Economic growth, exchange rate and FDI: A comparative analysis of Nigeria and Ghana between the year 1990 to 2000

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Abstract
This study sets out to examine the “effect of economic growth and exchange rate on FDI, a comparative analysis of Nigeria and Ghana between the years 1990 to 2000”. Ghana and Nigeria were colonized by Britain and gained independence three years apart, that is, In March 6, 1957 Ghana gained her independence which makes her three years older than Nigeria, they are both members of the commonwealth. This note sets out to beam its search light on the comparative analysis of the effect of economic growth and exchange rate on FDI of both countries between 1990-2000 when both countries were thirty-three and thirty years old respectively. Coupled with the fact that both countries are developing economies. Data from World Development Indicators is used to run an ordinary least square or regression analysis. It was discovered that both economic growth and exchange rate are not a good predictor of foreign direct investment for both countries.
1. Introduction

Prominence had been given to FDI as the instrument for resources to flow across national borders to improve economic performance, industrial and international competitiveness, and exports relationship between countries regionally or across the globe. Retrospectively, Ghana’s FDI, making a specific reference to 1990 to 2000, had been rising and falling like the wave of an ocean, same as its Nigeria counterpart. Ghana started with 1.14% and rose to 12.76% in the year 2000. In between these years, there had been an increase in their FDI beyond the percentage recorded in the year 2000. For instance, in the years 1994 and 1999, Ghana’s FDI within these years were at its highest web with 17.9% and 18.74% respectively. On the other side of the coin, Nigeria’s FDI in the year 1990 started with 4.55% and rose to 8.83%. Although, she had her highest percentage of FDI in the years 1995 and 1997 with 15.18% and 12.34% respectively.

FDI is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the ordinary shares of voting stock is the criterion for determining the existence of a direct investment relationship which comprises of agriculture, manufacturing and telecommunication just to mention but a few.

Source: World Development Indicator
Nigeria foreign direct investment from the year 1990 to 2000

Source: World Development Indicator
2. Summary Empirical Analysis

Ordinary least square analysis was carried out to determine the effect of economic growth and exchange on foreign direct investment. As a basis, the equation below was used \( Y = b_0 + bx_1 + bx_2 \).

where \( Y \) is the outcome variable (FDI) and \( x_1 \) and \( x_2 \) are the independent variables and the \( b_0 \) which is the intercept of the equation. The year under scrutiny is 1990 to 2000

A. Ghana

<table>
<thead>
<tr>
<th>Dependent variable: FDI</th>
<th>Coefficient</th>
<th>t statistics</th>
<th>Standard error</th>
<th>Prob.</th>
<th>beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange rate</td>
<td>2.73e+08</td>
<td>1.68</td>
<td>1.63e+08</td>
<td>0.132</td>
<td>0.5105</td>
</tr>
<tr>
<td>Economic growth</td>
<td>-5993732</td>
<td>-0.15</td>
<td>3.89e+07</td>
<td>0.881</td>
<td>-0.0470</td>
</tr>
<tr>
<td>bo</td>
<td>9.87e+07</td>
<td>0.58</td>
<td>1.71e+08</td>
<td>0.579</td>
<td></td>
</tr>
<tr>
<td>R-square</td>
<td>0.2856</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R</td>
<td>0.0862</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the summary of the regression result presented in the above table, it can be inferred that both exchange rate and economic growth are not a good predictor of FDI going by the R-square figure which is 29% (not goodness for fit). The t statistic shows that there is a positive or direct relationship between exchange rate and FDI, which means that, as exchange rate is rising, foreign direct investment is increasing though it might not be in at the same rate. The t statistics also shows that there is negative or inverse relationship between economic growth and foreign direct investment (-0.15) which presupposes that when economy growth is increasing, foreign direct investment is decreasing or declining. However, there is no evidence of significance of these relationships as the p-values show that there is no statistically significant effect of economic growth and exchange rate on FDI in Ghana.
B. Nigeria

<table>
<thead>
<tr>
<th>Dependent variable: FDI</th>
<th>Coefficient</th>
<th>t statistics</th>
<th>Standard error</th>
<th>Prob.</th>
<th>beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange rate</td>
<td>-227606</td>
<td>-0.06</td>
<td>3870019</td>
<td>0.955</td>
<td>-0.4950</td>
</tr>
<tr>
<td>Economic growth</td>
<td>-5.11e+07</td>
<td>-1.61</td>
<td>3.18e+07</td>
<td>0.146</td>
<td>-0.1809</td>
</tr>
<tr>
<td>bo</td>
<td>1.31e+09</td>
<td>6.75</td>
<td>1.94e+08</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>R-square</td>
<td>0.2446</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R</td>
<td>0.0557</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Similar to Ghana, from the summary of the regression result presented in the above table, it can be inferred that both exchange rate and economic growth are not a good predictor of FDI in Nigeria, going by the R-square figure which is 24% (not goodness for fit). The t statistic also shows that there is negative or inverse relationship between the explanatory variables (economic growth, exchange rate) and the response variable (FDI) (-0.06 and -1.61) which presupposes that when economy growth is increasing, foreign direct investment is decreasing or declining and the in same vein, when the exchange rate for dollar increases, there will be a decrease in FDI. The p-values show that there is no statistically significant effect of economic growth and exchange rate on FDI in Nigeria.

3. Conclusion

From the empirical evidence it has been established that both economic growth and exchange rate are not a good predictor of FDI for both Nigeria and Ghana. To this end, in improving FDI, efforts should be geared towards other more significant factors which are not part of this research exercise.
4. References

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