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PREFACE

The issue of foreign direct investment (FDI) is pertinent at this stage of Ghana's development process because it is seen as one avenue through which the country can attract much needed capital and technological know-how. After relying heavily on foreign aid in the 1960s and 1970s, most governments worldwide have now turned to foreign direct investment. Transnational Corporations (TNCs) are also looking to invest in developing countries because they are seeking to consolidate their operations, lower their costs, and increase their market share. The 2005 World Investment Report indicates that in recent years, there has been a massive increase in FDI flows from developed to developing countries and yet the flow of FDI to Africa is less than 3% of total world FDI flows. It is clear that the market for FDI has become highly competitive and that developing countries must put their houses in order in order to attract more FDI.

In this paper, the author addresses two important issues. The first is to empirically determine the nature and extent of the impact of FDI on Ghana's economic growth over the period 1970 to 2003. In the process, he essentially uncovers the determinants of economic growth and measures their relative impacts, using econometric techniques. Having accomplished this task, he then goes on to discuss the second issue of what Ghana should do to attract more FDIs. He introduces some new and refreshing ideas on how to accelerate the pace of Ghana's economic development. I trust that his prescriptions will be useful food for thought of Ghana's policy decision makers.

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Mrs. Jean Mensa
Administrator
IEA
November 2005

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ABSTRACT

Following a steady decline in official development assistance world-wide, foreign direct investment (FDI) is now viewed as a source of capital and a major tool in the fight against poverty. It is also viewed as a catalyst for technology transfer from the developed to developing countries. However, the empirical evidence on the size of the gains from FDI is mixed. Although several studies have found that FDI, or FDI in combination with other factors, has a positive effect on economic growth, other studies have found no significant effects, while a few have found that FDI could even have an adverse effect on a country's economic growth. This paper seeks to empirically examine the relationship between FDI and economic growth for Ghana, and to draw out the implications for policy.

1. INTRODUCTION

> *"Foreign capital instead of being viewed as a rival, ought to be considered as a most valuable auxiliary, conducive to put in motion a greater quantity of productive labour and a greater proportion of useful enterprise than could exist without it"* (Alexander Hamilton, American founding father, quoted in Rolfe and Damm, 1970:121).

Beginning from a general mistrust of foreign direct investment (FDI) in the 1960s and early 1970s, developing country governments have now come to embrace it warmly within the last two decades or so. The growing interest in FDI is not only a result of globalization but also a consequence of the steady decline in official development assistance. Developing country share of FDI has increased from a paltry 5% in 1980 to 36% in 2004 (UNCTAD, 2005). Foreign direct investment is now viewed as a source of capital and a major tool in the fight against

poverty. It is also viewed as a catalyst for technology transfer from the developed to developing countries. According to economic theory, international capital inflows, *inter alia*, promote efficient allocation of resources, which in turn enhances economic growth.

It has been argued that FDI plugs the savings-investment gap in the host country. It has also been suggested that a foreign corporate presence generates positive externalities such as improvement in human capital and local institutions. The almost universal belief in the growth enhancing effects of FDI is demonstrated by the scramble of governments to attract foreign investments with all kinds of incentive packages. There is now a vast literature on FDI, and the empirical evidence on the size of the gains from FDI is mixed. Although several studies have found that FDI, or FDI in combination with other factors, has a positive effect on economic growth, other studies have found no significant effects, while a few have found that FDI could even have an adverse effect on a country's growth.

The objectives of this paper are twofold. Firstly, it will determine the extent of the impact of FDI on the economic growth for Ghana. Secondly, on the basis of the findings, it will discuss the implications for policy makers. The issue of FDI is relevant at this stage of Ghana's economic development. The basic fundamentals of the Ghanaian economy have improved over the 2004-5 financial year and there are indications that the economy is beginning to head in the right direction. However, in order to eradicate poverty and make substantial progress towards achieving the Millennium Development Goals by 2015, the economy needs to grow at a fast pace, ideally double the current rate. Therefore, understanding the exact nature of the FDI-Growth relationship is crucial for developing an appropriate policy response.

The paper is organized as follows. Section 2 provides an overview of trends in key economic indicators for Ghana from 1970 to 2003 to set the background for the discussion. Section 3 reviews FDI trends both worldwide and in Ghana. Section 4 summarises the pros and cons of

FDI, while Section 5 discusses the empirical methodology, including the model specification, estimation methods and data sources. Section 6 presents and discusses the results, while Section 7 addresses the policy implications. The final section contains some concluding remarks.

2. OVERVIEW OF KEY ECONOMIC INDICATORS

Starting from a high growth rate of nearly 10% per annum at the beginning of the 1970s, Ghana's economic growth rate declined to lows of -2.5% in 1972 and -12.5% in 1975 (Figure 1).

Fig 1. Ghana's GDP Growth Rate, 1970-03
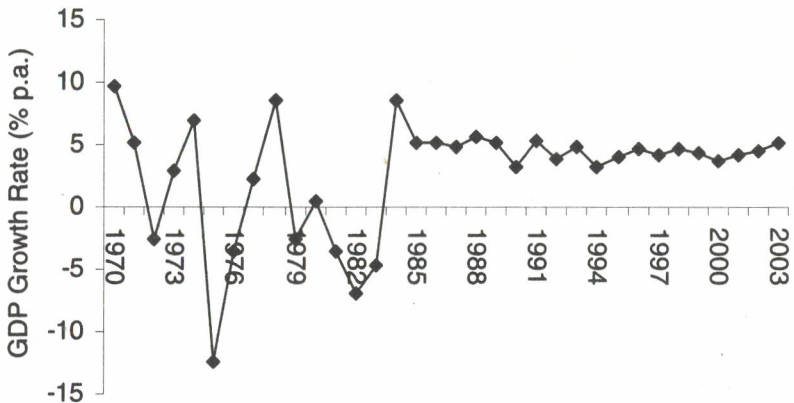
Source: World Bank (2005).

Although the energy crisis of the early seventies and poor commodity prices had an effect on this dismal performance, the coup d'ètat of 1972 was definitely a significant factor. Indeed, the effect of coups on the economy is also demonstrated by the negative growth performances in the period 1979 to 1983. In the decade of the 1970s, economic growth averaged a paltry 1% per annum, increasing to 2% per annum in 1981-1990, then to 4% in 1991-2000, and to about 5% after 2001. Inflation averaged about 40% per annum in 1970-1980, and nearly 50% in 1981-1990. Inflation has trended downwards since 2000. The poor economic performance of the period 1970-1990 can also be seen in the movement of the trade (exports and imports) indicators (Figure 2). Total trade declined to a low of about 800 million cedis in 1983 before following an upward trajectory.

Fig 2. Ghana's Exports and Imports, 1970 - 03
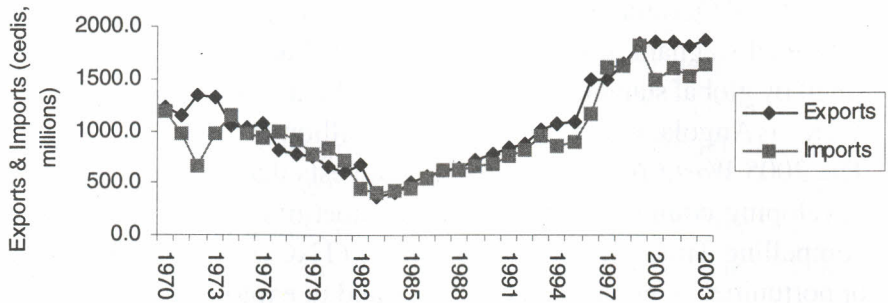


Source: World Bank (2005).

Ghana's economy has made strong gains in the last few years. There has been continued reduction in the fiscal deficit and the debt to GDP ratio, thereby easing pressures on the domestic money market. For example, as of June 2005, the overall annualized budget deficit was estimated at 3.7% of GDP, a significant decline from the 2001 level of 9% of GDP. Since January 2005, the Bank of Ghana has systematically reduced the prime lending rate from 18.5% to 15.5% as of August 2005 (Bank of Ghana, 2005). By the end of June 2005, the year-on-year inflation rate had dropped to 15.7%. The cedi stabilised against other currencies during this period and Ghana's foreign reserves remained strong. However, the recent OPEC fuel price increases are bound to exert upward pressure on prices and reduce GDP growth. Therefore it is unlikely that the target GDP growth rate of 5.8% for 2005 would be achieved. Underlying the fall in inflation was a steady decline in broad money growth, which fell from 41.8% in June 2004 to 21.8% in July 2005.

3. OVERVIEW OF FDI TRENDS

3.1 Global FDI Trends

Between 2001 and 2003, global FDI flows declined from US$825.9 billion to US$632.6 billion (a decline of 23.4%) due to the global economic slowdown (Figure 3). Despite the decline in global FDI in 2003,

FDI to developing countries actually increased in that year, followed by a further 40% increase in 2004. However, most of these flows went to Asia and Oceania, in particular, China. Africa's share of global FDI remained stagnant at US$18 billion in 2003 and 2004, and was very small by global standards. The most popular investment destination in Africa is Angola, which attracted US$2 billion of inward FDI in 2004. The 2005 *World Investment Report* suggests that the surge in FDI to developing countries is a result of competitive pressures which are compelling Transnational Corporations (TNCs) to seek new market opportunities in emerging economies and to explore new ways of reducing their costs. In recent years, the high prices for many commodities, especially petroleum, have further stimulated FDI in developing countries that are rich natural resources.



Fig. 3 Global FDI Flows, 2001 - 04
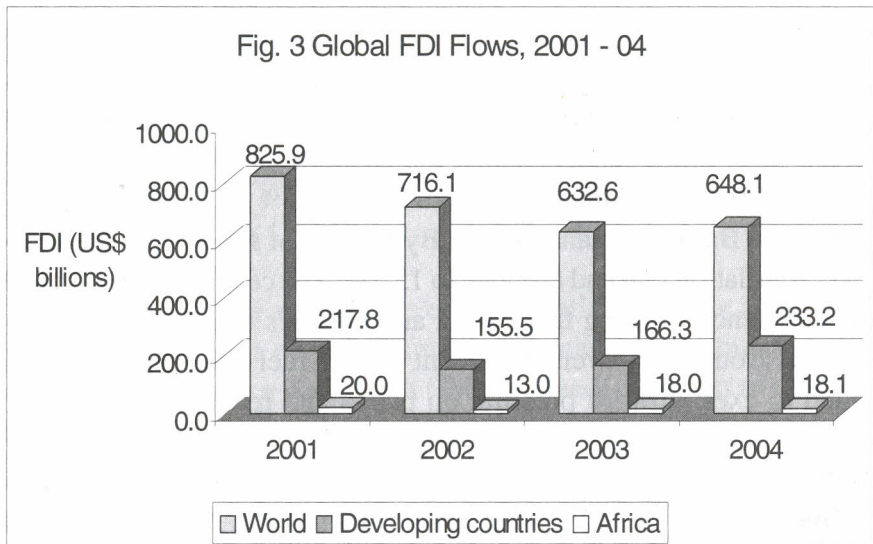
Source: UNCTAD (2005).

3.2 National FDI Trends

The political uncertainty and poor economic performance of the 1970s and 1980s also affected FDI flows to the country. Figure 4 shows that FDI declined during this period. The net year-on-year change in FDI was negative in the early seventies and early eighties. The relative

stability of the 1990s saw a gradual increase in FDI, although there were large swings in FDI flows between 1992 and 2003. The decline in FDI flows since 2001 can partially be attributed to the global economic slowdown. A growing form of FDI in recent years is private remittances. As at July 2005, inward private transfers (i.e. from individuals, NGOs, religious groups, etc.) channelled through the banks and finance companies was US$2.35 billion, compared to US$1.51 billion in 2004, an increase of 55.6%. Of the US$2.35 billion in remittances, US$666.2 million (or 28.3%) came from individuals (Bank of Ghana, 2005).

Fig. 4 Inward FDI Flows, 1970 - 03
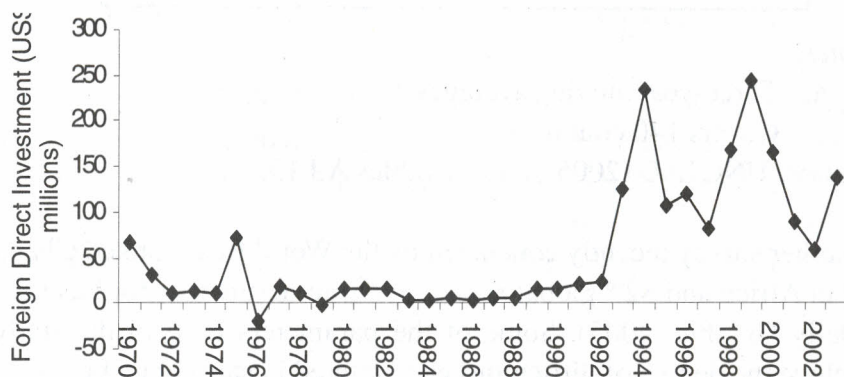
Source: World Bank (2005).

Table 1 shows Inward FDI Performance Index Rankings for selected countries for the period 1990 to 2004 reported in the 2005 *World Investment Report*. Ghana was ranked 91st out 140 countries in 2004, which was a marginal improvement over the 1990 score of 89.

Table 1 Inward FDI Performance Index Rankings, 1990-2004[a,b]

Country	1990	2000	2003	2004
Cote d'Ivoire	80	78	89	87
Russian Federation	-	104	97	88
Austria	77	77	83	89
Ghana	**89**	**83**	**94**	**91**
Papua New Guinea	2	45	86	92
Sweden	53	8	54	93
Canada	38	33	71	94
Algeria	102	110	92	95

Notes:
   a.   Three-year moving averages.
   b.   Covers 140 countries.
Source: UNCTAD (2005), Annex Tables A.I.13.

Another survey recently conducted by the World Bank ranked Ghana 7th in Africa and 82nd globally as a favourite destination for business (Daily Graphic, 2005). Some of the parameters used in the study include the degree of difficulties encountered in starting up business, acquisition of business licenses, flexibility of hiring and firing of workers, and registration of properties for business. Other factors included ease of enforcement of contracts, volume of cross-border trade, protection of investors, taxation, and so on.

4.   THE ADVANTAGES AND DISADVANTAGES OF FDI

4.1 Who is a Foreign Investor?

A foreign investor is defined here as a person/company/group of companies that brings in funds from abroad to finance some form of productive activity in the country. This definition therefore rules out people who come here to trade or to provide temporary services.

4.2 Types of Foreign Investment

There are four main categories of foreign capital inflows (FCI): foreign aid, commercial loans, portfolio investment, and FDI. Foreign aid can be in the form of loans or grants. The difference between the two is that loans carry the burden of future payment (sometimes at concessional rates). On the other hand commercial loans must be repaid at market interest rates. Portfolio investment refers to short-term foreign investment, while FDI is of a more long-term nature.

4.3 Advantages of FDI

The links between FDI and economic growth may be explained with the aid of Figure 5. As can be seen from the diagram, the links are indirect rather than direct. FDI's initial impact on the economy is through increasing the level of investment. If this increased investment is put to productive uses, it can lead to an increase in output and hence economic growth. The other impact of FDI is through its effect on the productivity of domestic firms. This happens through the positive externalities, specifically the technological spillovers, that FDI generates.

The benefits of FDI can be summarized as follows:

- FDI brings in new technology which enhances productivity

- FDI has demonstration effects on domestic firms from technology choice and new managerial practices

- By helping to train local staff, FDI contributes to human capital development

- To the extent that FDI increases growth, it contributes to poverty reduction and hence increases political stability

Fig. 3 The Links between FDI and Economic Growth
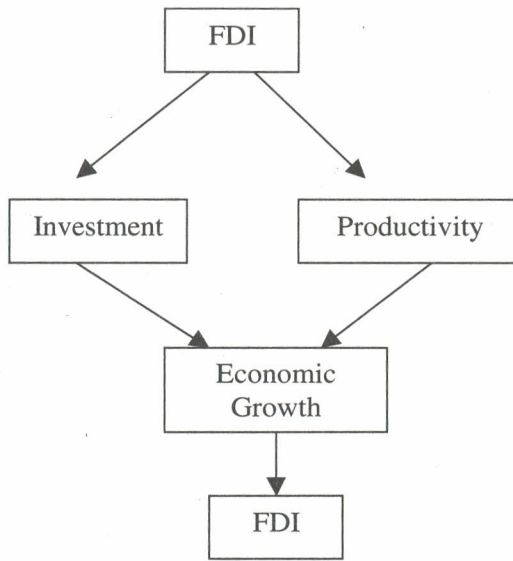
- FDI brings in much needed foreign exchange to pay for capital and intermediate goods

- Foreign firms bring in international market connections and generate new export opportunities

- Foreign firms generate backward and forward linkages
- FDI is a source of R&D spillover, including human capital development

- By increasing economic growth, FDI can also increase domestic savings

- By augmenting total resource availability, FDI leads to higher investment

- FDI is more persistent than other forms of foreign capital (e.g. portfolio investment).

It must be noted, however, that these positive effects are not automatic but depend on a set of conditions in the host country's economy. These include:

- Absorptive capacity – the host country must have sufficient human capital development to absorb the new technology

- Adeuate hard infrastructure: roads, railways, ports

- Sufficient soft infrastructure: banking & business services, financial markets, supply networks, strong institutions, intellectual property rights, and

- Macroeconomic and political stability

4.4 Disadvantages of FDI

Whilst extolling the virtues of FDI, we must be mindful of the possible pitfalls. The following are some disadvantages of FDI:

- Foreign firms could capture market share at the expense of domestic firms (i.e. they could 'crowd out' domestic firms)

- If foreign capital is financed from domestic markets, this could raise interest rates and 'crowd out' domestic investment

- FDI could increase import intensity and increase the current account deficit: a high import content could lead to low domestic value added, which could result in limited domestic linkages

- Excessive outflow of FDI ("decapitalisation") could have a negative effect on economic growth.

5. Model Specification and Data Sources

To examine the relationship between FDI and economic growth, we use the vector autoregression (VAR) modelling approach. One shortcoming of the cross-sectional inter country studies of FDI is that they are unable to determine causality in the Granger sense.[1] Pooling countries in this manner presumes that the underlying causal structure is the same in each country. It does not allow different countries to exhibit different patterns of causality. A further advantage of the VAR model is that each variable is considered as endogenous, thus avoiding the problem of simultaneity bias that could occur when using a single equation model of FDI and growth. For example, any correlation between FDI and economic growth could be due to an endogenous determination of FDI. That is, government policies could increase both economic growth and inward FDI simultaneously. Therefore, estimating the relationship with a single equation could produce biased coefficients.

We specify a four-variable VAR model comprising economic growth, inward foreign direct investment, trade openness, and financial development. Following the usual practice, we use real per capita gross domestic product as a proxy for economic growth. Trade openness and financial development have been identified as some of the channels through which FDI affects growth and therefore we have included these variables in the model. For example, Levine (1997) has suggested that financial development might stimulate economic growth through improving investment and productivity growth. Financial development is proxied here by the ratio of narrow money (M2) to GDP.[2] This is actually a measure of the extent of the financial sector and not a measure of financial deepening. Alternative measures are the ratio of domestic bank credit to GDP and the spread of borrowing to lending interest rates.

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[1]*In the Granger sense, a variable x Granger-causes another variable y if x precedes y. This can be proven if and only if a prediction of y on the basis of its past history can be improved by further taking into account the previous history of x (Granger, 1969).*

[2]*Narrow money is defined as transferable deposits and currency outside deposit money banks, and quasi-money liabilities which comprise time, savings, and foreign currency deposits.*

Trade openness, defined as the ratio of total merchandise trade (imports + exports) to GDP, is used as a proxy of the trade policy regime. The concept of openness in trade policy is a measure of 'neutrality'. Neutrality implies that incentives are indifferent between saving a unit of foreign exchange through import substitution and earning a unit of foreign exchange through export promotion. Ideally, a good measure of trade policy should be able to capture differences between, neutral, import substitution and export promotion regimes (Harrison, 1996). The simplest measures of trade openness are the ratio of total merchandise trade to GDP or the growth rates of exports and imports. The former is used in this study. The basic VAR model is as follows:

$$
\begin{bmatrix} gdp_t \\ fdi_t \\ open_t \\ fd_t \end{bmatrix} = A_0 + A_1 \begin{bmatrix} gdp_{t-1} \\ fdi_{t-1} \\ open_{t-1} \\ fd_{t-1} \end{bmatrix} + \ldots + A_k \begin{bmatrix} gdp_{t-k} \\ fdi_{t-k} \\ open_{t-k} \\ fd_{t-k} \end{bmatrix} + e_t \quad (1)
$$

where: gdp = real GDP per capita (constant US$),

fdi = foreign direct investment (% GDP),

$open$ = trade openness (ratio of real exports and real imports to real GDP),

fd = financial development (ratio of M2 to real GDP),

A_0 = a vector of constant terms,

$A_{i=1,\ldots,k}$ = matrices of parameters, and

e_t = 4 x 1 vector of stochastic error terms.

We also experimented with a version of the model which contains variables to account for interactions between FDI and trade openness, and between FDI and financial development. On the basis of the literature review, we hypothesise that FDI, trade openness and financial development will all have a positive effect on economic growth. We therefore expect the estimated coefficients of these variables to be positive. We also expect positive interactions between FDI and trade openness, and between FDI and financial development.

To estimate the above system of equations, we used Engle and Granger's (1987) two-step methodology. In the first step, we pre-tested the variables for their orders of integration using the augmented Dickey-Fuller (ADF) (see Dickey and Fuller, 1981) and Phillips-Perron (PP) (see Phillips and Perron, 1988) unit root tests. As has been shown by Engle and Granger (1987), if the time series are not stationary then the estimated coefficients are likely to be inconsistent.[3] Next, we tested for the presence of cointegration among the variables using Johansen and Juselius' (1990) multivariate maximum likelihood procedure. This step identifies possible long-run relationships among the integrated variables in the system. According to Engle and Granger (1987), if we find that the series are stationary in first differences [i.e. I(1)] and the variables are cointegrated, Granger causality can be established by including an error-correction term (ECT) in the model in order to capture the short-term deviations from their long-run equilibrium path. As a matter of fact, evidence of cointegration in Step 2 of the Engle-Granger procedure indicates the presence of Granger-causality, although it does indicate the direction of the causal relationship. Estimation of the model including the ECT, referred to as the vector error correction model (VECM), allows the direction of the causality to be established. As indicated earlier, it also allows us to distinguish between short- and long-run Granger causality. In order to gain efficiency through cross equation residuals (that is, by assuming that the multivariate error vector has a non-zero diagonal covariance matrix), we used Zellner's seemingly unrelated regression (SUR) to obtain estimates of the VECM coefficients (Charemza and Deadman, 1992).

All the data were obtained from the online version of the *World Development Indicators* World Bank, 2005). The data covered the period 1970 to 2003 and were expressed in logarithms in order to capture multiplicative time series effects and also to achieve stationarity in their variance (Granger and Newbold, 1986).

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[3]*The use of non-stationary variables could result in spurious regression results, characterized by high R^2 and t-statistics with no economic meaning (Engle and Granger, 1987).*

6. Empirical Results

Figure 6 shows the graphical relationship between FDI and economic growth (real GDP). It can be seen that there is a positive association. That is, real GDP increases with an increase in inward FDI. The correlation coefficient (a measure of the strength of this association) is 0.72.[4]

Fig. 6 The Relationship between FDI and Economic Growth in Ghana
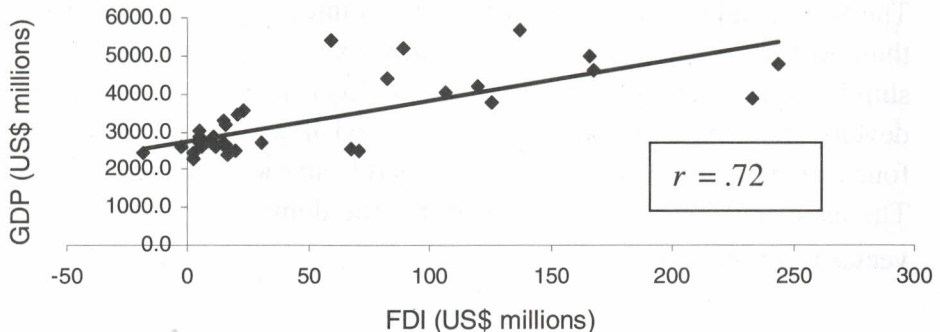
Considering that factors other than FDI also affect growth, this statistic indicates a fairly strong relationship between FDI and economic growth. However, the existence of a strong correlation between FDI and economic growth does not necessarily imply that one variable causes (or leads to) to the other. In fact, the relationship could be a statistical coincidence. More advanced econometric techniques are required to establish whether a causal relationship exists between the two variables, and if so what the direction of the causality is. We therefore turn to the VAR model results.

The results of the ADF and PP unit root tests are reported in Appendix Table 1. When checked against MacKinnon's (1991) critical values based on a response function dependent on the sample size, we found

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[4]The correlation coefficient lies between -1 and 1, with r = 1 indicating a perfect linear relationship.

that all the variables are stationary after taking first differences. Hence we conclude that all the four variables are integrated of order one (i.e. are I[1]). The next step was to test for cointegration among the four variables using the Johansen and Juselius' (1990) maximum likelihood methods. The Schwartz Information Criterion, Akaike Information Criterion, and the Final Prediction Error were used to select the number of lags required in the cointgration test. All the three techniques indicated that a lag of one was appropriate for the VAR model. The results, based on the trace test, are presented in Appendix Table 2.

The results indicate the presence of two cointegrating relationships, thus supporting the proposition that there exists a long-run relationship between economic growth, foreign direct investment, financial development and trade openness in the period under study. That is, the four variables would not move too far apart from each other over time. The estimated long-run relationship for the dominant cointegrating vector is reported in Table 2.

Table 2 Long-Run Equilibrium Relationship between Economic Growth, Foreign Direct Investment, Financial Development, and Trade Openness

	Intercept	*fdi*	*fd*	*Open*	*fdi*fd*	*fdi*o*
Coefficient	-5.382	0.398	0.949	- 2.273	0.127	0.342
t-statistic	-	(4.713)*	(5.893)*	(-3.352)*	(5.720)*	(3.47

Notes:
1. The dependent variable is real per capita GDP.
2. *fdi* = foreign direct investment; *fd* = financial development; *open* = trade openness.
3. * denotes significance at the 1% level.

The coefficient of *fdi* is positive as hypothesized and statistically significant, thus confirming that FDI exerts a significant positive effect

on Ghana's economic growth over time. Since the variables are expressed in logarithms, the coefficients represent elasticities with respect to economic growth. In the case of FDI, a 1% increase in FDI increases economic growth by about 0.4%.

Financial development also has a significant effect on economic growth. It is interesting to note, judging by the size of the coefficients, that financial development appears to have a greater impact on growth than FDI. A 1% increase in financial development results in 0.95% increase in economic growth, which is nearly a one-to one effect. This result contradicts that of Deidda and Fattouh (2002) who found that there is no significant relationship between financial development and economic growth in low-income countries. It is also important to note that the interaction of FDI and financial development is significantly positive. This finding provides support for the view that financial development is a possible channel through which FDI affects growth. Financial development facilitates investment, while investment promotes productivity growth. This happens because FDI often embodies technological progress which enhances productivity growth.

Contrary to previously reported cross-country studies (Shan and Morris, 2002; Makki and Somwaru, 2004), we find that trade openness has a significant negative impact on Ghana's economic growth. The lack of evidence for a positive impact of trade openness on economic performance could be due to several factors. First, Ghana has traditionally pursued an import substitution policy which was promoted in the 1960s and 1970s. It was not until the 1980s that the country began to pursue an export promotion strategy. Second, Figure 4 shows that the levels of inward FDI flows have been historically low. It was not until the early 1990s that FDI began to grow. An important observation from the VAR results is that although trade openness has a negative effect on growth, the interaction of FDI and openness has a positive effect. This result supports the view that trade liberalisation on its own may not be growth enhancing unless it is implemented in tandem with complementary policies.

Having established that a long-run a long-run relationship exists between economic growth, foreign direct investment, financial development and trade openness, the next stage in the two-step procedure was to estimate a VECM involving the first differences of the VAR model. Granger (1988) identified two possible channels of causality. The first channel can be ascertained by observing the significance of the lagged variables, while the second is by means of the significance of the lagged ECT term (given by the t-statistic) in the VECM. A third means of establishing causality is through a joint test of the lagged terms and the lagged ECT, which is referred to as a Wald test. Table 3 reports the results of these tests.

Table 3 Granger Causality Results Based on the Vector Error-Correction Model (VECM)

Explanatory Variables	Short-Run Sources of Causation				ECT	Wald Coefficient Test Results (χ^2 Statistics)			
	Δgdp(-1)	Δfdi(-1)	Δfd(-1)	$\Delta open$(-1)		Δgdp(-1) & EC	Δfdi(-1) & ECT	Δfd(-1) & ECT	$\Delta open$(-1) & ECT
Δgdp(-1)		0.018	-0.027	-0.012	-0.254				
	-	(1.400)	(-0.986)	(-0.159)	(-2.184)**	-	6.61**	5.21**	5.86**
Δfdi(-1)	2.217		0.273	0.304	-0.655	12.41*		12.31*	12.84*
	(0.847)	-	(0.724)	(0.330)	(-3.357)*		-		
Δfd(-1)	-1.810	0.040		-0.283	0.024	1.78	0.03		0.47
	(-1.325)	(0.417)	-	(-0.543)	(0.534)			-	
$\Delta open$(-1)	0.190	0.004	0.047		0.009	0.51	0.26	0.64	
	(0.360)	(0.117)	(0.583)	-	(0.526)				-

Notes:

1. Δ denotes first difference of a variable; (-1) denotes one lag.
2. *fdi* = foreign direct investment; *fd* = financial development; *open* = trade openness.
3. Numbers in parentheses denote *t*-statistics.
4. *denotes significance at the 1% level; **denotes significance at the 5% level.

The first row of Table 3 reports the VECM results for the effects of FDI, financial development, and trade openness on economic growth. It can be seen that none of these variables (in lagged first differences) are significant, indicating that FDI, financial development, and trade

openness have no statistically significant short-run effects on economic growth. However, the lagged ECT coefficient has the expected negative sign and is significant. The lagged ECT coefficient represents the speed of adjustment back to the long-run relationship among the variables and is expected to lie between -1 and 0. In this case the coefficient of -0.254 implies that a deviation from long-run growth in the current period is corrected by about 25% in the next period. The significance of the ECT in this equation, coupled with the significance of the χ^2 statistics in the Wald tests, imply that foreign direct investment, financial development, and trade openness together Granger-cause economic growth through the long-term relationship embodied in the ECT.

The second row of Table 3 reports the effects of economic growth, financial development, and trade openness on FDI. While these variables positively affect FDI, none of them are significant, indicating that there is no significant short-run impact. However, the lagged ECT and the Wald test statistics are significant, implying that economic growth, financial development, and trade openness Granger-cause FDI. The foregoing results suggest that, in the case of Ghana, neither the FDI-led Growth Hypothesis nor the Growth-led FDI Hypothesis obtains. Rather, there is feedback causality between FDI and economic growth. Financial development and trade openness are also important variables leading to economic growth. The long-run results indicate that these variables positively interact with FDI to affect economic growth. In the last two rows of Table 4 where *fd* and *open* are the dependent variables respectively, none of the test statistics are statistically significant, indicating that there is no Granger causality between these dependent variables and the other variables.

7. POLICY IMPLICATIONS

Although levels of FDI inflows into Ghana have been low in comparison to, say, Latin American and South-East Asian countries, the empirical results indicate that they have had a significant impact on Ghana's economic growth. This suggests that there is the potential

for FDI to play an even greater role in Ghana's economic development. The graphical analysis presented earlier clearly shows that political instability has been very costly to Ghana's economic growth. Following the re-establishment of democratic government in 1992 and the peaceful change over of government through the ballot box in 2000, there are indications that the political situation has stabilized. Other critical conditions which need to be met to attract FDI are macro-economic stability, a favourable taxation and investment regime, industrial peace, improved and transparent governance, improved infrastructure (ports, roads, rail, telecommunications), and an educated and healthy workforce.

Within the last few years, various policies have been implemented to address some of the above issues. Some of these measures include tax holidays and import duty exemptions for foreign investors, improved remittance of dividends and profits abroad, and a massive ports and road rehabilitation program. Security of investment is provided by the national constitution, as well as by agreements such as the Multilateral Investment Guarantee and the Investment Promotion Protection Agreements. The historic Bank of Ghana Act, promulgated by parliament in 2002 has created an independent central bank and given it constitutional powers to conduct monetary policy. Among other things, the Act specifies that:

- the prime objective of the Bank of Ghana is to "maintain price stability independent of instructions from Government or any other authority";
- A Monetary Policy Committee will be responsible for formulating monetary policy; and
- Government borrowing from the central bank in any year shall be limited to 10% of its revenue.

The Act has freed the Bank to focus on its core business of fighting inflation and maintaining price stability. Over the last two years or so, positive results have begun to emerge. The economy has moved from a path of high inflation to one of disinflation and macroeconomic

stability. The Bank aims to target a single digit inflation rate in 2006. The fiscal deficit has declined, the external reserves have improved, interest rates have declined, and the exchange rate, particularly with respect to the US dollar, has remained fairly stable.[3] In 2005, Ghana obtained its first sovereign rating, thus laying the foundation for gaining access to international capital markets. These developments should boost investor confidence.

This study has found that financial development, in combination with FDI, positively affects economic growth. However, the financial sector remains underdeveloped. Ghana's economy is mainly cash-based which creates inefficiencies in business transactions. The cash-based economy also renders the transmission mechanism of monetary policy ineffective and generally makes it difficult for the central bank to control money supply. Three main issues need to be addressed to move from the current system to an electronic transactions system. These are development of ICT systems, public education, and measures to deal with electronic fraud. The central bank is currently supporting the development of an integrated Payments System for the entire financial sector, including the rural banks and microfinance institutions. Some of the commercial banks currently allow their customers to conduct some transactions on automated teller machines (ATMs). However, these services are only limited to a few urban areas and the number of ATMs is limited. There is the need to extend these systems to every bank in the country. There is also the need for the banks and commercial organisations to exploit the Internet to make it easier for customers make payments. Alongside this development should be a campaign to educate the public about the use of these electronic systems. Fraud is always a problem in the operation of such systems, and the potential for fraud will deter some people from taking advantage of this new technology. Thus, there is the need for strict new laws to deter and deal with fraudsters.

Another important aspect of financial development which needs to be

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[5]*Inflation declined from 40.5% in December 2000 to 11.85 in December 2004; the fiscal deficit declined from 9% of GDP in 2000 to 3.2% of GDP at the end of 2004; and the domestic debt/GDP declined from*

improved is the general availability of banking services. In spite of a fairly large population base, banking services in this country are available mainly in the urban centres, with rural areas lacking in basic services. The presence of a limited number of players in the banking sector and hence the lack of competition, contributes to the large variance between the prime and lending rates and discourages investment in the country. For example, the prime rate is currently 15.5%, while the lending rates are between 20.9% to 27%.

One type of FDI which is growing astronomically and could be mobilised for Ghana's benefit is that of private remittances which come in through formal and informal channels. Currently, most of these funds are used to finance private building projects and to maintain family members in Ghana. There is a great potential to tap these funds, as well as those from domestic sources, to invest in commercial/business ventures. These resources could be channeled into the development of small and medium enterprises (SMEs). Another way of tapping these funds is by enabling expatriate Ghanaians to buy shares in public companies that are slated for privatisation. Such investors will have not only financial interests in the survival of the companies but also a social one as well.

Within the last few years, the process of globalization, coupled with advances in technology, have been transforming FDI activity worldwide. In general, there has been a decline in traditional 'greenfield' FDI where new production capacity is created. Firms are seeking to consolidate their global activities through mergers and acquisitions, with the aim of acquiring both assets and market share. The market for FDI has therefore become more competitive. UNCTAD observed as far back as 1998 that "liberal FDI policy is increasingly losing its effectiveness as a locational determinant of FDI", as "adequate core FDI policies are now simply taken for granted" (UNCTAD, 1998: xxvi-xxvii). Michalet (1997) also noted that:

21% in December 2001 to 15.2% by the end of 2004 (Acquah, 2005).

"Multinationals,….., are not seeking to invest in all countries in the world. Rather, they seek to establish a presence in a small number of countries, with world-competitive facilities that together strengthen their regional or world-wide comparative advantages" (Michalet, 1997:31-32).

The 2005 *World Investment Report* reveals a new trend in global FDI in the form of internationalisation of R&D. TNCs are increasingly seeking to support expansion of production activities in developing countries with local R&D. For example, some developing countries and transition economies in Eastern Europe are now attracting highly advanced R&D activities. Already, more than half of the world's leading R&D investors have located their R&D activities in China, India, or Singapore.

Given these developments, there is the need for Ghana to develop an FDI strategy which dovetails with a wider economic development programme. I would like to submit that we lack a long term plan and that our development agenda has been heavily influenced by the Breton Woods institutions – The World Bank and the IMF. In the 70s and 80s, we had the Economic Recovery Programme (ERP), which was followed by the Structural Adjustment Programme (SAP). After the SAP wreaked social havoc, they brought in the Programme of Action to Mitigate the Social Cost of Adjustment (PAMSCAD). Now, we have the Ghana Poverty Reduction Strategy (GPRS), supported by a plethora of programmes including the President's Special Initiative, the Medium Term Private Sector Development Strategy, and the Trade Sector Support Programme. The GPRS targets some key sectors that are perceived to bring about rapid economic growth. What is required is a comprehensive long-term development plan which provides not only a vision for where the country should be by 2015, but also a road map for achieving this vision. Within this plan, Ghana should identify its main comparative advantages and develop policies to develop its strengths in these areas with the view to attracting FDI.

On the issue of boosting inward FDI flows, the focus should not be on creating incentives for specific companies or even specific business activities but on improving the general business environment. Providing a good business environment, as well as removing bottlenecks and disincentives in the economy, will benefit both domestic and foreign investors and enhance economic growth.

8. SUMMARY AND CONCLUSIONS

The main objective of this study was to empirically examine the nature of the relationship between FDI and economic growth in Ghana. This was done by estimating a multivariate vector-autoregressive model comprising economic growth, FDI, financial development, and trade openness for the period 1970 to 2003. In the short-run, foreign direct investment was found not to have any significant effect on economic growth. However, in the long-run, foreign direct investment and financial development were found to have a significant effect on economic growth, whereas the effect of trade openness on FDI was negative. The interaction of FDI and openness, as well as the interaction of FDI and financial development, also have a significant effect on economic growth. The Granger-causality tests established that there is a bilateral or feedback effect between FDI and economic growth. That is, economic growth initially increases the flow of FDI, which then leads to more rapid economic growth as a result of the increased level of aggregate demand. On the basis of the finding that financial development by itself, as well as in combination with FDI, has the potential to positively affect economic growth, it was suggested that Ghana should aim to transform the economy from the current cash-based system into an electronic-based one.

Research to date has established that the conditions required to attract inward FDI include political and macroeconomic stability, good taxation and investment policies, and improved infrastructure. Although these conditions are necessary to attract FDI, they may not be sufficient as the market for FDI becomes increasingly competitive. The

way forward for Ghana is to target FDI into areas where she has a comparative advantage. This should be done within the framework of a broad long-term development plan. In general, improving the enabling environment for both domestic and foreign investors would be a better policy option than devising incentive packages for specific firms or projects.

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Appendix Table 1 Unit Root Test Results (Intercept with Trend)

Variable	Augmented Dickey-Fuller		Phillips-Perron	
	Levels	1st Difference	Levels	1st Difference
gdp	-1.499	-3.559*	-1.292	-3.903*
fdi	-1.198	-3.439*	-2.022	-3.771*
open	-1.599	-3.303*	-1.654	-3.969*
fd	-1.922	-3.484*	-2.643	-5.192*

Notes:

(i) Critical values are based on MacKinnon (1991).

(ii) * Indicates that the coefficient is significant at 1% level.

Appendix Table 2 Johansen's Maximum Likelihood Test Results

Null	Alternative	Eigenvalue	Trace Statistic	5% Critical Value	1% Critical Value
k = 0	k=1	0.741	110.99*	94.15	103.18
k<=1	k=2	0.677	75.86**	68.52	76.07
k<=2	k=3	0.596	46.51	47.21	54.46

Notes:

(i) Critical values for the test are given in Osterwald-Lenum (1992).

(ii) k denotes the number of cointegrating vectors.

(iii) * Indicates significance at the 1% level; **indicates significance at the 5% level.

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