

International Trade And Economic Performance In Kenya

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Abstract: The growth in the market value of output remains a major backbone for economic advancement. Therefore, factors determining economic growth remain vital for realizing a country's economic expansion. Global trade has been touted as a tool to catapult growth. However, the bearing of trade on economic performance remains debatable where selected studies back the claim that international trade impacts positively on output expansion, opposers contend that the influence of international trade remains uncertain. This deviating opinions raise the importance for continued studies based on regional perspectives. The study therefore intended to investigate international trade and economic performance in Kenya. A correlation design was employed based on regional analysis for the period 1961 to 2014. Results showed that trade involving Sub Sahara and Arab nation's impacts positively on economic performance. International trade involving South Asia (SA), Middle East and Northern Africa (MN) is impact less while trading with High Income (HI) nations diminishes performance in Kenya. In respect to the findings, it is imperative that Kenya ought to engage more in trade involving Arab and Sub Saharan Africa nations in contrast to the advanced nations to improve performance.

Keywords: International Trade; Economic performance, Kenya.

I. INTRODUCTION

The growth in the market value of output remains a major backbone for countries economic advancement. This indicates how well the economy and various sectors are performing and can raise the living standards in the country if income is distributed equally (Razmi & Refaei, 2013). Both developing and developed countries have rapid growth as one of the key macroeconomic objectives to be pursued (Hassen *et al.*, 2013). Therefore, factors determining economic growth remain vital for realizing a country's economic expansion. Global trade according to Iftikhar (2012) has been touted as a tool to catapult growth. In last few years numerous emerging economies have embraced international trade reforms for purposes of promoting regional and global integration to spur rapid economic performance (Hassen *et al.*, 2013). To accomplish the main aim of realizing rapid economic performance, Mkubwa *et al.* (2014) notes that economies continue lessening or removing trade obstacles to increase the value of imported and exported goods and services.

Association involving international trade and performance of economies as discussed in the study of Redlin and Gries (2012) supported by Mercan *et al.* (2013) and Billmeier and

Nannicini (2007) remains a matter of much attention and controversy. For instance, some research works back the claim that international trade impacts positively on output expansion, opposers contend that the influence of international trade remains uncertain. This hypotheses are substantiated by mixed results where studies like Hassen *et al.* (2013) corroborated by Yeboah *et al.* (2012) and Razmi and Refaei (2013) established positive association while Simorangkir (2006) proved the existence of negative effect. This conflicting views forms a reasoning behind the study on international trade and economic performance in Kenya which aims to answer the questions;

- ✓ Does trading involving Arab nations (A) promote economic performance in Kenya?
- ✓ Do trading involving MN nations promote economic performance in Kenya?
- ✓ Does trading involving South Asia (SA) promote economic performance in Kenya?
- ✓ Do trading involving SS promote economic performance in Kenya?
- ✓ Do trading involving HI nations promote economic performance in Kenya?

STUDY SCOPE

Founded on the obtainability of data, the study covered 57 years from 1961 to 2017.

SIGNIFICANCE

The aim is to inform Kenyan policy makers the impact and magnitude of international trade on economic performance of Kenya in respect to regional trading partners. This will inform decision making with regard to which regions to embrace as trading partners for the sake of mutual benefit.

II. LITERATURE REVIEW

International trade has been a topical issue that has attracted numerous studies that span various countries from Middle East, Asia, South America and Africa. Mercan et al. (2013) in their study and Razmi et al. (2013) basing on a panel of countries which encompassed China, Russia, Brazil, Turkey and India established that international trade impacts positively on growth. In his assessment in Indonesia another Asian country, Simorangkir (2006) on the other hand by focusing on another Asian country in particular Indonesia established that international trade has a negative sway on productivity of a nation.

From the African perspective, in the recent years most of the African nations have been coming together to form regional trade blocks. These blocks are meant to foster relationships, ease trade and create a strong negotiating power when dealing with developed nations for the sake of mutual benefits that can propel economic expansion. Several studies involving African nations attest to the importance of the openness subject that is a key pillar to propel growth for Africa. For example, Hassen et al. (2013), Kiganda (2015), Yeboah et al. (2012) and Mkubwa et al. (2014) using both timeseries and panel data analysis in Tunisia, Tanzania, Kenya and a panel of other 38 African nations noted that trade openness is a significant determinant that impacts positively on growth. An analysis of the non-African countries studies point to a mixture of findings while although those based on Africa indicate consensus and encouraging results, the generalization of openness without disaggregation based on regions makes it challenging to divorce its contribution to growth from a regional perspective. Understanding the impact will guide the policy agenda concerning the most appropriate regions to trade with to spur rapid growth. This therefore called for a study to establish whether trade openness promotes growth in Kenya based on a regional timeseries analysis.

III. METHODOLOGY

A correlation design was engaged with data decomposed into regions that included the A, MN, A, SS and HI countries.

IV. RESULTS AND DISCUSSION

CORRELATION ANALYSIS

Findings in Table 4.1 show a positive association involving international trade with the A and SS. Trading with HI portray a negative association while trading with MN, SA have no association with Kenya's economic performance.

	GDP _t	HI _t	MN _t	SA _t	SS _t	A _t
GDP _t	1.000000 ----					
HI _t	0.134283* (0.0253)	1.000000 ----				
MN _t	-0.170778 (0.2215)	0.737456 (0.0000)*	1.000000 ----			
SA _t	-0.180326 (0.1963)	0.789299 (0.0000)*	0.857846 (0.0000)*	1.000000 ----		
SS _t	0.212582* (0.0288)	0.340112 (0.0127)*	0.374374 (0.0058)*	0.484876 (0.0002)*	1.000000 ----	
A _t	0.187300* (0.0193)	0.832413 (0.0000)*	0.769601 (0.0000)*	0.661923 (0.0000)*	0.312050 (0.0229)**	1.000000 ----

Figure in brackets () denotes p-value where * & ** indicates significance for 1% and 5% levels

Table 4.1: Association Results

AUGMENTED DICKEY FULLER TEST

Stationary results in Table 4.2 indicated that economic performance (GDP), international trade involving HI, SS and A are stationary after first differencing whereas international trade involving MN and SA are stationary after at levels.

	Model	Test-Statistic		Conclusion
		Level	First Diff	
GDP _t	Intercept	-2.542753 (0.1125)	-7.430639 (0.0000)*	Stationary after 1 st differ.
	Trend & Int.	-2.434783 (0.3579)	-7.464448 (0.0000)*	Stationary after 1 st differ.
	None	-1.306362 (0.1743)	-7.506572 (0.0000)*	Stationary after 1 st differ.
HI _t	Intercept	-2.177582 (0.2169)	-7.320241 (0.0000)*	Stationary after 1 st differ.
	Trend & Interc.	-2.386134 (0.3817)	-7.264779 (0.0000)*	Stationary after 1 st differ.
	None	-1.850930 (0.0616)	-7.408681 (0.0000)*	Stationary after 1 st differ.
MN _t	Intercept	-7.974399 (0.0000)*	-	Stationary at level
	Trend & Interc.	-7.961627 (0.0000)*	-	Stationary at level
	None	-7.732342 (0.0000)*	-	Stationary at level
SS _t	Intercept	-2.285945 (0.0230)	-6.760405 (0.0000)*	Stationary after 1 st differ.
	Trend & Inter.	-3.305088 (0.0779)	-6.648932 (0.0000)*	Stationary after 1 st differ.
	None	-2.285945 (0.0230)	-6.760405 (0.0000)*	Stationary after 1 st differ.

SA _t	Intercept	-8.153882 (0.0000)*	-	Stationary at level
	Trend & Int.	--8.337342 (0.0000)*	-	Stationary at level
	None	-8.419383 (0.0000)*	-	Stationary at level
A _t	Intercept	-2.11143 (0.2413)	-7.95371 (0.0000)*	Stationary after 1 st differ.
	Trend & Interc.	-2.99728 (0.1436)	-7.85879 (0.0000)*	Stationary after 1 st differ.
	None	-1.85136 (0.0616)	-8.03565 (0.0000)*	Stationary after 1 st differ.

Note. () denote probability whereas * shows significance at 1% level

Table 4.2: ADF Findings

JOHANSEN AND ADJUSTMENT RATE FINDINGS

Table 4.3 findings show indicate cointegration involving international trade and Kenya's economic performance which infers that international trade impacts Kenya's economic performance in the long-run.

No. of CEq(s)	Eigen value	Trace Statistics	Critical Values	Probability**
None *	0.663358	145.4937	95.75366	0.0000
At most 1 *	0.458446	91.05687	69.81889	0.0004
At most 2 *	0.404247	60.39123	47.85613	0.0022
At most 3 *	0.308569	34.49477	29.79707	0.0134
At most 4 *	0.192566	16.04515	15.49471	0.0413
At most 5 *	0.101482	5.350437	3.841466	0.0207

Trace test indicates 6 cointegration eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

No. of CEq(s)	Eigenvalues	Max-Eigen Statistics	Critical Values	Probability**
None *	0.663358	54.43683	40.07757	0.0006
At most 1	0.458446	30.66563	33.87687	0.1153
At most 2	0.404247	25.89646	27.58434	0.0809
At most 3	0.308569	18.44963	21.13162	0.1139
At most 4	0.192566	10.69471	14.26460	0.1702
At most 5 *	0.101482	5.350437	3.841466	0.0207

Max-eigenvalue test indicates 1 cointegration eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 4.3: Johansen Findings

Normalized cointegration test output in Table 4.4 indicate a long-run association involving regional international trade and Kenya's economic performance.

GDP _t	HI _t	MN _t	SA _t	SS _t	A _t
1.000000	0.145201 (0.04204)	-0.017908 (0.01674)	0.003180 (0.01855)	-0.072213 (0.01138)	-0.078196 (0.03773)
	[3.45361]*	[- 1.06956]	[0.17145]	[- 6.34602]*	[- 2.07279]*

N/B. (), [] show standard errors and test statistics with * denoting significance at 5%

Table 4.4: Findings on Normalized Cointegration

Equally, the error correction findings in Table 4.5 show a short-run association involving international trade and Kenya's performance.

ECM	D(GDP _t)
Coint. Eq	-0.471695* (0.09163) [-5.14761]
D(HI _t (-1))	0.095120* (0.02244) [4.23937]
D(HI _t (-2))	0.044324* (0.01972) [2.24719]
D(MN _t (-1))	-0.014439* (0.00550) [-2.62400]
D(MN _t (-2))	-0.006455 (0.00605) [-1.06775]
D(SA _t (-1))	0.007936 (0.00734) [1.08075]
D(SA _t (-2))	-0.000431 (0.00767) [-0.05626]
D(SS _t (-1))	-0.044570* (0.00566) [-7.87404]
D(SS _t (-2))	-0.015537* (0.00737) [-2.10788]
D(A _t (-1))	-0.052687* (0.01761) [-2.99132]
D(A _t (-2))	-0.013486* (0.01564) [-0.86224]
C	-0.044574 (0.39309) [-0.11339]
R ²	0.829319
Adj. R ²	0.767684
F-statistics	13.45532
Log likelihood	-113.7960
AIC	5.111840
SC	5.647207

(), [] show standard errors and test statistics as * shows statistical significance at 5%

Table 4.5: Short Run Analysis Findings

Founded on question one, while international trade involving Arab nations impacts positively on Kenya's economic performance in the long-run, mixed impacts are witnessed in the short-run at time lag one and two. One percent international trade growth involving the Arab nations improves Kenya's economic performance by 0.1% in the long-run, 0.01% in the short-run at lags one and reduces performance by 0.05% at lag two. This corroborates the results established by Hassen et al. (2013), Mkubwa et al. (2014) & Yeboah et al.(2012).

In answering second study question, international trade involving MN does not influence on Kenya's performance in the long-run. However, it has negative impact in short-run. That is 1 % increase in international trade with MN reduces economic performance by 0.01%.

To answer question three, international trade involving SA does not impact on Kenya's economic performance. For the fourth question, international trade with SS had mixed influence on Kenya's performance the long and short runs. 1% rise in trade involving SS improves Kenya's performance by 0.1% in the long-run but reduces performance by 0.01% and 0.02% at lags one and two respectively.

Lastly as in question five, trading with HI nations reduced and increased Kenya's economic performance for the long-run and short-run correspondingly. 1% improvement in the level of international trade with HI worsens Kenya's economic performance by 0.1% during long run and improves performance by 0.1% and 0.04% at lags one and two in the short-run respectively.

Additional, Table 4.5 and equation 4.2 specify an (R^2) of 0.8293 and ECT of -0.47. I.e. approximately 83% of changes in Kenya's performance can be attributed to international trade and that any disequilibrium in economic performance is corrected at 47% adjustment rate in the following year.

IMPULSE ANALYSIS AND VARIANCE DECOMPOSITION

Plots in Figures (4.1), (4.2), (4.3), (4.4) and (4.5) in describing the impact of a single shock in international trade with HI, A, SS, SA and MN countries on economic performance in Kenya show that trading involving HI, A and MN nations led to a decline in economic performance as in Figures (4.1), (4.2) and 4.5 correspondingly. Figure 4.3 demonstrates that international trade with SS nations impacts positively on economic performance in Kenya with certain instability in the first decade before steadiness. Figure (4.4) indicates that trading with SA nations causes a negative influence in the first 8 years before fizzling out.

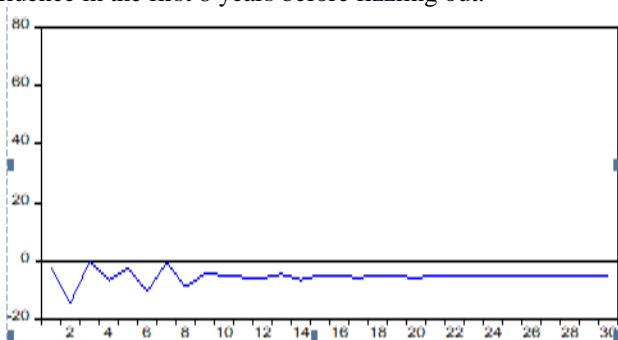


Figure 4.1: HI to GDP Response

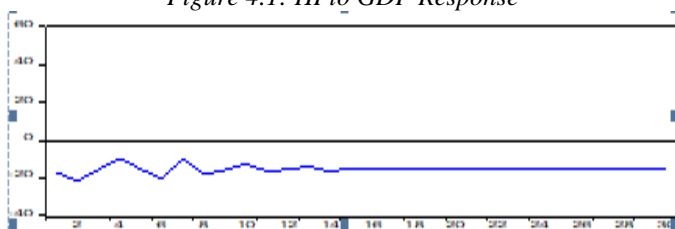


Figure 4.2: A to GDP Response

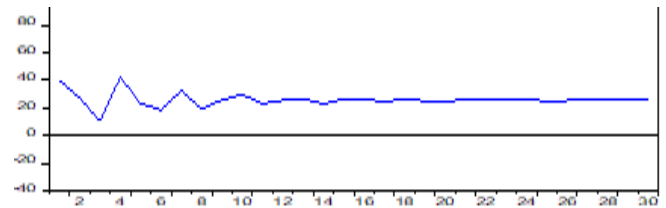


Figure 4.3: SS to GDP Response

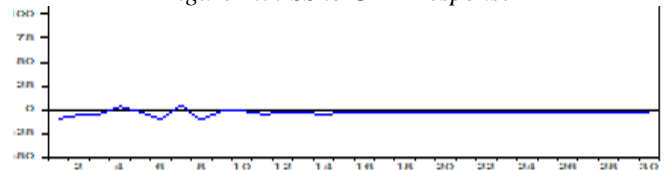


Figure 4.4: SA to GDP Response

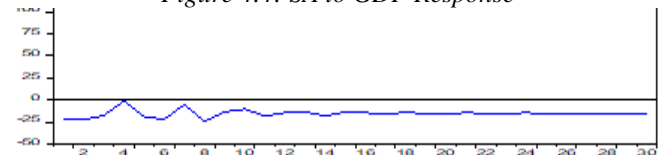


Figure 4.5: MN to GDP Response

Findings in Table 4.6 indicate specify that deviations in Kenya's performance are as a result of own shocks in the first period at 100 % reducing to 49% in the 3rd decade. Further, influence of international trade on performance in Kenya in respect to; HI nations declined with increase in forecasting time, MN nations increased with forecasting time, SA, SS and A nations increased shortly to year five before declining. More importantly, it is noted that trading involving the SS nations had a superior impact on Kenya's performance whereas trading with SA denotes minimal influence on performance. This is a pointer to the importance of the government of Kenya trading more with the SS nations for the sake of improving economic performance.

Period	GDP	HI	MN	SA	SS	A
1	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	80.50351	3.534728	1.718548	1.216436	11.29485	1.731929
5	39.53991	2.605923	3.333112	1.843136	46.56216	6.115761
10	44.54216	2.101030	3.356380	1.611181	43.03574	5.353509
15	46.60520	1.815277	3.510469	1.522811	41.72171	4.824529
20	47.65479	1.591425	3.546693	1.456868	41.16500	4.585218
25	48.47564	1.418251	3.538357	1.394171	40.74381	4.429768
30	49.15690	1.287352	3.527628	1.344802	40.38019	4.303125

Table 4.6: Decomposition findings

DIAGNOSTICS

Tables (4.7), (4.8), (4.9) and (4.10) show no autocorrelation, no multicollinearity, residual normal distribution and no heteroscedasticity.

Figure 4.6 results indicate that the VAR model is stable since none of the inverse roots is outside the circle.

Lag	LM-Statistic	Probability
1	38.5	0.36
2	49.6	0.06

Table 4.7: Serial correlation

	Coefficient	Variance	UncenteredVIF	CenteredVIF
C(1)	0.395024		1.066390	NA
C(2)	0.000114		5.879918	5.680641
C(3)	0.000685		5.419049	5.278794

C(4)	4.99E-05	1.391377	1.342011
C(5)	0.000163	6.605681	6.376827
C(6)	0.000596	4.899292	4.691965

Table 4.8: Multicollinearity Test

Jarque-Bera	Df	Prob.
3.467013	2	0.1767

Source: Author's computation

Table 4.9: Normality Test

Chi-square	df	Probability
558.93	546	0.34

Table 4.10: Heteroscedasticity Test

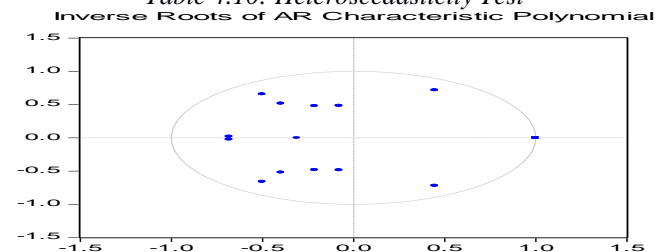


Figure 4.6: Stability Test

V. CONCLUSION AND RECOMMENDATIONS

Founded on study questions, evidence show that trading with SS and A nations impacts positively on Kenya's economic performance. Trade involving HI nations reduces performance while trading with SA, MN nations has no impact on Kenya's performance. Therefore, the research work mentions that to enhance Kenya's performance, implementation of policies that to a larger extent embrace trading with SS and A nations more than the developed western nations. In conducting her trading policies, Kenya's government needs to reflect constriction trade involving HI nations but engage more with SS and A nations.

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