412***
Covariance (Rising protectionism-State probabilities)						
Prob1	-0.12	0.36***	0.11	-0.02	-0.05	0.20*
Prob2	0.12	-0.36***	-0.11	0.02	0.05	-0.20*
Observations	170	170	170	170	170	170

Source: Research finding.



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