Effects of Chinese Investment (FDI) and Service Trade on Economic Community of West Africa States (ECOWAS) Economic growth

Dr Grafoute Amoro
School of International Economics, Shanghai University, 99 Shangda Road, 200444, Shanghai China
&
Dr Moses Joseph Shawa
School of International Economics, Shanghai University, 99 Shangda Road, 200444, Shanghai China
&
Dr Laaria Mingaine
School of Management, Shanghai University, 99 Shangda Road, 200444, Shanghai China

ABSTRACT
This paper explored effect of Chinese investment and service trade on ECOWAS countries economic growth. The paper uses an amplified cumulative production function growth model. Granger causality and co-integration test were used in the empirical analysis, employing Augmented Dickey-Fulls (ADF) and stationary test, the variables proves to be integrated of the order one (1) at first difference. The granger method has been performed to test the hypothesis that causality is running from Chinese investment to ECOWAS countries economic growth while there is no causal relationship between Chinese FDI and bilateral service trade. The analysis is carried out using Ordinary Least Square method, on times series data covering the period 1979-2000. The focus shows ECOWAS countries-China bilateral trade enhance western African countries economic growth. Yet it should be a reinforcing of the policy priority for ECOWAS countries to make sure this tie and the upcoming Chinese Foreign investment will be profitable, in term of transfer and acquisition of advanced technology.

Key word: Investment (FDI), Service, trade, Ecowas, growth

1. Introduction
In developing countries, trade and investment (FDI) are often regarded as significant catalysts for economic growth. FDI is seen as a significant vehicle of technology transfer from developed countries to developing countries. It also strengthens domestic investment and facilitates advancement in human capital and institutions in the host countries. International trade is also viewed as an instrumental in advancement of economic growth. Trade is also seen as facilitating more efficient services and production of goods by shifting production to countries that have comparative advantage in producing them.

According to Kotabe et al, (1998) service trade, which has been largely ignored in many previous researches, represents nowadays approximately 25% of the total value of global trade with growth in this sector being faster than the world trade in goods. According to Wymbs (2000), the remarkable enhancement in the globalization of services is due to a number of factors: service suppliers following clients; the result of the GATT, the opening of closed markets; advances in information and communication; the trend towards service outsourcing and the demand of services to match economic development. Despite this, it seems that theoretical developments in international marketing strategy
have not kept swiftness with which the rapid globalization of services as grown (Lovelock, 1996; Reardon, Erramilli, and Dsouza, 1996; Cicic, 1999; Erramilli and Rao, 1993)

With regards to Africa, and China, their formal trade started in late 1950s. During that time, major partner were those countries in North Africa. Currently, most African countries have become pertinent in exporting primary goods and importing consumer capital goods and services from china. In term of service, the trade service represents 14% of total exports service in 2006 (compared to 1% in early 1990s).

China focuses on the African continent with not only a need for industrial resources, but with the cash to play competitively. Its strategy can be said to be premised on a notion of economic development with Chinese characteristics that encourage African states to build their economies through trade and investment in infrastructure. The core objective of this study is to examine the effect of Chinese investment (FDI) and its service trade on ECOWAS economics. The basis of this study consists of using modern economic instrument for a weighted evaluation of the Chinese investment on ECOWAS economic growth and also highlights the limitation of this service trade and finally recommendations to enhance this trade.

2. Overview of ECOWAS Service Sector
ECOWAS is a regional institution grouping fifteen West African countries that was founded on May 28, 1975 with signing of the Lagos treaty (Nigeria) with a mission to promote economic growth and development. This organization has contributed to the steady improvement of the standard of living for the countries, which favors promising future foreign investments. Some statistics reported by the World Bank that by 2001, the cumulated gross domestic product (GDP) for the ECOWAS region was$75.1billion.

ECOWAS's service sector is characterized by inadequate regulatory and institutional framework, and those that are already in place need further restructuring. The service sector themselves are underdeveloped in such a way that they can not compete in the world economy. It was only since the late 1980s that the economy shifted towards a tertiary industry with the capture of foreign investment. The GDP growth of Ecowas in recent time shows that the service producing sector contributed about 45 percent to GDP in the 1980s and the debt service burden incurred by Ecowas member in 1980s and 1990s imparted negatively on the ability of the service producing sector. However, ECOWAS witnessed better GDP growth performance in 1990s to the present than in 1980s. However it is worthwhile to note that the service sector represent an opportunity for the whole world, due to the need of investment (UNIDEP).

3. Bilateral Service trade between China and ECOWAS Countries
Since the creation of ECOWAS in 1975, China has kept a trade tie. It’s promoted products and services from their public and private sector to the gathering of commercial and corporate interests. ECOWAS attracts long term and low cost funds and technology from China to develop and interconnect public infrastructure (roads, telecommunication, railway, ports, harbors etc).Thus of thousand projects executed in West Africa in public infrastructure; five hundred are exclusively managed by the China road and bright corporation Construction Company.

The Sino-West African partnership has enlarged to banking sector after acquisition of $5.5 billion (20%) stake in Standard Bank by the industrial and commercial bank of China (ICBC). This has established trade tie in financial services gateway between them through an alliance of the largest banks in these regions. In the telecommunication sector, West African countries have been reinvigorated by deregulation to provide opportunities to foreign investors, because they have realized the importance of
telecommunication in their economic development and expected to see a wave of rapid growth in this sector, thereby China telecom, Huawei became a dominant supplier in this region. Huawei has set up 32 representative offices and services centers, and also training center in Africa.

The transportation Systems which were built in colonial era by the western countries were becoming dilapidated, because of the growth in population amongst other factors. Nowadays this system has been improved by Chinese corporation. Furthermore, China and West Africa have made significant progress in bilateral tourism cooperation, through the Approval Destination Status (ADS) policy on destination approval. In Africa there are 26 ADS countries. ADS are a policy to enable African countries to welcome more visits by Chinese tourists and encourage more African tourists to travel to China.

To increase trade and overcome some difficulties such as language barriers, cultural exchange, the Chinese government and ECOWAS also decided to improve the education sector by providing scholarship to African students to study in China. Internship training is also available for the African workers to improve their professional skills in many fields. Trade between ECOWAS and China has played an important role in the development of infrastructure and improvement in the quality of life of the people through various projects. The table below shows the number of project approvals by sector in West Africa. The service sector ranked the second place after manufacturing industry, with 125 millions of dollars.

**Table I: sectoral distribution of China’s FDI inflows to West Africa (1979-2000)**

<table>
<thead>
<tr>
<th>Sector/industry</th>
<th>No. of projects</th>
<th>Investment value (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>230</td>
<td>315</td>
</tr>
<tr>
<td>Services</td>
<td>200</td>
<td>125</td>
</tr>
<tr>
<td>Light industry</td>
<td>82</td>
<td>87</td>
</tr>
</tbody>
</table>

**Source:** UNCTAD, based on information provided by MOFCOM, taken from UN 2007

4. Review of Relevant Literature

ECOWAS is a signatory and member to many regional and multilateral trade agreements. The core policy for the block has been to reduce tariffs, remove trade barriers and embark on outward oriented trade policies. The prospect are that following ECOWAS’s commitments and obligations in these trade agreements, that trade tariffs will reduce significantly as required by the World Trade Organization (WTO) protocol and be compliance with other regional trade agreements. Thus this openness and the liberalization policy adopted by most of African countries, since the independence, are directly correlated to greater economic growth with the trend that trade have a stronger effect on economic growth when the states has a higher percentage of openness to international trade. Grossman and Helpman, (2006) observed that open trade regimes go hand-in-hand with better investment climates, learning effects and technology externalities. There are also some goods arguments suggesting that trade liberalization may raise growth rates permanently.

According to Maddison (1998) the gradual liberalization of capital flows and trade in the Organization for Economic Cooperation and Development (OECD) countries spurred West European recovery, reconstruction and catch-up growth. Also, the outbound-orientation of some East Asian countries played a significant role in their catch-up growth. Despite continuing protectionists by Chinese, the gradual liberalization of foreign trade and inward investment has undeniably contributed significantly to the impressive and sustained growth rates over the recent times.
Drabek and Laird (1998) observed that African countries with gradually more liberal trade policies are the ones with growing ratios of trade and inward investment to national income, which results in higher growth rates. Thus the Regional Integration (ECOWAS) presents unprecedented prospects for its member’s countries to achieve greater economic growth through trade and investment. And all countries in the world are increasingly striving for rapid growth, hence many police makers are encouraging more companies to invest in their land. This favorable police is due to the fact Foreign investment possess several positive stimulants for a country ‘growth such as advanced technologies, large amounts of investment capital, highly skilled labor etc. In addition to the transfer of production know-how FDI bring also a new managerial skills.

Chadee and Schlichting, (1997) surveyed some aspects of foreign direct investment in the Asia-Pacific Region and conclude that FDI has contributed positively to all the economies in that region. Further, Zhang (2001) confirms that FDI promotes economic growth in countries with a liberalized workforce with higher job skills and education and liberalized trade regime. However, Fosu and Magnus (2006) studied the long –run impact of FDI and trade on economic growth in Ghana between 1970 and 2002. The authors used augmented aggregate production function growth model. By applying the bounds testing approach to cointegration, they found cointegration relations between growth and its determinants in the aggregate production function model. Their study indicates that impact of FDI on growth to be negative. However, Trade was found to have considerable positive impact on growth. According to Lee (2005) FDI along with trade liberalization is the answer for economic development. The author argues that Trade Liberalization reduces poverty and enhances the welfare of consumers as it offers wider platform for choice from among wider variety of quality goods and cheaper imports. Hansen and Rand (2006) examined the causal links between FDI and growth in Developing countries. The authors found that FDI promotes economic growth, but the extent to which a country is benefited by FDI depends on labor skills, its trade policies, and absorptive capabilities. Karim and Yusop (2009) based on a simple OLS regression, studied the Malaysia’s growth-case. The authors found there is a range of possible factors that ensure that FDI promotes or hinders economic growth. The recent OLS panel study of 45 countries over the period 1998-2005 is evidence example where FDI inflows exert a positive impact on economic growth only in the presence of highly skilled labor.

Borensztein, Gregorio, and Lee, (1996) surveyed the role of FDI in promoting economic growth using an endogenous growth model. The authors analyzed FDI flows from industrial countries to 69 developing countries during 1970-1989. This study further showed that FDI is an important vehicle of technology transfer, contributing more economic growth than domestic investment. However, Rodriguez and Rodrik, (2006) presented a critical view of the link between open-trade policy and economic growth. The authors found that past studies failed to account for institutional differences among countries resulting in an upwardly-biased estimate of trade and other policy liberalizations. This analysis showed that the relationship between economic and average tariff rates is only slightly negative and nowhere near statistical significance. Further the study found that the question of whether FDI and trade trigger economic development or economic growth is an unresolved issue.

Research based on the neoclassical approach observes that FDI affects only the level of income and leaves the long-run growth unchanged. According to Solow, (1957) long-run growth can only arise because of technological progress and/or population growth, both considered exogenous. In summary, empirical literature reveals mixed conclusion on the link between nature of trade policy regimes and FDI.
5. RESEARCH METHODOLOGY AND MODEL SPECIFICATION

5.1 Model specification
Our econometrics work developed estimating equation that was drawn from literature by using augmented production function in which the level of representing countries productivities depends on Chinese FDI, service trade, Gross Capital Formation, human capital, employment. By use of analytical framework provided by Kohpaiboon, (2002) the ECOWAS production function can be presented as follow:

\[ Y = f(FDI, K, L, H, Trd) \]

Where

Y = GDP growth rate
FDI = Chinese direct investment
K = Gross Capital Formation
L = employment
H = human capital
Trd = trade (export plus imports) of services

By considering the production function in the context of multiple regressions, the evaluation of the function can be analyzed on the basis of the equation:

\[ Y = \beta_1 + \beta_2 \ln FDI + \beta_3 \ln K + \beta_4 \ln L + \beta_5 \ln H + \beta_6 \ln Trd + \varepsilon \]

Where coefficient signs are: \( \beta_1 > 0; \beta_2 > 0; \beta_3 > 0; \beta_4 > 0; \beta_5 > 0; \beta_6 > 0 \);

5.2 Description of Data and sources.
The research is bolstered by substantial literature reviews where data was analyzed and synthesized using a content analysis technique or analytical technique. The data for analysis was obtained from the World Development Indicators (WDI) database. The WDI database, published by International Monetary Fund and World Bank, includes variables such as trade in services, human capital, GDP growth rates, FDI, Gross Capital Formation, market openness and Employment. The data covered 15 countries for the years 1979-2000.

5.3 Estimation Methodology
5.3.1 Unit Root
Stationarity is important because if the series is non-stationary then all the typical results of the classical regression analysis are not valid. Regression with non-stationary series may have no meaning and therefore called spurious results. In stationary time series, shocks will be temporary and over time their effects will be eliminated as the series revert to their long-run mean values. The Augmented Dickey Fuller test for the presence of unit root is performed on the variables levels. Considering the ADF statistic, the null hypothesis will be reject if the ADF statistic is less than the critical value, thus we conclude that the series is stationary. The cointegration test and unit root on relevant economic variables are in order to determine time series characteristics.

In this case, time series is considered as stationary if series are mean-reverting, that is, the series repeatedly does not have a tendency to drift and returns back to its mean. Hence, if the variance and mean of the series are constant overtime, while the value of the covariance between the two periods depends only on the gap between the periods and not on the actual time at which the covariance is considered, then the series is stationary. However, if one or more of the above mentioned conditions are not fulfilled, then the series is non-stationary (Paramiah&AKway, 2008).
This test is significant as it shows the number of times the variable has to be differenced to arrive at a stationary value. In general, economic variables which are stationary are called $I(0)$ series and those which are to be differenced once in order to achieve a stationary value are called $I(1)$ series. In testing for stationarity, the standard augmented Dickey-Fuller tests (Fuller, 1979; Dickey, 1979; Phillips–Perron, 1988) are carried out to test the existence of unit root in order to establish the properties of individual series. The regression is estimated by equation:

$$\Delta Y_{t-1} = \alpha + \beta Y_{t-1} \sum_{j=1}^{k} \gamma_j \Delta Y_{t-k} + \varepsilon_t$$

Where $\Delta$ is the difference operator, $Y$ the series to being tested, $\Box$ is the number of lagged differencies, and $\varepsilon_t$ an error term.

### 5.3.2 Granger Causality

Granger (1969) proposed one way to address this question and his ideas were popularized by Sims (1972). Using Granger proposal to testing causality involves using $F$-tests to test whether lagged information on a variable $Y$ provides any statistically significant information about a variable $X$ in the presence of lagged $X$. If not, then "$Y$ does not Granger-cause $X."$ Granger causality differentiates between bi-directional and unidirectional causality. Unidirectional causality is said to exist from $A$ to $B$ if $A$ causes $B$ but does not cause $A$. If either of them causes other, then a mutual feedback is said to exist between the variables. There are many ways in which to implement a test of Granger causality. The VAR model is estimated as follows, where all are initially considered endogenously and symmetrically. This is show by equation system

$$
\begin{bmatrix}
GDP_t \\
FDIc_t \\
K_t \\
L_t \\
H_t \\
Trd_t
\end{bmatrix}
= 
\alpha_0 + \alpha_1 
\begin{bmatrix}
GDP_{t-1} \\
FDIc_{t-1} \\
K_{t-1} \\
L_{t-1} \\
H_{t-1} \\
Trd_{t-1}
\end{bmatrix} + 
\alpha_2 + 
\begin{bmatrix}
GDP_{t-p} \\
FDIc_{t-p} \\
K_{t-p} \\
L_{t-p} \\
H_{t-p} \\
Trd_{t-p}
\end{bmatrix} + 
\begin{bmatrix}
\mu_1 \\
\mu_2 \\
\mu_3 \\
\mu_4 \\
\mu_5 \\
\mu_6
\end{bmatrix}
$$

Where

- $t =$ time subscript,
- $p =$ number of lags for the VAR,
- $\alpha_0 =$ vector of constants $\alpha_0$, $\alpha_1$, .............. $\alpha_p =$ all parameter matrices and the variables have their usual meanings. The VAR Granger/Block Exogeneity Wald Tests has been adopted to examine the causal relationship among the variables.
6. Empirical Analysis
6.1 Unit Root test

Table 2: Unit Root test for Stationarity at first difference

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Test statistic</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln FDIC</td>
<td>-3.176753</td>
<td>I(1)*</td>
</tr>
<tr>
<td>LnK</td>
<td>-4.749486</td>
<td>I(1)*</td>
</tr>
<tr>
<td>LnL</td>
<td>-3.747531</td>
<td>I(1)*</td>
</tr>
<tr>
<td>LnH</td>
<td>-4.388917</td>
<td>I(1)*</td>
</tr>
<tr>
<td>Lntrd</td>
<td>-3.317819</td>
<td>I(1)*</td>
</tr>
</tbody>
</table>

Note: Significance at 1%, 5% and 10% level. Mackinnon (1991) critical value are -2.6603, -1.955 and -1.7.

At all levels variables were not stationary by observing the values of ADF statistics with the Critical value, which were greater than the ADF statistics. However at first difference as showed in the above table, the variable became stationary at first difference. On the basis of this, the null hypothesis of non stationarity is rejected and it is safe to conclude that the variables are stationary. This implies that the variables are integrated of order one. Having confirmed the stationarity of the variables at I(1), we examine the presence or non-presence of co integration among variable. When a co integration relationship is present, it means that Chinese Foreign Direct Investment, Gross Capital Formation, employment, human capital, and service trade share a common trend and long-run equilibrium.

Table 3. Cointegration test result

<table>
<thead>
<tr>
<th>Eigen value</th>
<th>Likelihood Ratio</th>
<th>5%(CV)</th>
<th>1%(CV)</th>
<th>Hypothesized No. of CE (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.848225</td>
<td>152.972</td>
<td>136.61</td>
<td>146.99</td>
<td>None**</td>
</tr>
<tr>
<td>0.796769</td>
<td>105.838</td>
<td>104.94</td>
<td>114.36</td>
<td>At most 1*</td>
</tr>
<tr>
<td>0.736826</td>
<td>66.00269</td>
<td>77.74</td>
<td>85.78</td>
<td>At most 2</td>
</tr>
<tr>
<td>0.516428</td>
<td>32.62916</td>
<td>54.64</td>
<td>61.24</td>
<td>At most 3</td>
</tr>
<tr>
<td>0.349404</td>
<td>14.46528</td>
<td>34.55</td>
<td>40.49</td>
<td>At most 4</td>
</tr>
<tr>
<td>0.093096</td>
<td>3.718629</td>
<td>18.17</td>
<td>23.46</td>
<td>At most 5</td>
</tr>
</tbody>
</table>

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

The result from the table 4.2.1 showed that the likelihood ratio compared with the critical value for the significance level 1% and 5%, point out Economic growth proxy as GDP growth rate of western African Countries and its determinants namely, Chinese Foreign Direct Investment, Gross Capital Formation, Human Capital, Employment, service trade share a common and long-run equilibrium.
Table 4. Granger Causality

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>GDP</th>
<th>FDIC</th>
<th>K</th>
<th>L</th>
<th>HC</th>
<th>Trd</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>F-stat</td>
<td>0.58857</td>
<td>0.95686</td>
<td>6.664</td>
<td>1.76711</td>
<td>4.19851</td>
</tr>
<tr>
<td></td>
<td>Prob</td>
<td>0.5717</td>
<td>0.2393</td>
<td>0.013</td>
<td>0.216</td>
<td>0.3382</td>
</tr>
<tr>
<td>FDIC</td>
<td>F-stat</td>
<td>4.43626</td>
<td>0.37904</td>
<td>6.505</td>
<td>1.66453</td>
<td>0.4567</td>
</tr>
<tr>
<td></td>
<td>Prob</td>
<td>0.0387</td>
<td>0.68786</td>
<td>0.0312</td>
<td>0.2336</td>
<td>0.7356</td>
</tr>
<tr>
<td>K</td>
<td>F-stat</td>
<td>7.26315</td>
<td>0.90566</td>
<td>0.365</td>
<td>0.67894</td>
<td>0.3656</td>
</tr>
<tr>
<td></td>
<td>Prob</td>
<td>0.00277</td>
<td>0.4324</td>
<td>0.843</td>
<td>0.2788</td>
<td>0.66798</td>
</tr>
<tr>
<td>L</td>
<td>F-stat</td>
<td>2.49607</td>
<td>0.9788</td>
<td>2.00927</td>
<td>2.02129</td>
<td>0.5689</td>
</tr>
<tr>
<td></td>
<td>Prob</td>
<td>0.1277</td>
<td>0.4834</td>
<td>0.18404</td>
<td>1788</td>
<td>0.4567</td>
</tr>
<tr>
<td>HC</td>
<td>F-stat</td>
<td>6.74977</td>
<td>1.21262</td>
<td>0.56767</td>
<td>0.323</td>
<td>0.4031</td>
</tr>
<tr>
<td></td>
<td>Prob</td>
<td>0.00392</td>
<td>0.3343</td>
<td>0.689</td>
<td>0.568</td>
<td>0.7521</td>
</tr>
<tr>
<td>Trd</td>
<td>F-stat</td>
<td>5.51995</td>
<td>0.34488</td>
<td>9.97603</td>
<td>4.284</td>
<td>0.89123</td>
</tr>
<tr>
<td></td>
<td>Prob</td>
<td>0.0219</td>
<td>0.1418</td>
<td>0.0034</td>
<td>0.042</td>
<td>0.5986</td>
</tr>
</tbody>
</table>

From the result of the first equation, it could be noted that the null hypothesis that Economic growth granger causes Employment and trade is rejected, implying that causality is running from economic growth to Employment and trade. In the second equation we found that an unidirectional Causality between Chinese service Foreign Investment and Economic growth. This causalities relation indicates that Foreign Investment is the vital force in promoting economic growth. Still in the second equation there is bidirectional causality between Chinese Foreign Investment and Labor force. This indicates that Chinese foreign Investment inflows to West Africa is due to the Western African countries labor performance and contribute to the African countries economic development. However we did not find any causality between Chinese FDI and Bilateral trade. This implies Ecowas trade policy regime with china does not any influence on their economic development.

Trade between China and ECOWAS faces a number of obstacles which may or may not have influence in the way business is conducted. Such limitations to trade include; cultural and language barriers, political and economic instability in the ECOWAS region among other issues. ECOWAS as body in itself has got various issues which might limit trade to be conducted smoothly, for example, most of the countries in ECOWAS have got different political and economic ideologies which in a way complicate the situation when it comes to trade issues or negotiations. Therefore it should be the policy priority for Western African Countries to make sure that FDI inflows from China and their trade relationship with china exert the reinforcing and beneficial effects on GDP. From the third equation we found one unidirectional causality between Human Capital and economic growth. And finally from the fourth equation we found also a unidirectional causality between Trade and Gross formation capital. This indicate that trade has been profitable to improve public infrastructure and private sector in western Africa.

4.4 Growth Model; OLS Estimate Equation.

Since the time series variables are not stationary, there is likelihood that if the OLS is conducted on the variables. The results might be biased or inconsistent. Therefore OLS should be conducted at first differenced form in order to have unbiased or consistent results which has economic meaning. Where

\[ \Delta \ln Y_t = \ln Y_t - \ln Y_{t-1} \]
Table 5. OLS Estimated Result

<table>
<thead>
<tr>
<th>Explanatory Variable</th>
<th>Estimated Coefficient</th>
<th>Std error</th>
<th>T-statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>5.098403</td>
<td>3.598901</td>
<td>1.416656</td>
<td>0.2295</td>
</tr>
<tr>
<td>DlnFDIc(-1)</td>
<td>0.223316</td>
<td>0.166094</td>
<td>-4.34452</td>
<td>0.2500</td>
</tr>
<tr>
<td>DlnK(-1)</td>
<td>0.887605</td>
<td>0.7556</td>
<td>2.1747</td>
<td>0.39053</td>
</tr>
<tr>
<td>DlnL(-1)</td>
<td>-30.16387</td>
<td>25.23483</td>
<td>1.710799</td>
<td>0.155</td>
</tr>
<tr>
<td>DlnH(-1)</td>
<td>0.79212</td>
<td>0.185749</td>
<td>4.264497</td>
<td>0.013</td>
</tr>
<tr>
<td>DlnTrd(-1)</td>
<td>0.03909</td>
<td>0.07891</td>
<td>-3.02403</td>
<td>0.0065</td>
</tr>
</tbody>
</table>

R²=0.69; n=20

5. Discussion

R²=0.69 show that approximately 69% of the variation in Economic growth rate is explained by all variables in the model. In our study we found that Chinese service foreign investment and labor force are not significant, regarding to the t-statistics where those t-values are less by the critical value at 1% and 5%. The positive coefficients of FDI and labor expected are not verified. The justification of this result is that Chinese foreign investment in West Africa is insubstantial in the service sector.

Western African markets are still unknown by the Chinese investor. This unknown factor is due to the unknown of market environment conditions, culture and language barriers. The labor force also does not participated in the economic growth in this research and the coefficient is negative. Since the acquisition of the independence the primary sector account for the booming sector of employment. Thus Agricultural sector still the most important single activity for the African peoples.

In West Africa, about 70% of the total working engaged in primary sector. However regarding the service sector, it has been ignored by the police makers and did not represent 10% of ECOWAS GDP share. In West Africa, service sector is characterized by inadequate regulatory and institutional framework, and those that are already in place need further restructuring. The service sector themselves are underdeveloped in such a way that they cannot compete in the world economy. It was only since the late 1980s that the economy shifted towards a tertiary industry with the capture of foreign investment.

Yet, the model OLS identified the trade variable, human capital variable and gross capital formation to explained the economic growth rate in West Africa. The commercial regime adopted by most of Ecowas countries has been profitable to enhance trade. The trade relationship between china and Ecowas countries will be mutually beneficial relationship if the two partners come with clear and appropriate trade policies. The coefficient of human capital and gross capital are positive as expected in our model. This indicate that when the Human capital increase by 1%, the economic growth will increase by 0.79 while an increase of 1% of Gross capital formation will push the economic growth by 0.88%. As mentioned in the literature review the human capital development plays an important role in fostering economic growth. Thus the HPAEs (High Performing Asian economies) achieved high growth by getting the basics right. Private domestic Investment and rapidly growing human capital were the principal engines of growth. And some of these economies also got a head start because they had a better-educated labor force (World Bank, 1993).

It is argued by Wood and Berge(1997 ) that the manufacturing export success of East Asia reflects the realization of latent comparative advantage in manufactured goods based on relative endowments, particularly relative endowments of skilled labor,
A high degree of complementarity between trade policies and education expenditure provides support for development policies that stimulate long term economic growth by simultaneously promoting investment in human capital as well as gross capital formation which enhance the level of the living standard.

CONCLUSION AND RECOMMENDATION

Present paper attempts to investigate the effect of service trade and Chinese Investment on ECOWAS countries economic growth. The study takes care of the issues of structural change in the economy by choosing the appropriate time period. We built our modified growth model from basic growth model, where the factor included is ECOWAS GDP, Chinese Direct Investment, Trade, Human capital, Gross Capital Formation and Employment, among which GDP is the dependent variable. Granger causality analysis shows that the Chinese FDI inflows to ECOWAS countries is due to the western African labor force dynamism, and contribute to the West African countries economic development. Granger causality shows its contribution on Ecowas development in term of improvement of public infrastructure and private sector in western Africa.

Contrarily The OLS estimation reveals that the labor force and Chinese FDI are not significant while the bilateral trade variable, human capital and Gross Capital Formation explain the Economic growth of West Africa countries. The trade shows that, the tertiary sector, which has been abandoned since the independence of African countries, is recovering by the bilateral trade between China and ECOWAS countries.

Trade and corporate social responsibility have helped to reduce Africa poverty and brought about a lot of competition which has been profitable for the African people in term of the improvement of purchase power and the accessibility of the goods, at good price. However as a limit, the study suggests that on human capital development, language barriers and cultural differences weigh heavily against the transfer of technological skills and education from Chinese to Ecowas citizens. Because cheap Chinese labor is often used, large industrial projects rarely transfer skills to local African populations. Ecowas countries’ rampant corruption has also proven to be a serious cultural obstacle that must be overcome if West Africa is to successfully leverage its demands vis a vis China.

In order to establish a proper cooperation between China and Ecowas countries, the following steps are necessary. Firstly ECOWAS countries lies in developing the capacity to better manage its own policies toward China’s engagement. Ecowas should develop credible, accountable and transparent institutions; a free-market system that encourages investment, diversification, and competition is unlikely to emerge.

West African should focus on how China’s engagement in Africa fits into the broader picture of international engagement. In particular,ECOWAS Countries have an opportunity to diversify their development by balancing Western assistance with that of China but needs to better understand how each type of aid can be beneficial, and what sectors, in order to implement a successful strategy. Greater emphasis should be placed on building human capital and overcoming language and cultural barriers to facilitate the transfer of business knowledge and technology to a wider array of the Ecowas population.

Reference

AFRICA confidential, 2. 1. (n.d.).


John, I. Impact de la chine et de l’indie sur les économies africaines cas du benin du burkina faso., *Development centre OECD*.


