INNOVATIONS

Impact of Africa Growth and Opportunity Act and Merchandise Exports on the Ethiopian Economy over the long term

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Abstract
Ethiopia is not only one of the country which have high real economic growth in the world, but it is also the second-most populous country in Africa.At the same time, the country is one of the poorest, with an average per capita income of $850.A low level of manufacturing export growth has been identified as a major cause of the poor economic performance of many Sub-Saharan countries. Ethiopia's trade deficit has been growing over the past decade, as its imports have increased 12.5% per year on average since 2004/05andthe trade balance for 2020 decreased by 14.63 % compared to the trade balance for 2019. In the study, time series data from 1960-2017 was used to assess the long-run effects of merchandise exports and the Africa Growth Opportunity Act on Ethiopia's economy, and to make recommendations regarding where Ethiopia should increase merchandise exports. In this study, the autoregressive distributed lag bounds testing method was used after the Dickey-Fuller augmented test to identify the unit root. Findings from the study show that merchandise exports and Africa growth and opportunity act are related from economic growth in the long run. Thus, Ethiopia stands to suffer a lot by being disqualified from the Africa growth and opportunity act. Moreover, the study found that exporting more goods and services to developing countries in Africa is more profitable for Ethiopia, and being membership in Africa growth and opportunity act has contributed significantly to its economic growth.According to the findings, Ethiopia diversifies its exports, improves productivity where it has a comparative advantage, fosters good relations with low-income countries, and exports merchandise goods and services to such countries.

Key Words:1. Ethiopia 2. Economic growth 3. Effect 4. Merchandise Export 5. Long Run

1. Introduction

In this world, Ethiopia is an earthly paradise and a land of origin, and it has never been colonized. One of the most important business operations that contributes significantly to a country's economic success is exporting goods. It is a way of selling retail items to peregrine customers. Globalization has made it impossible for developing countries to cut themselves off from the ecumenical economy. A country's economy might be growing, but trade is not only advantageous but also inevitable. Among the fastest-growing economies in the world, Ethiopia has an annual average growth rate of 9.4% from 2010/11 to 2019/20, according to an estimate from the World Bank. At the same time, it is also one of the poorest, with an average per capita income of $850. By 2025, it hopes to attain lower middle income status. In the 2019/20 fiscal year, Ethiopia's true gross product growth slowed to 6.1

percent as a result of COVID-19.Most of the magnification has been attributed to industry, specifically construction and accommodation (World Bank, 2021).

As outlined in the concepts of Adam Smith and David Ricardo, Litsche (1960) and Evensky (2015) have found that trade openness has a positive influence on economic growth. When countries specialize in making goods in which they have a comparative advantage, trade can directly increase per capita income. It can also spur development indirectly through other channels such as technology transfer, product diversification, increasing scale economies, efficient resource allocation and distribution within the economy, and interactions with trading partners. It is well-known that open economies flourish more rapidly than closed economies.

Here are some reasons why export expansion is so important. Export development enables an abode country to focus its investment on sectors where it has a comparative advantage, as neoclassical trade theory suggests (Heckscher, 1949; Ohlin, 1933).Ethiopia would export basic necessities while importing manufactured goods for these purposes. Recent theoretical and empirical research, by contrast, has highlighted the relevance of export. The manufacturing sector has become the main mechanism by which developing countries can benefit from globalization and close the income gap with the industrialized world, through rapid technical change, widespread deregulation and, increasing internationalization of the generated.

In regard to imports and exports of goods and services, Ethiopia has reached this stage in its development. Ethiopia exported an average of $1.7 billion annually from 2009 to 2018, ranging from $1.6 billion in 2009 to $3.4 billion in 2014. Primary products represented 84% of total sales in 2018, while manufactured products represented 16%. Export values for other commodities were frivolous. A total of 12.5 billion dollars' worth of products were imported to Ethiopia from 2009 to 2016, an increase from 7.9 billion dollars in 2009. Primary products accounted for 23% of Ethiopian imports in 2018, while manufactured goods accounted for 77% and other products accounted for a small share. Foreign exchange access is severely restricted to the private sector due to a large trade imbalance, lower commodity prices, and policies by the enthusiastic regime that take priority in allocating foreign currencies (World Bank, 2021).

Ethiopia's imports come mainly from Asia (63%), followed by Europe (25%), Africa (21%) and the cumulated states (8%). The country's largest supplier is China, supplying 38% of Ethiopia's imports, followed by India at 7%. Its largest suppliers from Europe are Italy, Germany, and Turkey. The United States exports aircraft, construction equipment, equity investments, real estate, agricultural machinery, farming, and engineering accommodations to Ethiopia, which account for about 8% of its total imports. U.S. exports to Ethiopia were dominated by aircraft and aviation components. As a result of the proximity of and accessibility to reliable air transportation and services in Dubai, numerous U.S. companies with offices in the United Arab Emirate (UAE) conduct business in Ethiopia.

The role of exports in boosting economic growth has been studied empirically (Saleem and Sial, 2015). A sample of 47 emerging African nations from 1981 to 1987 was used in several empirical studies on manufacturing exports and economic growth and three export metrics. Ahmad and Kwan (1991) refute the export-led development theory by demonstrating that manufacturing exports account for a small share of total exports, while Esaku (2002) supports the export-led growth hypothesis. As a result, macroeconomic policies are primarily concerned with keeping economic growth strong and boosting manufacturing exports at the same time. It is the objective of this study to provide a comprehensive and rigorous study of the impact of manufacturing exports on Ethiopia's

economic growth and to make recommendations on which areas of the world Ethiopia should be exporting more to. Since previous Ethiopian studies have yielded ambiguous conclusions, this study contributes to empirical research.Thus, a 58 year time series of data was used to accomplish this study's objective.

2. Significance of the study

The importation of goods has a catastrophic impact on profitable growth and concerns policymakers. It contributes to the frugality of many developing countries like Ethiopia. Profitable and stable growth with high merchandise imports was the key to macro-economic programs. The impacts of importing ware triggered a major altercation.

3. Reviewof Literature

According to the endogenous growth proposition, the long-run growth rate is inextricably linked to endogenous forces. Physical and mortal means are both allowed to have growing returns to gauge (Hossain &Karunaratne, 2004). Ultimately, trade or mortal capital act as a growth machine (Lucas, 1988; Romer, 1990). Endogenous growth models place a lesser emphasis on the role exploration and development play in producing profit through technological metamorphosis.By encouraging invention, R&D spillovers, and literacy by doing, trade encourages advanced productivity growth, according to Krugman (1986) and Lucas (1988). Recently developed endogenous growth models stress the importance of exports to GDP growth.Studies on this relationship have determined that exports promote profitable growth when the volume of exports rises. Externalities are predicted to crop as exports increase, resulting in a growth in domestic product.

A neoclassical view of trade is based on relative advantage as well as Heckscher-Ohlin and Samuelson propositions. As trade becomes more open, each country specializes in producing particulars in which it has a relative productivity advantage, which originates from differences in technologies or natural coffers rather than factor bents, hence boosting its weal earnings and advantages from trade. As an alternative, Heckscher-Ohlin Samuelson examines the wealth of countries in a two-country, two-element model, in which each country exports a good that uses its abundant factor further and further.

The Solow model is based on the premise of diminishing returns to gauge, which implies that there is a steady-state position of per capita GDP (gross domestic product) that emerging countries can achieve. Accordingly, two countries with the same savings, depreciation, and population rates can have the same living conditions in the long run (Ray, 1998). Similarly, transnational trade openness generates inrushes of capital goods and technology, which results in an increase in artificial exertion, trade in manufactured goods, and profitable economic growth. By considering a broader range of issues in the new trade proposition, a wider range of issues have been considered. New ideas have been approved for growing indigenization. The maturity of propositions associating trade openness to long- run growth are grounded on endogenous technological change models.

Mbaku (1989) indicates that during the 1970s and 1980s, import growth facilitated profitable growth in 37 African countries. Using samples from 1960 to 1970 and 1970 to 1980, Fosu (1996) finds that exports boosted profitable growth in 28 least advanced African nations, but the impact was less than in other least developed nations. A study by Ukpolo (1994) finds that non-fuel commodity exports had a considerable salutary effect on growth in eight low-income African countries between 1969 and

1988. For 35 African countries over the period 1970-1990, Amoateng and Amoako-Adu (1996) confirm the positive effects of import growth on GDP.

4. The Africa Growth and Opportunity Act

4.1. Sub-Saharan African countries under the Africa Growth and Opportunity Act

American congress passed the African Growth and Opportunity Act in May of 2000. AGOA is a trade program aimed at strengthening economic ties between the United States and Sub-Saharan Africa.Under the act, the United States and selected sub-Saharan countries sign a preferential trade agreement. It was originally approved for 15 years, but was reauthorized for ten years by the Obama administration on June 25, 2015. In its current form, AGOA will continue until September 30, 2025. Economic experts consider AGOA one of the key components of growth in sub-Saharan Africa. The goal of AGOA is to expand U.S.-African trade and investment. As a result of AGOA's trade provisions, 350,000 direct and 1 million indirect jobs have been created in Africa and 100,000 jobs in the United States. Exports from participating countries to the United States rose more than 300 percent since the program began (African Growth and Opportunity Act (AGOA), 2021).

Kenya led the sub-Saharan Africa region, scoring 98% in the US Trade and Investment with Sub-Saharan Africa- recent trends and new developments report. With 81.9 % and 68.2 %, Ethiopia and the Democratic Republic of Congo (DRC) are the other eastern African countries that have made use of the treaty to increase their exports to the US, mainly textiles and apparel, metals, agricultural products and artwork. Madagascar, Ethiopia, and Kenya increased their apparel exports, leading to a 9.9% annual increase in US apparel imports from the region under AGOA, to $1.2 billion from 2016 to 2018. With one of the fastest-growing economies in the world, sub-Saharan African economies offer great prospects for lifting millions out of poverty and fostering long-term stability.

Africa exports to the US far outnumber US imports, resulting in a trade balance favoring African countries. Since the launch of AGOA, two-way trade between Sub-Saharan African countries and the United States has grown significantly. In spite of this, AGOA beneficiary countries' trade surplus has declined, primarily because oil prices are lower and volumes of exports in this sector have declined, which accounts for the majority of African exports to the United States. Combined good trade between the U.S. and China in 2015 reached $36 billion, down from $50 billion in 2014, $61 billion in 2013, and $66 billion in 2012.

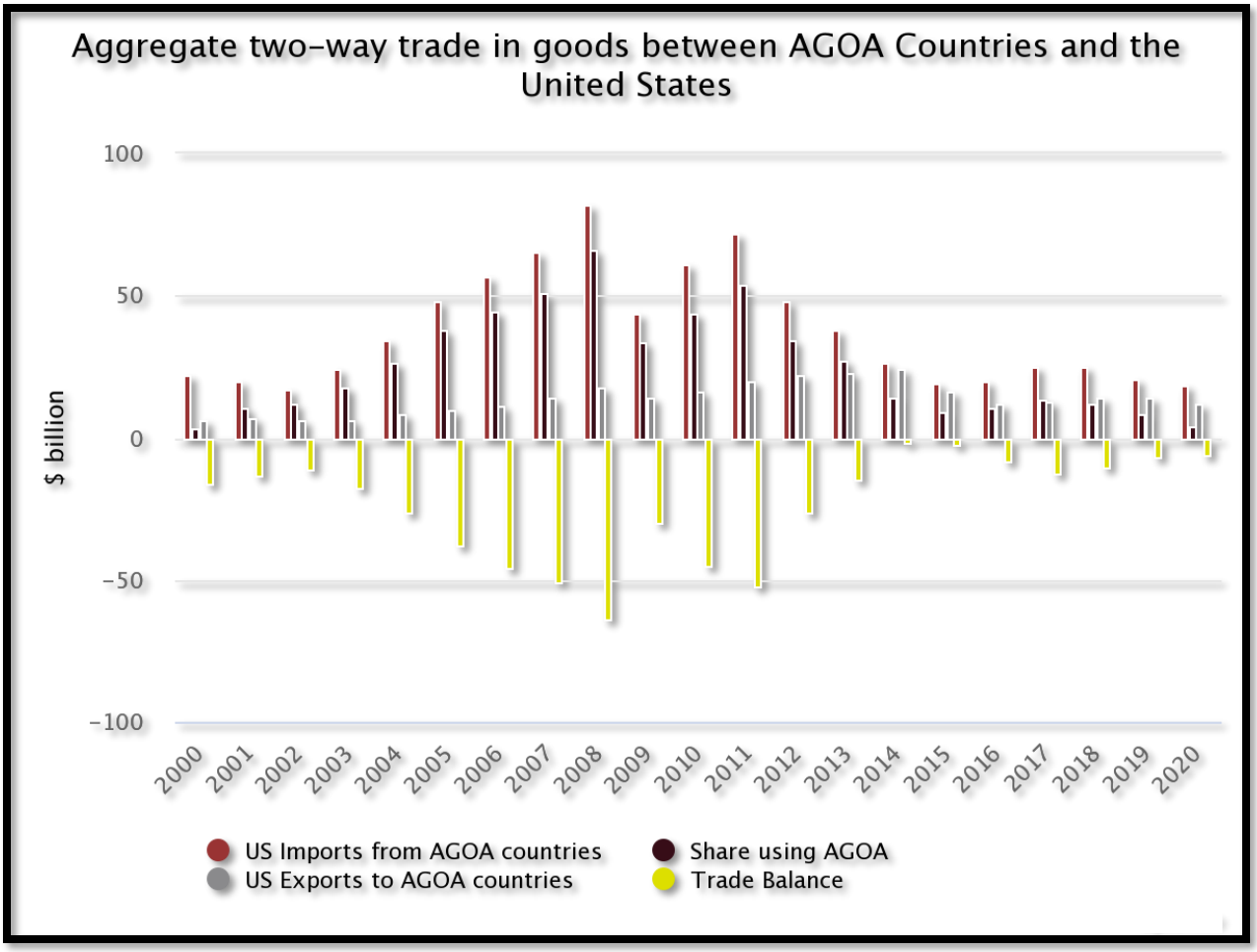

Figure 1 Aggregate two-way trade in goods between AGOA Countries and the United States

Source: Africa Growth and Opportunity Act.

In the past, oil exports from Angola and Nigeria have been the largest single contributor to AGOA-eligible trade, followed by Chad and the Republic of Congo. Since the onset of the African Growth and Opportunity Act (AGOA), this share has significantly declined with South Africa, Kenya, Ethiopia, Lesotho, Ghana and Madagascar among the leading non-oil exporters. Specifically, South Africa's exports are quite diverse, spanning both extractive and manufacturing sectors; on the other hand, apparel dominates in countries such as Kenya, Ethiopia and Madagascar (African Growth and Opportunity Act (AGOA), 2021).

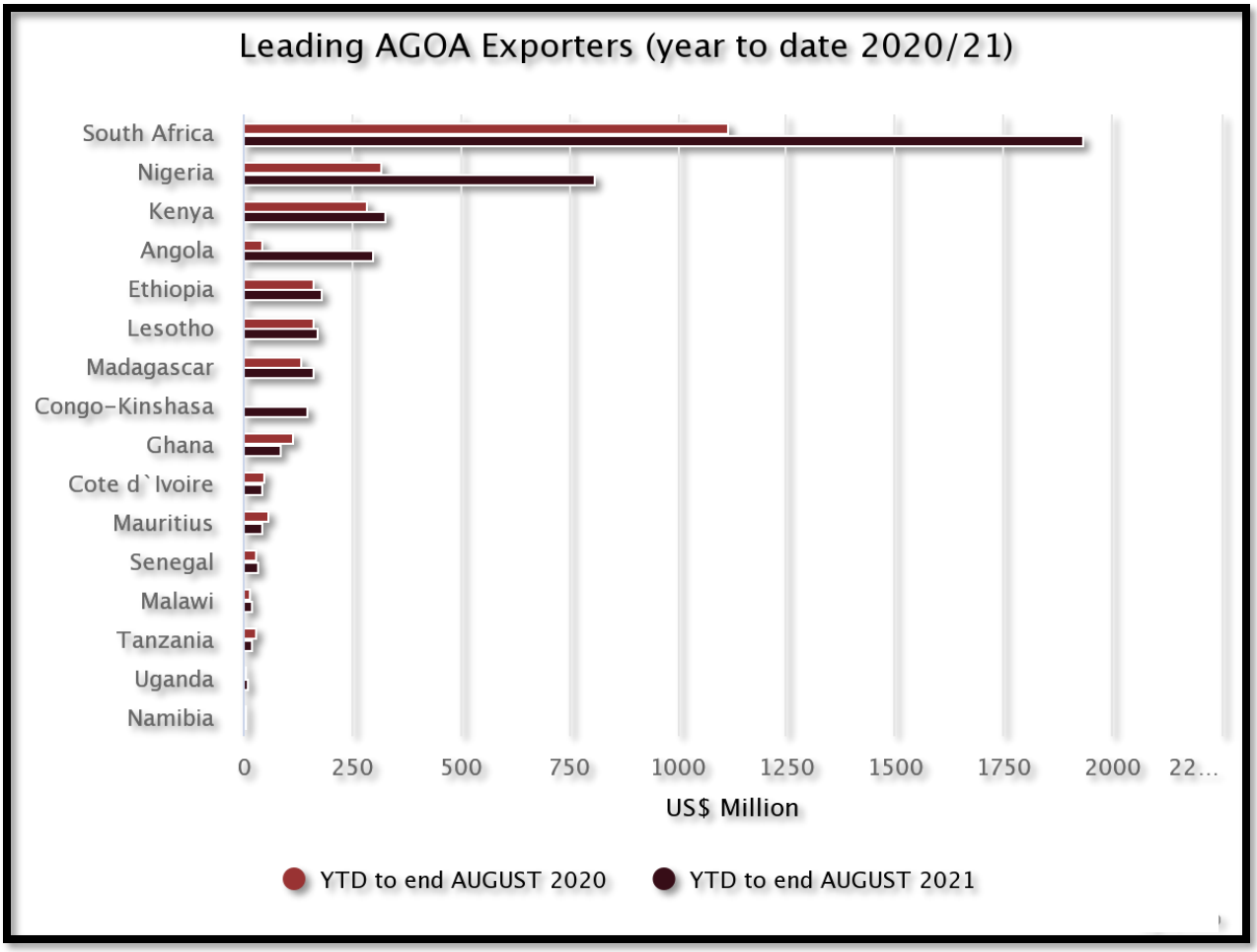

Figure 2 Leading AGOA Exporters (year to date 2020/21)
Source: Africa Growth and Opportunity Act.

4.2. The Africa Growth and Opportunity Act relates to Ethiopia

The textile sector in Ethiopia has grown rapidly since joining AGOA and has opened up employment opportunities, as well as contributing to generating more than $ 200 million in foreign exchange earnings. In addition, it helped Ethiopia to produce exportable items, placing Ethiopia among the leading countries in East Africa that leverage the Africa Growth Opportunity Act (AGOA) for economic growth. In 2001 when AGOA was implemented, Ethiopia's AGOA exports included apparel and textiles, leather products, and horticulture. Now Ethiopia, Guinea, and Mali are no longer allowed to use AGOA. In many ways, the decision has an economic impact that is not simple (African Growth and Opportunity Act (AGOA), 2021).

Despite Ethiopia's ongoing war in Tigray (War between the terrorist Tigray People Liberation Front (TPLF) and the Ethiopian government, the TPLF is called a terrorist by the Ethiopian government and is currently working with terrorists to destabilize the country, launching a vicious campaign against the people of Amhara and Afar) the United States is ending the tariff-free African Growth and Opportunity Act (AGOA) in a sign of deteriorating relationships between the

countries.Approximately 100,000 people gain direct employment due to AGOA annually and Ethiopia receives about $100m in hard cash.

Ethiopia's war in the Tigray region, which began in November 2020 and killed tens of thousands of people, has been harshly criticized by the US in recent months. Massacres and mass starvation have been reported by human rights organizations in Ethiopia as the regime's offensive against the Tigray People's Liberation Front (TPLF) intensifies. US President Joe Biden said that Ethiopia would be disqualified from the program due to its gross violations of internationally recognized human rights. On September 17, an executive order sanctioned Ethiopians involved in violence in Tigray, Amhara and Afar. In his remarks, Biden noted that the situation in northern Ethiopia, characterized by widespread violence, atrocities, and serious human rights abuses, constituted an unusual and extraordinary threat to the national security and foreign policy of the United States.

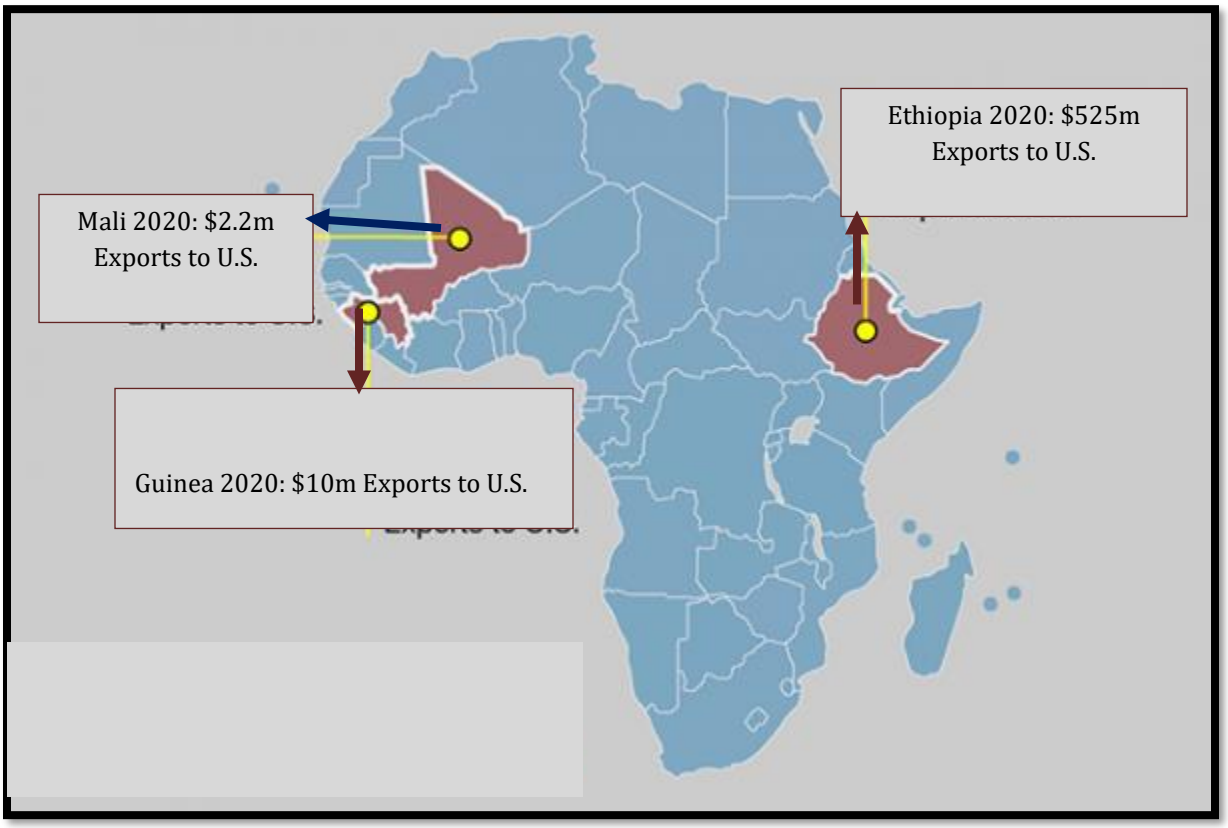

Figure 3Excluding countries from AGOA with the US by 2021
Source: Africa Growth and Opportunity Act

Table 1Exchange of goods and services between Ethiopia and the United States under AGOA

Sector	Category	2018	2019	2020	2020 YTD JUNE	2021 YTD JUNE
Agricultural products	Exports by US	75,588	105,693	144,075	61,765	61,058
	Imports by US	166,199	150,187	152,527	71,773	55,040
	AGOA (including GSP provisions) imports by US	6,982	6,863	6,233	3,449	3,575
	GSP imports by US	3,621	3,517	3,946	2,165	485
	AGOA imports by US	3,361	3,346	2,287	1,285	3,090
Forest products	Exports by US	1,673	2,467	2,160	817	1,771
	Imports by US	150	116	108	51	40
	AGOA (including GSP provisions) imports by US	130	88	101	51	37
	GSP imports by US	51	88	101	51	10
	AGOA imports by US	79				27
Chemicals and related products	Exports by US	13,405	18,722	17,002	5,574	10,642
	Imports by US	2,538	1,148	2,250	984	802
	AGOA (including GSP provisions) imports by US	43	72	178	37	23
	GSP imports by US	33	55	175	37	7
	AGOA imports by US	10	17	3		16
Energy-related products	Exports by US	337	3,532	127	39	31
Textiles and apparel	Exports by US	2,099	2,750	2,936	1,023	2,862
	Imports by US	117,453	214,612	227,115	106,064	123,505
	AGOA (including GSP provisions) imports by US	114,418	211,161	222,312	103,980	120,222
	GSP imports by US	1	69	97	26	1
	AGOA imports by US	114,417	211,092	222,215	103,954	120,221

Footwear	Exports by US	160	281	348	98	186
	Imports by US	34,782	24,897	12,151	8,746	881
	AGOA (including GSP provisions) imports by US	34,619	23,403	11,081	7,753	844
	AGOA imports by US	34,619	23,403	11,081	7,753	844
Minerals and metals	Exports by US	9,201	10,441	10,115	3,696	3,037
	Imports by US	1,208	3,049	2,916	1,817	1,577
	AGOA (including GSP provisions) imports by US	55	36	81	56	62
	GSP imports by US	35	36	81	56	37
Machinery	Exports by US	25,597	24,427	31,517	9,791	14,649
	Imports by US	28,703	36,683	18,048	9,012	8,720
Transportation equipment	Exports by US	1,105,327	756,651	639,491	235,108	115,281
	Imports by US	12,007	33,555	13,363	6,514	4,360
Electronic products	Exports by US	45,760	55,313	28,994	14,428	22,373
	Imports by US	3,019	3,455	1,051	844	249
Miscellaneous manufactures	Exports by US	3,292	4,988	2,476	1,548	2,131
	Imports by US	6,851	7,183	6,497	3,644	5,317
	AGOA (including GSP provisions) imports by US	2,722	6,032	5,583	3,245	3,925
	GSP imports by US	1,058	3,807	3,120	2,282	2,423
	AGOA imports by US	1,664	2,226	2,463	964	1,502
Special provisions	Total exports	25,763	25,524	31,696	9,885	17,001
	General imports	71,872	96,654	88,507	32,476	42,826
All Sectors	Exports by US	1,308,202	1,010,789	910,939	343,772	251,021
	Imports by US	444,784	571,538	524,533	241,924	243,316
	AGOA (including GSP provisions) imports by US	158,973	247,655	245,574	118,571	128,688
	GSP imports by US	4,802	7,571	7,525	4,616	2,963
	AGOA imports by US	154,171	240,084	238,050	113,955	125,726

Source: US Department of Commerce and own compilation

5. Methodology of the Study

5.1. Source of Data and Type

For all variables examined, secondary sources were used for about 58 years. We used data published by the World Bank source and Ministry of Finance and Economic Development (MoFED) along with annual reports and published studies. Since so many researchers have used the data published by

WB and MoFED, the data can be trusted. The reason for the use of 1960 as a cutoff point is because it is only starting from this year that consistent data could be found in the data source for most variables used in this particular study.As a result, the data period ranges from 1960-2017.

5.1. Model Specification

As a result, an economic model is developed by referring to the available data embedded in standard theories and other empirical works. The growth version of Okun's law claims that slower economic growth is associated with more unemployment. The model must take into consideration other factors in order to explore their impact on Ethiopian economic growth, if the importance of these other factors in explaining economic growth is understood.
Based on the prior theory, as follow can be viewed as the model's functional form.
$LNRGDPt= f(LNESSA_t, LNEHIC_t, LNEAW_t, AGOA_t)$
Where RGDP is real gross domestic product (%), f is a function of, ESSA is export to Sub Sahara African countries (% of GDP), EHIC is export to high income countries (% GDP), LN is logarithm,t is time subscript, AGOA is Africa Growth and Opportunity Act (0 if t< 2001 and 1if t>2000)and EAW is export to Arab World (% GDP).

Unit root test: -According to Alrabba (2017), the enhanced Dickey-Fuller test is one of the most common tests for determining whether time series are stationary. For large time series, other tests are more powerful than ADF test statistics, including Kwiatkowski-Phillips-Schmidt-Shin (KPSS), Phillips-Perron (PP) test and Ng-Perron (NP) test.

With drift and trend

$$\Delta X_t = \alpha_0 + \gamma X_{t-1} + \theta T + \sum_{i=1}^{p} \beta_i \Delta X_{t-i} + e_t$$

Where, Δ is difference operator, α_0 is drift term, P is the lag order of the auto-regressive process, T = trend term/trend variable, t = time subscribe, β_i = is a measure of lag length, $\gamma = \delta - 1$, the coefficient of X_{t-1}which measures the unit root, e = the error term / is the white noise, θ = the coefficient on a time trend series, $\Delta X_t = X_t - X_{t-1}$, are first difference ofX_t, X_{t-1} = Are lagged values of order one of X_t, ΔX_{t-i}= are changes in lagged values.

Long run autoregressive distributed lag model: - Selection of technique depends upon the order of integration. If the order of integration of variables is the same and all variables are on a level I (0), then ordinary least square is used. If all variables are integrated of order I (1) and there is only one independent variable, then the Engel Granger co-integration technique is applied. If the integration of order is the same for all variables, i.e. I (1) and there is more than one independent variable, then the Johanson co-integration technique is used. If the order of integration of all variables is not the same, i.e., I (0) or I (1), then ARDL is applied (Dilek, 2016).

ARDL model was proposed by Pesaran et al. (2001). The general form of ARDL (p, q) is as:-

$$Y_t' = \gamma_{0i} + \sum_{i=1}^{P} \delta_i Y_{t-i} + \sum_{j=0}^{q} \beta_i' X_{t-i} + \varepsilon_{ti}$$

Where,Y_t' is a vector, $(X_t')'$ are allowed purely $I(0)\ or\ I\ (1)\ or\ cointegrated$; δ and β are coefficients; γ is the constant; $i = 1, \ldots\ldots, K; p$;is optimal lag order used for dependent variables;q is optimal lag orders used for independent variable; ε_{ti} is a vector of error terms- unobservable zero mean white

noise vector process. The hypothesis that the coefficients of the lag level variables are zero is to be tested (Pesaran et al., 2001). The null of non-existence of the long-run relationship is defined by: -
$H_0: a_1 = a_4 = 0$ (Null, i.e. the long run relationship does not exist)
$H_1: a_1 \neq 4_2 \neq 0$ (Alternative, i.e. the long run relationship exists)
Having the above intimations, the general ARDL model for this study is appears as follows:-

$$\begin{aligned} D\big((\ln RGDPt)\big) = {} & \beta 1 + \alpha 11(\ln RGDPt - 1) + \alpha 21(\ln ESSAt - 1) + \alpha 31(\ln EHICt - 1) + \alpha 41(\ln EAWt - 1) \\ & + \alpha 51(AGOAt - 1) + \sum_{i=1}^{P} \theta 1i\, D\big((\ln RGDPt - 1)\big) + \sum_{i=1}^{q} \theta 2i\, D\big((\ln ESSAt - 1)\big) \\ & + \sum_{1=1}^{q} \theta 3i\, D\big((\ln EHICt - 1)\big) + \sum_{i=1}^{q} \theta 4i\, D\big((\ln EAWt - 1)\big) + \sum_{i=1}^{q} \theta 5i\, D\big((AGOAt - 1)\big) + \epsilon 1t \end{aligned}$$

If there is a long-run relationship between variables, the researcher develops the following model:-

$$\begin{aligned} D\big((\ln RGDPt)\big) = {} & \beta 1 + \sum_{i=1}^{p} \theta 1i\, D\big((\ln RGDPt - 1)\big) + \sum_{i=1}^{q} \theta 2i\, D\big((\ln ESSAt - 1)\big) + \sum_{i=1}^{q} \theta 3i\, D\big((\ln EHICt - 1)\big) \\ & + \sum_{i=1}^{q} \theta 4i\, D\big((\ln EAWt - 1)\big) + \sum_{i=1}^{q} \theta 5i\, D\big((AGOAt - 1)\big) + \epsilon 1t \end{aligned}$$

The F-statistic is used to test the null hypothesis that the coefficients of the lagged variables are equal. This is checked in each model according to the amount of variables. This can also be expressed in the following way:-

$$F_x(X_1 | Y_1, \dots\dots\dots\dots, Y_k)$$
$$F_y(Y_1 | X_1, \dots\dots\dots\dots, X_k)$$

As shown in equations above, the F-statistic (Wald test) test is used in order to test the hypothesis. When the estimated F-statistic is greater than the upper bound critical value, the variables are co-integrated. When the F-statistic is less than the lower bound critical value, there is no co-integration among the variables. As shown in equation, the researcher employed the following method of expression to determine the F-statistic:

$$F_{\ln RGDPt}(\ln RGDPt | \ln ESSAt, \ln EHICt, \ln EAWt, AGOAt)$$

In the event that the lag length differs from its true value, the Akaike Information Criterion (AIC) is used to decide which lag length is the best (Gonzales and Petrakis, 2002). On this basis, AIC decides that the length of this study is six. Thereafter, the ARDL bounds test was carried out using up to sixlags.

6. Econometrics Result of the Study

6.1. Diagnostic Test

The Breusch-Godfrey test is accepted with the null hypothesis that serial autocorrelations do not occur, and similarly, the Breusch-Pagan-Godfreytest for heteroskedasticity does not find any evidence of heteroskedasticity. To check the model specification, Ramsey RESET was used, and the tests showed that there was no misspecification. Further, since the ARDL model is based on the CUSUM and CUSUM of a square within the 5% critical bounds, its long-run coefficients are stable.

6.2. Augmented Dickey-Fuller Test Statistic

It is essential to determine the stationary nature of a time series before proceeding with a study. Traditionally, the augmented Dickey-Fuller (ADF) test has been used to determine whether macroeconomic variables are stationary. For this study, we can apply an ARDL co-integration test, taking into account constant terms, because four (of five) variables are I (1) processes and one is I (0).

Table 2the Stationary Test of Variables at the Level and First Difference

Variables	At Level		At first difference		
	Without constant and trend	With constant only	Without constant and trend	With constant only	Order
LNRGDP	-3.185563	-4.070871*	-3.857970**	-8.018523*	I(0)
LNEAW	-2.271406	-2.229673	-11.21942*	-11.44078*	I(1)
LNESSA	-1.757278	-0.814215	-6.393334*	-6.325260*	I(1)
LNEHIC	-4.687453	-1.066512	-10.83122	-10.83757	I(1)
AGOA	-1.978621-	0.648539	-7.483315*	-7.472370*	I(1)
*-significant at 1%		**-significant at 5%			

Source: Own computation

6.3. ARDL Bound Test

The predicted F-statistics are outside the critical value range at 90, 95, and 99 percent. For those reasons, we reject the null hypothesis that co-integration didn't exist and that long-run economic growth didn't exist as well. Consequently, the ARDL bounds test confirms the existence of the long-run equation for economic growth in table 3. The results of the regression are shown in table 4.

Table 3Bound Co-integration Result

Test Statistics	Value	Significance Level	I(0) Bound	I(1) Bound
F- Statistic	8.44787	10%	2.72	3.77
		5%	3.23	4.35
		2.5%	3.69	4.89
		1%	4.29	5.61

Source: Own computation

Table 4Long Run ARDL Result

Dependent variable (LNRGDP)				
Ind. Variables	Coefficient	Std. Error	t-statistics	Pro.
LNEAW	0.176803	0.367557	0.480631	0.6415
LNESSA	0.310893	0.572309	2.016336	0.0115
LNEHIC	2.809418	1.138138	2.167532	0.0092
AGOA	0.726771	0.488899	3.563365	0.0009
C	-11.74887	4.888852	-2.403197	0.0209
R-square = 0.737241		Adjusted R-squared = 0.699379		

Source: Own computation

As shown in the table above, Ethiopia's merchandise exports to SSA, HIC, and AGOA have a statistically significant and positive effect on the country's economic growth. It can be explained as follows: when all other factors remain constant, a percentage changes in LNESSA, LNEHIC andAGOA lead to increases of 31%, 280%, and 73% in economic growth over the long run, respectively. According to this study, merchandise exporting to the Arab world has a positive effect on economic growth, though it is insignificant compared to the other variables.A rise in exports results in an increase in foreign exchange reserves, which in turn spurs higher imports of basic and capital goods, job opportunity, high production and, ultimately, quicker economic growth. Moreover, global rivalry encourages export-oriented firms to maintain low production costs and increase technical advancement, which results in faster economic growth. Compared to previous studies, this one had similar results. By capturing a larger overseas market and gaining economies of scale, export-led growth also increases the efficiency of the factors of production (Mitra and Khan, 2014). The contribution of exports to economic growth has been unidirectional in Bangladesh for a long period of time (Al-Mamun and Nath, 2005). Meanwhile, if exports grow due to foreign direct investor inflows, the export growth will reduce the output growth due to various distortions.

International trade opens opportunities for knowledge spillovers, increases productivity, and improves human capital. According to Romer (1990), trade allows local producers access to a greater range of capital and intermediate goods, expanding their base of productivity knowledge and increasing productivity more quickly. As a result, neoclassical ideas claim that commerce drives growth. Through open channels, endogenous theory can help countries discover complementary activities that could enable them to thrive, such as job training or education. According to the study, there is no doubt that neoclassical and modern trade theories differ in a number of important ways, yet they both agree that international trade openness aids economic growth in developing countries.

A contrarian view is introduced by Baldwin (1979) regarding the implications of endogenous growth on economic growth. The authors claim that market opening causes global divergence resulting in the North industrializing and growing faster than the South. Essentially, neoclassical theory holds that trade is the engine of growth. The endogenous theory demonstrates how countries can take advantage of the globalization process through channels of openness to find complementary activities like education or job training that can help them survive and develop. There are many points on which the neoclassical framework and the new trade theories differ, but they agree that international trade openness facilitates economic growth for developing countries, which is consistent from this study.The United States has been Ethiopia's largest export market before, and by 2020 Ethiopia $525 million worth of goods sent to America. Ethiopia has benefited the most from AGOA, as the program has advanced and expansion for industrial parks, provided more employment opportunities, and helped the economy grow. Since AGOA has played a role in the expansion and development of industrial parks in Ethiopia, the sentencing of Joe Biden will have an enormous impact on Ethiopia.

7. Conclusion

In this study, we estimate the long run coefficients of merchandise export and AGOA on economic growth in Ethiopia. We find that real gross domestic product has a substantial long-run relationship from ESSA, ETHI and AGOA but not from EAW. The results of this study indicate that the ARDL model does not include serial correlation, conditional heteroscedasticity, or specification error, and that the distribution has a normal shape. CUSUM and CUSUMSQ statistics are significant within the 5% critical constraints, which is indicative of the long-run stability of the ARDL models.

8. Policy Implication

According to the study, Ethiopia has to diversify its export base away from less sophisticated primary commodities and towards high-productivity industries like manufacturing to achieve faster growth. As well as increasing production in sectors where Ethiopia has a competitive advantage, it should also work on moving up the value chain in these commodities. If Ethiopia has better commercial relations with countries in the Sub-Saharan and high income words like America, it can generate more foreign exchange.Ethiopia was excluded from AGOA in November 2021 under Biden's administration. Therefore, it is encouraging to look at the study's results like Sub-Saharan rather than the results for developed countries.Therefore, although leaving AGOA may create a lot of unemployment, if you look at such options, Ethiopia will be able to deal with many related problems in the long run.Look into other global market options, consider tax relief and temporary subsidies for sectors like textile and leather manufacturing to encourage employers to hire more workers,in addition, it offers opportunities for domestic sales of products that cannot be exported to the United States.

Accordingly, the results obtained here could be improved in a number of ways in light of the specific estimation method used. In the future, studies could add variables such as exports of merchandise outside the region, exports of merchandise within the region, exports of merchandise to Latin America and the Caribbean, merchandise exports to developing economies in the Middle East & North Africa, as well as non-economic determinants of economic growth in Ethiopia. In this study, only 58 years of data have been collected. However, if data are collected over longer periods, more comprehensive results can be obtained.Using CUSUM square, we verified that there is no structural break, but we recommend that others verify it more thoroughly.The data used were from Ethiopia, a single country with time-series data. Using panel data analysis and including other countries in the cause study may be key to conducting this research.

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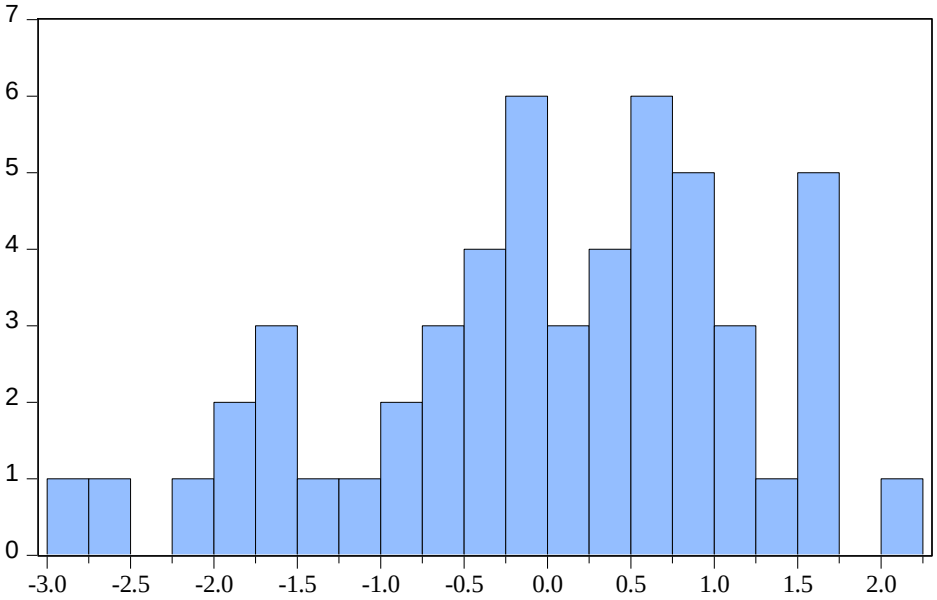
Appendix: -

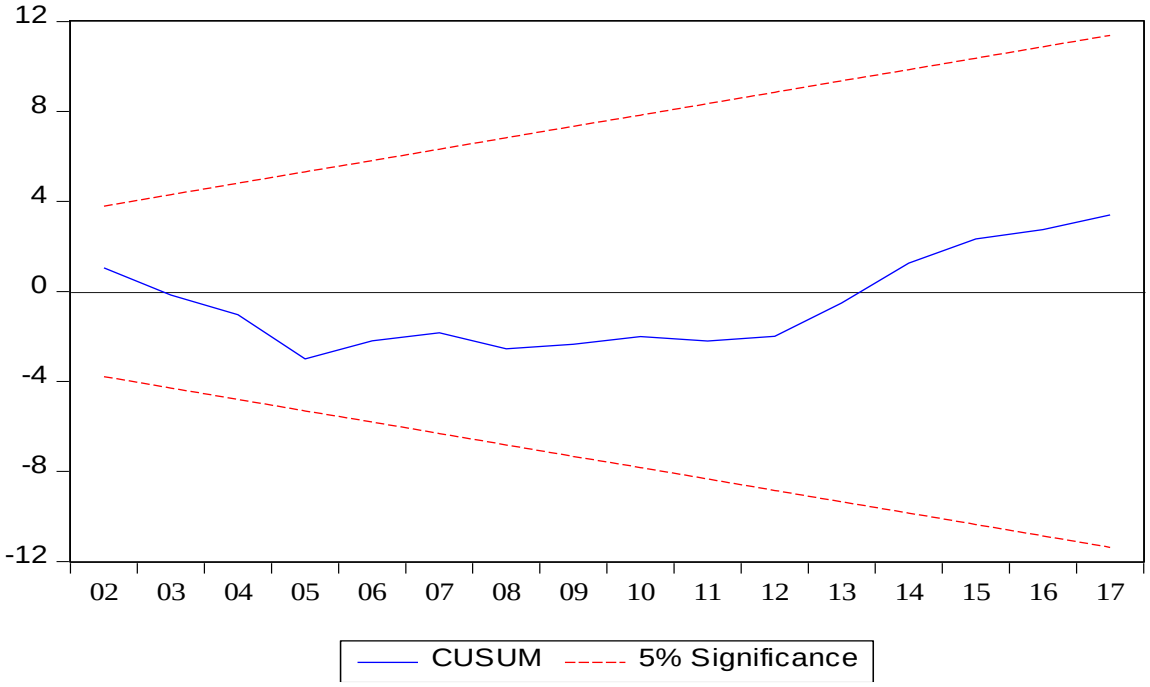
Appendix: A1 Diagnostic Test



Series: Residuals	
Sample 1965 2017	
Observations 53	
Mean	2.09e-15
Median	0.096132
Maximum	2.117259
Minimum	-2.851504
Std. Dev.	1.165344
Skewness	-0.513759
Kurtosis	2.693236
Jarque-Bera	2.539358
Probability	0.280922

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.103282	Prob. F(2,39)	0.4010
Obs*R-squared	7.654703	Prob. Chi-Square(2)	0.0218
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.798935	Prob. F(11,41)	0.6700
Obs*R-squared	16.49738	Prob. Chi-Square(17)	0.4889
Scaled explained SS	1.013821	Prob. Chi-Square(17)	1.0000
Functional form			
	Value	df	Probability
t-statistic	1.509573	40	0.1819
F-statistic	2.278812	(1, 40)	0.1819
F-test summary:			
	Sum of Sq.	df	Mean Squares
Test SSR	6.572371	1	6.572371
Restricted SSR	23.87711	41	3.411015
Unrestricted SSR	17.30473	40	2.884122

Appendix: A2 Model Stability Test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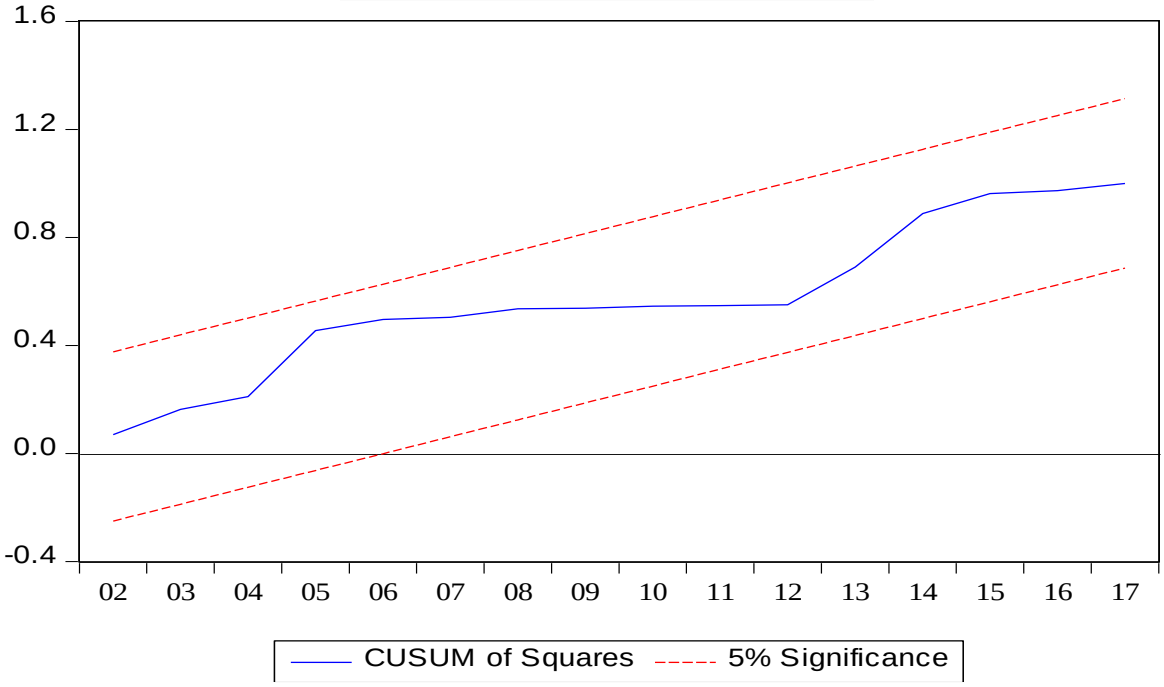
CUSUM
5% Significance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-0.4
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CUSUM of Squares
5% Significance