Economic Performance in the Arab Maghreb Union (AMU): A Focus on the Contributions of Economic Openness and Institutional Quality

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Abstract

Empirical results have shown that economic openness and institutional quality variables influence the performance of the economy of different countries and regions differently. While these variables improve the economy of some countries and regions, findings have shown that in others the reverse is the case. In this present study, emphasis is on the contributions of economic openness and institutional quality to the economic performance of the Arab Maghreb Union (AMU). The study utilized the panel autoregressive distributed lag (ARDL) model with annual series ranging from 2000 to 2020. Institutional quality variables were selected using the principal component analysis (PCA). The short run results showed that, while capital account openness impacted positively on GDP per capita, trade openness adversely affected GDP per capita. In the long run, results indicated that FDI inflows had a positive and significant impact on GDP per capita. In the long run also, while governance effectiveness had negative and significant impact on GDP per capita, the impact of political stability was positive and significant. Consequently, the study recommends that in the short run, economic liberalization policy in the bloc should focus more on capital account openness than trade openness, while the long run policy thrust should centre on how to attract and harness FDI inflows into the member countries. This requires improvement in governance through building strong and virile institutions.
Keywords: FDI inflows, economic openness, institutional quality, GDP, ARDL
JEL Classification: F21; B27

1. Introduction

Recent studies have documented factors that determine the performance of an economy beyond the indicators considered by traditional economic theories, such as the neoclassical and endogenous growth theories. While the neoclassical growth theory indicates how a country

achieves a steady economic growth rate via three factors, namely: capital, labor and technology, the endogenous growth theory considers knowledge, innovation and investment in human capital as the key determinants of growth. In recent times, however, factors such as institutional quality and openness of the economy have been identified as germane to economic growth. (Das, R. U. & Rishi, 2010) observed a symbiotic relationship between trade openness and financial sector reforms by noting that, while openness of trade results in reforms in the financial sector, integration of the financial sector in the global economy could also encourage trade flows by enhancing competition in products. Furthermore, (Wei, 2015a) noted that beginning from the mid-80s, financial openness at international level became a major policy thrust of many countries, and especially developing countries as it became obvious that such policy improves the growth path. In another vein, (North, 1990) identified institutional frameworks to contribute to economic growth and this finds support in (Ha, 2016) and (Ngo, M. N., & Nguyen, 2020).

Despite the hypothesized positive impact of institutions and economic openness on the economy, several studies have displayed some skepticism towards the acclaimed positive impact of these factors to economic growth. For instance, scholars such as (Stiglitz, 2000) expressed concern over the risky nature of foreign investment, particularly short-term capital inflows which are thought to be volatile as it could lead to capital reversal that is capable of causing macroeconomic instability. (Schumkler, 2004) also noted that unhindered capital inflows could frustrate efforts at regulating domestic financial system. In their study, (Acemoglu, D., Naidu, S., Restrepo, P., & Robinson, 2015) did not establish any nexus between institutional variables and economic growth. It is partly owing to this skewed nature of trade between developed and developing countries that led to the formation of economic blocs in developing countries.

The irreconcilable impact of institutional quality variables and openness of the economy on economic growth, thus partly motivated this study. In order to contribute to the ongoing debate, this paper focuses on the AMU bloc. The economic bloc is within the African region whose economy suffers from unsustainable growth path owing to several factors such as institutional constraints and the negative impact of exogenous shocks arising from economic openness. The interest of this study in this economic bloc within Africa's North is mainly because the countries that comprise it, just like every developing country, depend on the exploitation and export of primary commodities which experience frequent deteriorating terms of trade at the international market. It has been noted that countries whose revenue base is woven around natural resources usually experience macroeconomic instability as a result of shocks arising from the international price of these resources. Also, the presence of natural resources in large quantities could lead to poor institutional frameworks in countries that have them (Murshed, 2004). Findings of the study should provide policy direction to countries within the bloc and other developing countries that face similar economic growth challenges.

In order to contribute to the ongoing debate, this paper combined both institutional quality and economic openness and investigated their impact on the economic performance of the Arab Maghreb Union (AMU). The economic bloc is within the African region whose economy suffers from unsustainable growth path owing to several factors such as institutional constraints and the negative impact of exogenous shocks arising from economic openness. The interest of this study in the bloc is mainly because the countries that comprise it, just like every developing country, depend on the exploitation and export of primary commodities which experience frequent deteriorating terms of trade. It has been noted that countries whose revenue base is woven around natural resources usually experience macroeconomic instability as a result of shocks arising from the international price of these resources. Also, as observed by (Murshed, 2004), the presence of natural resources in large quantities in a country could lead to poor institutional frameworks that encourage the diversion of proceeds from these resources to

unproductive ventures. The results of our findings should provide policy direction to countries within the bloc and other developing countries that face similar economic growth challenges.

2. Profile of the AMU Countries

The AMU was established in Marrakech in 1989 with an original objective to enter into a negotiation with the European Union (EU) when the later forms a single European market. Comprising five member countries, including Algeria, Libya, Mauritania, Morocco and Tunisia, the main objective of the economic bloc is to ensure stability in the region, encourage policy coordination and a gradual move to introduce free flow of goods and services among member countries. The economy of these countries is mainly sustained by earnings from the export of primary commodities. The petroleum sector contributes a large chunk of revenue in the Libyan economy and the Libyan GDP per capita is among the highest in Africa. Also, the oil and gas sectors play a pivotal role in the economy of Algeria as they are the main sources of revenue to the country. Major sources of earning for Morocco are export of raw materials such as textiles, leather and agricultural products including tourism. Mauritania has an abundance of natural resources among which are: iron ore, petroleum, livestock and fishing. The economy of Tunisia is propelled by oil, tourism, manufacturing of car parts, phosphates, *etc.*

As shown in figure 1 below, Libya has the highest GDP per capita compared to other countries in the bloc within the sample period. After 2002, the trend of GDP per capita in the country marginally declined and improved from 2004. It got to a peak in 2011 after which it saw a huge drop, and this coincided with the period of the Arab Spring which spread across North Africa. The trend of GDP per capita got to another peak in 2013 and experienced falling trend up till 2018. Over the sample period, there seemed to be no appreciable improvement in the trend of GDP per capita for Algeria and Tunisia which are the countries that attained the second and third positions in GDP per capita within the economic bloc. The country with the least GDP per capita is Mauritania whose trend was flat all through the sample period.
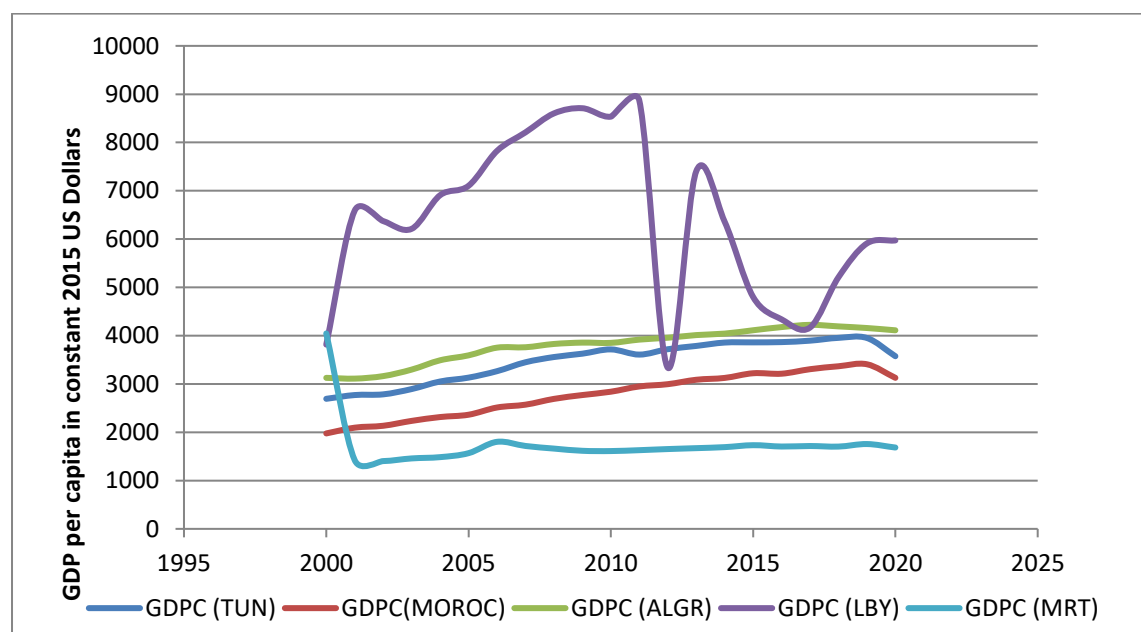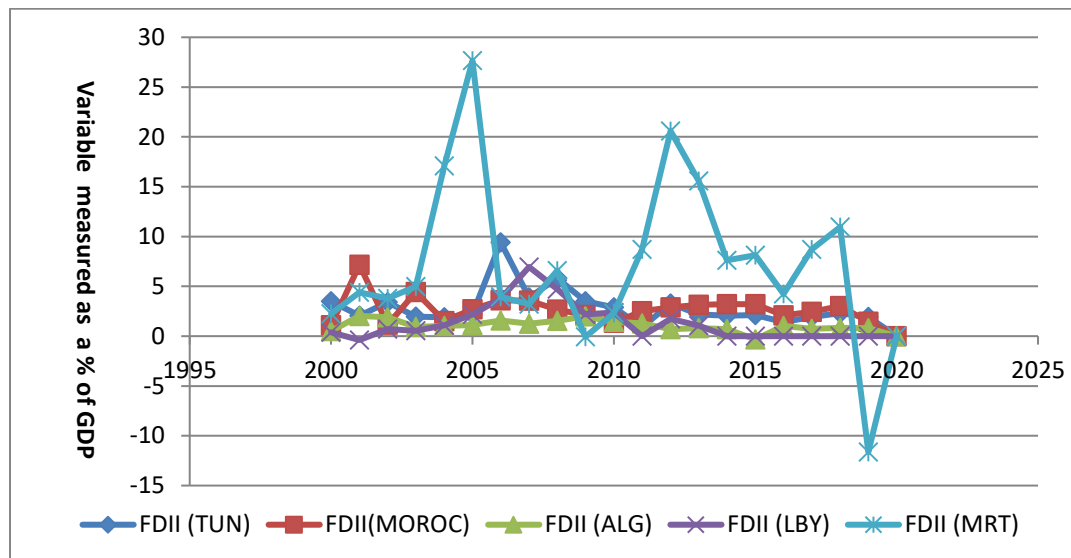

Note: GDPC - Gross Domestic Product per capita , TUN - Tunisia, MOROC - Morocco, ALG - Algeria, LBY - Libya, MRT – Mauritania

Figure 1. Trend of GDP Per Capita in the AMU Countries

Source: owned compilation

In terms of the trend of the FDI inflows as displayed in figure 2 below, finding shows that ironically, Mauritania which had the lowest GDP per capita in the bloc had the highest FDI inflows within the sample period. FDI inflows in Mauritania fluctuated as it attained a peak in 2005 and 2012, respectively. Prior to 2002, the trend of FDI inflows for Morocco was higher than that of other countries in the bloc. Between 2006 and 2007, Tunisia and Libya were the second and third largest FDI recipients trailing after Mauritania, while the trend for Morocco was higher than that of the two countries from 2011 till the end of the sample period. What is glaring in the trend is that FDI inflows was very low between 2010 and 2011 corresponding to the period of the Arab Spring, and it is noticed that Mauritania which did not experience the destabilizing impact of the crises was a destination for FDI within the economic bloc in these periods..
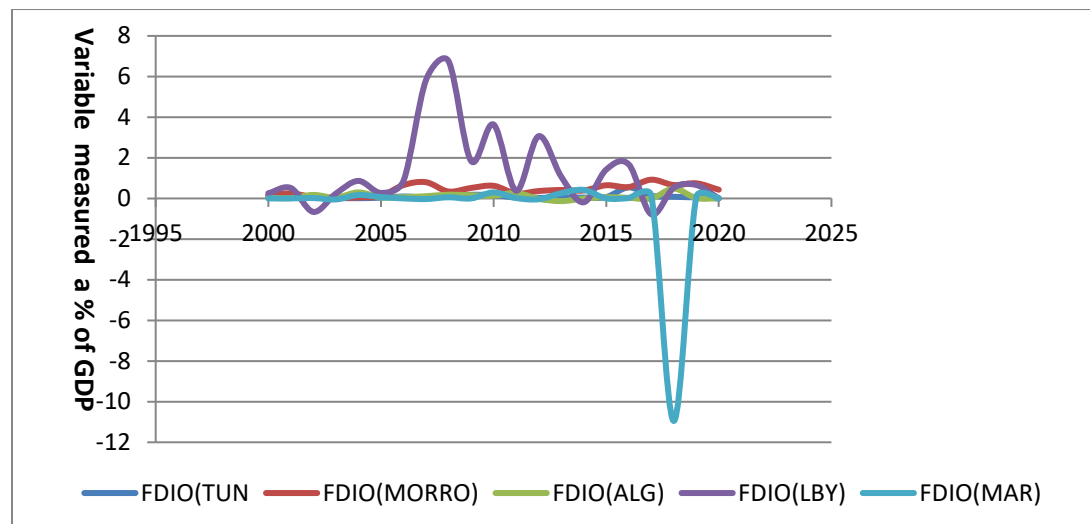

Note: FDII - Foreign direct investment inflows, TUN - Tunisia, MOROC - Morocco, ALG - Algeria, LBY - Libya, MRT - Mauritania
Figure 2. Trend of FDI Inflows in the AMU Countries
Source: owned compilation

With respect to FDI outflows, evidence from figure 3 indicates that Libya had the highest FDI outflows in the bloc within the sample period. FDI outflows in Libya was highest in 2008, corresponding to the period leading to the global financial crises. However, in 2010 FDI outflows in the country rose and this was the period of the onset of the crises in the Arab countries which culminated in the removal of the former Libyan leader. After 2016 when the country last had rising FDI outflows, the trend in the variable has been flat. For the other countries within the bloc, there was no significant improvement in FDI outflows within the sample period as the trend in each country was flat all through the period. In 2018, Mauritania had a drastic drop in her FDI outflows but her FDI inflows within this year improved.

Note: FDIO - Foreign direct investment outflows, TUN - Tunisia, MOROC - Morocco, ALG - Algeria, LBY - Libya, MRT - Mauritania

Figure 3.Trend of FDI Outflows in the AMU Countries

Source: owned compilation

2. Theoretical Foundation

The impact of openness on economic growth finds support in the theoretical views of (Lucas, 1988). The study provided convincing evidence in support of the existence of a positive impact of openness on economic growth. The argument provided by the study hinges on the fact that the more a country opens her borders through international trade, the chances she has to enjoy technological diffusion from developed countries. Another point of argument raised to buttress the positive impact of openness on economic growth is that, by enhancing domestic productivity and leveraging on economies of scale resulting from specialization, economic growth is achieved when an economy opens up. Through openness, competition is stimulated which puts domestic firms on their toes to innovate for increased efficiency in production. In another respect, (Grossman, G. M. & Helpman, 1991), citing the endogenous growth theory, observed that the spillover from foreign direct investment (FDI) which could come in form of technology transfer and knowledge spillover can be converted into improved productivity and, hence economic growth. Despite the growth-led hypothesis of economic openness, some scholars have criticized the view that openness encourages economic growth. Among these opponents include (Prebisch, 1950) and (Singer, 1950) who in their separate studies expressed concern regarding the nature of trade relationship between developed and developing countries. Their view was that, by specializing in the export of primary products which rarely compete with manufactures, developing countries usually suffer from deteriorating terms of trade in their trade relationship with developed countries. Prebisch-Singer's contention found support in the observation from (Krugmen.P, 1994) who contended that the impact of openness on economic growth is not clear. As noted by the scholar, if local consumption of imported goods exceeds the domestic production of such goods, terms of trade of such country is bound to deteriorate. This contention further finds support in (Diakosawas, D. & Scandizzo, 1991) who argued that if a country's export demand is elastic, the terms of trade will always decline.

In another respect, the role of institution in enhancing economic growth has been noted. (North, 1990) observed that institutions are very crucial in promoting the growth of the economy. Institutional variables such as legal, economic, political and social have been identified as major contributors to a country's economic growth. (Rodrik, 1999) buttressed this observation by noting that institutional quality guarantees a country's long-term economic growth. The role of institutional quality on growth can be identified through the effects it has on other variables that improve economic growth. For instance, better institutions guarantee

reduction in transaction costs which subsequently impacts on investment. (Aron, 2000) noted that quality investments can be achieved in countries that have quality institutions. For instance, if property rights are not strongly defined or enforced in any country, such could discourage huge investments in fixed assets since poorly enforced rules could lead to the state seizing whatever profits accruing from the investment.

Empirical Literature

In recent times, factors such as institutional quality and openness of the economy have been identified as germane to economic growth. Empirical studies on the nexus between economic openness and economic growth across different countries have shown varying results. For seventeen Asian countries, (Wei, 2015a) proved that de facto indicators of financial openness improved growth but de jure indicators did not. (Saifullahi, S. I. & Nuruddeen, 2015) reported a positive link between real GDP and trade openness in Nigeria which contradicts the negative link reported by Obiakor, (Olanrewaju, G. O., Okwu, A. T., & Obiakor, 2021) for Nigeria. In China, (Qazi M. A., Shahida, W. & Wee-Yeap, 2016) revealed a positive link between trade openness and economic growth both in the long-run and in the short-run. However, findings by (Mputu, 2016) showed that for sub-Saharan African (SSA) countries, a positive link exits between trade openness and economic growth which is supported by (Wiredu, J., Nketiah, E., & Adjei, 2020) for West African countries and (Ehigiamusoe, K. U. & Hooi Hooi, 2018) for Ghana, Nigeria and South Africa. In another study for the less developed countries, (Brun, J. & Gnangnon, 2017) revealed a positive link which contradicts the negative link reported by (Huchet, M., Mouël, C. L. & Vijil, 2018) for countries that specialized in low quality products. Also, in Romania, (Malsha, R. M., Mayoshi, G. E, & Ju, 2021) revealed a negative link, while an indirect link has been reported by (Fatima, S., Chen, B., Ramzan, M. & , Abbas, 2020) in a study involving developed and developing countries. (Goh, L.T., Ranjanee, S., & Leong, 2020) revealed the existence of an asymmetric impact of FDI inflows on economic growth for the Asian countries. A country-specific study by (Kouadio, H. K., & Gakpa, 2021) revealed that financial openness impacted positively on total factor productivity in Cote d'Ivoire.

In another respect, mixed results have also been reported by studies that investigated the link between institutional quality and economic performance across countries. For 29 emerging economies, (Nguyen et al., 2018) proved that institutional quality impacted positively on economic growth. This finds support in Recuero & González, (2019) for middle-income countries. In Nigeria, Olanrewaju et al., (2019) showed that all the institutional quality variables employed in the study Granger-caused growth without a feedback. This result for Nigeria finds support in Abubakar, (2020) and Abere & Akinbobola, (2020). However, in the middle income countries in Asia, (Ngo & Nguyen, 2020) showed that institutional factors did not impact positively on economic growth. In a study involving Central African Economic and Monetary Community (CEMAC), Seppo, (2020) showed that with the exception of quality of regulation and control of corruption, other institutional quality variables used in the study had positive impact on economic growth. Findings by Saritaş and Özmen (2021) in a study involving the European Union (EU) countries indicated that higher economic growth was possible due to higher institutional quality. This finds support in (Tran et al., 2021) whose finding showed that, for 48 countries in Asia, growth declined if the indicators of institutional quality exceeded a certain threshold. In another vein, Wang et al., (2021) showed that institutional quality promoted economic growth in non-oil producing countries, but showed no significant impact in oil-producing countries. In a study for the Economic Community of West African Countries (ECOWAS), Nzeh et al., (2022) revealed that regulatory quality and FDI outflows impacted adversely on the economy of the bloc in the short-run. On the other hand, while trade openness, political stability and FDI outflows had negative impact on the economy in the long-run, the impact of regulatory quality was positive. In Nigeria, findings by Obiakor

et al., (2021) showed that institutional quality influenced real GDP per person employed positively. A study involving 12 Asian economies by (Beirne & Panthi, 2022) showed that institutional quality improved real GDP per capita for countries with strong institutions, while in times of debt crises, institutional quality may stabilize portfolio debt in countries with weak institution.

3. Methodology
This study employed the panel autoregressive distributed lag (ARDL) model proposed by Pesaran et al., (1999) to investigate the nexus between economic openness, institutional quality and economic performance in the Arab Maghreb Union. Among the strengths of an ARDL is that it can be employed irrespective of whether the series are integrated of order one *I(1)* or order zero *I(0)* or an admixture of *I(1)* and *I(0)*. In order to check the order of integration of the series, the study employed panel unit root tests such as: Levin, Lin and Chu (LLC), augment Dickey Fuller-Fisher (ADF-Fisher), Im, Pesaran and Shin (IPS), and Phillp-Perron-Fisher (PP-Fisher) tests. Having ascertained the order of integration, the study investigated the presence of long-run relationship among the variables using both the Kao panel residual co-integration and the Pedroni panel residual cointegration tests. This study combined both institutional quality and openness of the economy following Rajan & Zingales, (2003) who noted that a simultaneous combination of the two determinants could guarantee economic growth. In order not to over-parametize the model, the study used principal component analyses (PCA) to select the most suitable institutional quality variables. The PCA as a variable selection technique was pioneered by the work of (Beale et al., 1967) which proposed the removal of variables which are less significant in the regression analysis.

3.3 Model Specification
The baseline model for the link between GDP per capita and the independent variables used in the study is expressed as follows:

$$LGDPC_t = FDII_t, FDIO_t, KAOPEN_t, POLSTAB_t, GOVEF_t, TOPEN_t) \quad (1)$$

Where: $LGDPPC$ = log of Gross domestic product per capita (a proxy for economic performance), $FDII$ = Foreign direct investment inflows, $FDIO$ = Foreign direct investment outflows, KAOPEN = Capital account openness, POLSTAB = Political stability, $GOVEF$ = Governance effectiveness, $TOPEN$ = Trade openness.

The panel ARDL form of equation 10 is specified as follows:

$$\Delta LGDPPC_{it} = \phi_0 + \sum_{i-1}^{p} \phi_1 \Delta LGDPPC_{it-i} + \sum_{t=0}^{p} \phi_2 \Delta FDII_{it-1} + \sum_{t=0}^{p} \phi_3 \Delta FDIO_{it-i} + \sum_{t=0}^{P} \phi_4 KAOPEN_{it-i} +$$

$$\sum_{t=0}^{p} \phi_5 \Delta POLSTAB_{it-i} + \sum_{t=0}^{p} \phi_6 \Delta GOVEF_{it-i} + \sum_{t=0}^{p} \phi_7 \Delta TOPEN_{it-1} + \phi_8 LGDPPC_{it-1} + \phi_9 FDII_{it-1} + \phi_{10} FDIO_{it-1}$$

$$+ \phi_{11} KAOPEN_{it-1} + \phi_{12} POLSTAB_{it-1} + \phi_{13} GOVEF_{it-1} + \phi_{14} TOPEN_{it-1} + \varepsilon_{it}$$

where ε = the error term. The country and time are represented by the subscripts i and respectively $\quad (2)$

In equation 11 above, ϕ_1, ϕ_1, ϕ_2, ϕ_3, ϕ_4, ϕ_5, ϕ_6 and ϕ_7 are the coefficients of the short-run parameters, while ϕ_8, ϕ_9, ϕ_{10}, ϕ_{11}, ϕ_{12}, ϕ_{13}, ϕ_{13} and ϕ_{14} are the coefficients of the long-run parameters. To test for the cointegrating relationship among the variables, the null hypothesis of no cointegration is stated against the alternative hypothesis

The null and alternative hypotheses respectively are tested as follows:

$\phi_8 = \phi_9 = \phi_{10} = \phi_{11} = \phi_{12} = \phi_{13} = \phi_{14} = 0$ (Existence of cointegration)

$\phi_8 \neq \phi_9 \neq \phi_{10} \neq \phi_{11} \neq \phi_{12} \neq \phi_{13} \neq \phi_{14} \neq 0$ (Absence of cointegration)

The existence of cointegration implies estimating a panel error correction (PECM). The PECM specification is as follows:

$$LGDPPC_{it} = \phi_0 + \sum_{i-1}^{p} \phi_1 \Delta LGDPPC_{it-i} + \sum_{t=0}^{p} \phi_2 \Delta FDII_{it-1} + \sum_{t=0}^{p} \phi_3 \Delta FDIO_{it-i} + \sum_{t=0}^{P} \phi_4 KAOPEN_{it-i} +$$

$$\sum_{t=0}^{p} \phi_5 \Delta POLSTAB_{it-i} + \sum_{t=0}^{p} \phi_6 \Delta GOVEF_{it-i} + \sum_{t=0}^{p} \phi_7 \Delta TOPEN_{it-1} + \pi PECM_{it-i} + \varepsilon_{it}$$

where PECM = Panel error correction model, π = the coefficient of PECM

(3)

3.5 Data and Sources
Data and Sources
The study covers the period from 2000 to 2020. The data for FDI inflows, FDI outflows and GDP per capita were obtained from the World Development Indicators data bank, while data on political stability and governance effectiveness were obtained from the Worldwide Governance Indicators (WGI). However, data on capital account openness was sourced from Chinn & Ito, (2006). GDP per capita was used to proxy economic performance and it was measured in constant 2015 US Dollars for all the countries. Openness of the economy was decomposed into trade openness and financial openness. Trade openness was calculated as the ratio of the sum of export and import to GDP. The GDP, export and import used in calculating trade openness were measured in constant 2015 US Dollars for all the countries. Both de facto and *de jure* measures were used to capture financial openness. The *de facto* measures used in the study are foreign direct investment inflows and foreign direct investment outflows and they were all measured as a percentage of GDP. The *de jure* indicator used is the capital account openness (KAOPEN) index by Chinn & Ito, (2006).

4. Preliminary Results
The results of the correlation matrix of the institutional quality variables in table 1 below show that governance effectiveness has a relatively strong positive link with other institutional quality variables. Political stability has a positive link with the variables after it, except voice and accountability which is negatively linked with it. Also, the rule of law has a strong positive link with regulatory quality, voice and accountability and control of corruption, while regulatory quality is positively linked with voice and accountability and control of corruption.

Table 1. Results of Correlation Matrix of the Institutional Quality Variables

Components	GOVEF	POLSTAB	RLAW	REGQ	VOACC	CONTCORR
GOVEF	1					
POLSTAB	0.579	1				
RLAW	0.930	0.581	1.			
REGQ	0.886	0.614	0.892	1.		
VOACC	0.514	-0.039	0.626	0.551	1	
CONTCORR	0.936	0.527	0.922	0.877	0.673	1

Source: own compilation

As noted by (Adams et al., 2019), a usual approach in the selection of appropriate variables under the PCA is to choose only those whose eigen-values are equal to or greater than one or

with at least 80% cumulative. Results of the PCA in table 2 show that the eigenvalues of governance effectiveness and political stability are 4.49 and 1.05, respectively and their cumulative variance are 74.8% and 17.6%. Using the results of the eigen-values as basis for selection, it implies that governance effectiveness and political stability with eigen-values greater than 1 are the most effective components and are therefore chosen for the study. The scree plot in figure 4 indicates that the first component with the highest eigen-value of 4.49 (governance effectiveness) has a variability of 74.8% and the second component with the second highest eigen-value of 1.05 (political stability) has a variability of 17.6%. The orthonormal loading plot shown in figure 5 below gives credence to the dominance of the two components in terms of relevance.

Institutional Variables	Eigen values	Proportion (%)	Cumulative (%)
GOVEF	4.49	74.8%	74.9%
POLSTAB	1.05	17.6%	92.5%
RLAW	0.22	3.6%	96.1%
REGQ	0.13	2.2%	.98.2%
VOACC	0.08	%1.3	99.5%
CONTCORR	0.03	0.51%	100%

Table 2. Extraction method: Principal component analysis
Source: own compilation

Figure 4. Scree Plot of Eigen-values
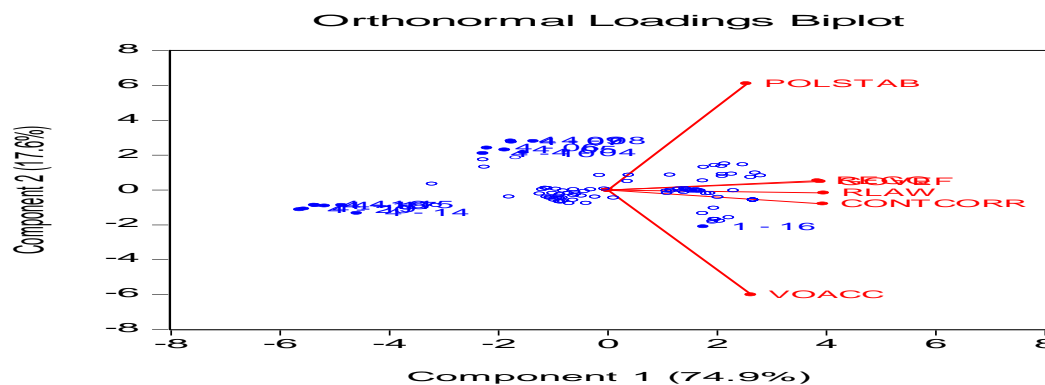Source: own compilation

Figure 5 Plot of Orthonormal Loadings

Source: own compilation

The results of descriptive statistics in Table 3 show that both the median and the mean variables are very close. This is an indication that the variables have low variability and that they are symmetric. Also, the average FDI inflows is higher than the average FDI outflows. A higher FDI inflows in relation to FDI outflows is a good development for the AMU as the countries comprising the economic bloc need more FDI inflows to develop. It is also noticed that on the average, GDP per capita is higher than the average of both FDI inflows and FDI outflows. It is equally found that the variable with the highest range is GDP per capital while trade openness has the least range. Thus, while GDP per capital was less volatile within the study period but trade openness exhibited the highest volatility. Lastly, the results of Jarque-Bera probability value which is lower than the 10% significant level indicates that the study cannot accept the null hypothesis of normal distribution.

Table 3. Results of Descriptive Statistics

	LGDPC	FDII	FDIO	KAOPEN	POLSTAB	GOVEF	TOPEN
Mean	3648.1	2.972	0.300	-1.049	-0.635	-0.493	0.009
Median	3407.8	2.038	0.109	-1.000	-0.569	-0.478	-0.198
Maximum	8870.7	27.65	6.757	0.000	0.833	0.644	1.532
Minimum	1403.2	-11.62	-10.95	-2.000	-2.568	-2.009	-9.116
Std. Dev.	1782.3	4.436	1.495	0.274	0.744	0.590	1.716
Skewness	1.240	2.567	-2.665	2.197	-0.562	-0.538	-4.094
Kurtosis	4.259	14.78	36.68	11.89	3.164	2.962	22.44
Jarque-Bera	33.86	722.7	5086.2	430.2	5.642	5.063	1946.7
Probability	0.000	0.000	0.000	0.000	0.059	0.079	0.000
Sum	383049.2	312.1	31.5	-110.04	-66.7	-51.9	0.93
Sum Sq. Dev.	3.30	2046.9	232.6	7.8	57.5	36.3	306.07

Source: own compilation

The results of stationarity at level and at first difference as shown in table 4 below indicate that GDP per capita is stationary at first difference in all the tests I(1), except under PP-Fisher. FDI inflows is stationary at level ie, I(0) in all the tests except under ADF-Fisher. Also, FDI outflows achieved stationarity at level in all the tests except under IPS. KAOPEN achieved stationarity at level in all the tests, while political stability became stationary at level in all the tests except under PP-Fisher. Governance effectiveness achieved stationarity at level in all the tests, while trade openness was stationary at first difference in all the tests except under PP-Fisher.

Table 4. Panel Unit Root at Level and at First Difference

Variable	LLC	O/I	IPS	O/I	ADF-Fisher	O/I	PP-Fisher	O/I

Variable	Stat	I	Stat	I	Stat	I	Stat	I
LGDPC	4.05(0.00)**	I(1)	2.10(0.02)**	I(1)	21.7(0.02)**	I(1)	68.9(0.00)**	I(0)
FDII	-3.2(0.00)**	I(0)	-1.29(0.09)**	I(0)	29.6(0.00)**	I(1)	39.2(0.00)**	I(0)
FDIO	-3.3(0.00)**	I(0)	-5.35(0.00)**	I(1)	17.4(0.06)**	I(0)	32.8(0.00)**	I(0)
KAOPEN	2.59(0.00)**	I(0)	-2.71 (0.00)**	I(0)	-2.49(0.00)**	I(0)	10.1(0.00)**	I(0)
POLSTAB	-3.5(0.00)**	I(0)	-2.84.00)**	I(0)	29.6(0.00)**	I(0)	55.5(0.00)**	I(1)
GOVEF	-2.7(0.00)**	I(0)	-3.31(0.00)**	I(0)	35.9(0.00)**	I(0)	49.8(0.00)**	I(0)
TOPEN	-2.5(0.00)**	I(1)	-2.24(0.01)**	I(1)	23.2(0.01)**	I(1)	24.2(0.00)**	I(0)

Note: ** and *** represent 5% and 10% level of significance I(0) = stationarity at level, I(1) = stationarity at first difference

Source: own compilation

With the results of the unit root showing that the series have an admixture of I(0) and I(1), the study proceeded to investigate the cointegrating relationship among the variables. Results of Pedroni cointegration test in table 5 indicate that the panel PP-statistics and panel ADF-statistics have p-values less than 10% for both within and between group. Therefore, there is a long run relationship among the variables. This result finds support in the result of the Kao cointegration test. The Kao cointegration result in table 6 indicates that the study has every reason to reject the null hypothesis of no cointegration since the p-value of the residual is less than 5%; thus indicating that the series are cointegrated.

Table 5.   Pedroni Residual cointegration test results

	t-statistics	Prob.
within group		
panel v-statistics	-2.347061	0.9905
panel rho-statistics	0.794879	0.7867
panel pp-statistics	-5.827643	0.0000
panel ADF- statistics	-5.332111	0.0000
between group		
panel rho-statistics	2.872902	0.9980
panel pp-statistics	1.416309	0.0783

panel ADF- statistics	-2.079443	0.0188

Note *** indicates a rejection of the null hypothesis of no cointegration at 10%.
Source: own compilation

Table 6. Kao Residual Co-integration Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID(-1)	-0.67	0.12	-5.77	0.00

Source: own compilation

In table 7, the results of the short run ARDL indicate that while capital account openness had a positive and significant impact on GDP per capita, trade openness had a negative and significant impact on GDP per capita. The results of other variables were found not to be significant. The result shows that if capital account openness rose by one unit, GDP per capita rose by 1.16. However, a unit rise in trade openness reduced GDP per capita by 0.04. The positive impact of capital account openness and the negative impact of trade openness on the economy of the AMU find support in some recent studies focusing on developing countries such as Wei, (2015), Huchet et al., (2018) and Wang et al., (2021) The implication of the results is that the economy of the countries in this economic bloc performs better if they liberalize their capital account, but opening up trade hurts the economy. The negative impact of trade openness conforms to the various theoretical views that express doubt concerning trade the relationship between the developed and the developing countries. In the short run also, both governance effectiveness and political stability impacted negatively on GDP per capita, even though they are not significant. The study is of the view that one plausible reason could be that the Arab Spring which engulfed some of the countries in the bloc around 2010 may have instigated these negative outcomes. Apart from this, the fact that most of the countries in this economic bloc are oil producing countries may have been partly responsible for the outcome. This is so because some empirical findings such as the study by Wang et al., 2021) have shown that institutional quality retards economic growth in oil producing countries. In another direction, the study did not find both FDI inflows and outflows to significantly impact on GDP per capita in the short run. Among the plausible reasons for the result could be that the instability in the polity within the study period affected FDI flows in the countries. This result finds support in Alimi, (2015) for sub-Saharan African (SSA) countries. The coefficient of PECM is negative and significant at the 10% level, which confirms the existence of long run relationship among the variables, implying that the speed of adjustment to equilibrium after a deviation is 49%

Table 7 Short-run results of the panel ARDL
Dependent Variable: LGDPC   ARDL (1, 1, 1, 1, 1, 1, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(FDII)	0.02	0.019	-0.99	0.33
D(FDIO)	0.007	0.005	1.33	0.19
D(KAOPEN)	0.16	0.06	-2.48	0.02
D(GOVEF)	-0.007	0.03	-0.25	0.80
D(POLSTAB)	-0.05	0.06	-0.78	0.44

D(TOPEN)	-0.04	0.012	-3.24	0.002
ECM(-1)	-0.49	0.29	-1.69	0.09

Source: own compilation

The long run results displayed in table 8 indicate that FDI inflows had a positive and significant impact on GDP per capita. As FDI inflows increased by one unit, GDP per capita rose by 0.01. The result of FDI inflows is in line with economic expectation. In theory, FDI inflows tend to benefit countries in diverse forms, such as expansion in business activities and technological diffusion. The positive impact of FDI inflows on economic growth finds support in Wei, (2015) for developing countries. In the long run also, FDI outflows had a negative impact on GDP per capita but the result was not significant which supports the fact that FDI outflows represents a withdrawal of domestic resources and unless the proceeds from the investment are repatriated such outward movement of investment cannot contribute to economic performance. Findings equally reveal that while governance effectiveness had negative and significant impact on GDP per capita, political stability showed a significant positive impact on GDP per capita. For the positive impact of political stability on GDP per capita in the bloc, the study contends that the political instabilities that occurred in most of the countries comprising the bloc were short-lived and therefore could not have adverse effect on their economy in the long run. Generally, the study finds that *de jure* and *de facto* financial openness (except FDI outflows) as well as trade openness impacted positively on GDP per capita in the AMU bloc in the long run.

Table 8 Long-run results of the panel ARDL
Dependent Variable: LGDPC   ARDL(1, 1, 1, 1, 1, 1, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
FDII	0.01	0.00	3.21	0.00
FDIO	-0.06	0.00	-0.63	0.53
KAOPEN	0.42	0.59	0.71	0.48
GOVEF	-0.17	0.03	-5.49	0.00
POLSTAB	0.09	0.02	4.59	0.00
TOPEN	0.02	0.03	0.59	0.55

Source: own compilation

Conclusion

The impact of economic openness and institutional quality on the performance of an economy is a topic that requires deep investigation, especially in developing countries that suffer frequent declining revenues arising from shocks in commodity prices as well as poor institutional frameworks that frustrate development. This study has established that in the short run, by opening up trade, the economy of the AMU bloc is adversely affected but capital account liberalization improved the economy of the bloc. The long-run result confirms the apriori expectation of the positive impact of FDI inflows on the economy of the bloc, while also revealing the positive contribution of a stable polity on the economy. The policy implication of the findings is that trade openness could be counterproductive in the bloc in the short run. This is because the economy of the countries sampled has not matured to the extent of such short-run trade liberalization as the countries that comprise it are mainly primary commodity producers. They still export primary commodities which experience frequent deteriorating terms of trade. By implication, AMU countries should trade more among themselves and other developing countries in the short run, while liberalizing capital movement which is sine qua non for development. The long run policy thrust of the economic bloc should be how to attract and harness FDI inflows into the member countries and to ensure political stability. This

requires upgrading the institutional frameworks in order to reduce rigidities that hamper capital inflows into the economy of the sampled countries.

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