Direct Foreign Investment and Firm-level Productivity in the Nigerian Agro/agro-allied Sector

Adeolu Babatunde Ayanwale and Simeon Bamire

Department of Agricultural Economics Obafemi Awolowo University Ile-ife, Nigeria
e-mail: aayanwa@oauife.edu.ng

ABSTRACT The acknowledged benefits of the DFI seems to be more than the demerits, and this seems to explain the current move of developing countries, seeking to attract private DFIs by removing the structural barriers and encouraging foreign investors. This study examines the impact of DFI on productivity at the firm-level in the agro/agro-allied sector of the Nigerian economy as an example of developing countries. Data were obtained from agro/agro-allied companies listed in the first tier market (comprising firms with some foreign compo-nents), and the second tier foreign exchange markets (involving domestically owned firms) as contained in the publications of the Nigerian Stock Exchange Commission and Central Bank of Nigeria. Data were analysed using descriptive statistics, correlation and regression techniques to achieve the stated objectives of the study. A comparison of the firm level productivity measures show that foreign firms' productivity is higher than that of their domestic counterpart. The results of the impact of DFI on productivity growth showed that there is positive and significant spillover effect at the firm level. However, the extent of the spillover may not extend to the sectoral level.

INTRODUCTION

The relative advantage(s) of direct foreign investment (DFI) as a productivity enhancing package is now widely acknowledged. This is evidenced in the new attention being given to the drive for private direct foreign investment (DFI) especially in developing economies.

For a developing country, the inflow of foreign capital may be significant in not only raising the productivity of a given amount of labour, but also allowing a large labour force to be employed (Sjoholm,1999). Domestic consumers may also benefit from direct foreign investment (FDI) in that when the investment is cost reducing in a particular industry, consumers of the product may gain through lower product prices, hence another industry that uses this product benefit from the lower prices. This creates profits and stimulates expansion in the second industry. Additionally, if the investment is product improving or product motivating, consumers benefit in the form of better quality products or new products. For most countries, taxes on foreign profits or royalties from concession agreements constitute a large proportion of total government revenue. This externality is the spillover effect from DFI

According to Taylor and Sarno (1997), DFI responds to economic fundamentals, official policies and financial market imperfections.

Development economists have identified a strong association between investment and economic growth. It has been observed that the expansion of private investment should be the main impetus for economic growth in developing countries. Barro (1991) and Barro and Sala-I-Martin (1992) predict that output can only grow through increased factor accumulation and/or through technical progress. However, most growth models have come to ascribe the rate of growth of an economy as being determined by the accumulation of physical and human capital, the efficiency of resource use and the ability to acquire and apply modern technology. Since investment determines the rate of accumulation of physical capital, it thus becomes an important factor in the growth of productive capacity and contributes to growth of the economy. Hence, increasing foreign private investment is an important channel for increasing aggregate investment.

Obwona (2001) noted other benefits of DFI as:

i) the provision of managerial knowledge and skills including organisational competence and access to foreign markets;

ii) it enables the transfer of technology to occur from developed economies; and

iii) it provides an array of goods and services to residents in the recipient country.

Furthermore, private DFI may also serve as a

stimulus to additional investment in the recipient country through the creation of external pecuniary economies such as infrastructures.

The acknowledged benefits of the DFI seems to be more than the demerits, and this seems to explain the current move of developing countries, seeking to attract private DFIs by removing the structural barriers and encouraging foreign investors. Such encouragement includes offers of incentives such as income tax holidays, import duties exemptions, and subsidies to foreign firms.

In an apparent shift of long-held stance against DFI, the Nigerian government, like other developing nations introduced the Structural Adjustment Programme (SAP) comprising a package of economic policy measures in 1986. The programme incorporates trade and exchange reform reinforced by monetary and fiscal measures, which were geared towards diversifying the mono-export base of the economy by stimulating domestic production and encouraging use of improved inputs for local production. To reinforce the gains of the economic policy measures and further encourage foreign participation in the economy, the Nigerian Investment Promotion Decree was promulgated in 1995 to " encourage, promote and coordinate foreign investment and enhance capacity utilisation in the productive sector of the economy." It also provides an opportunity for foreign participation in Nigerian enterprises up to 100 percent ownership. To achieve these objectives, the decree established the Nigerian Investment Promotion Commission (NIPC) in conjunction with the foreign exchange (monitoring and miscellaneous provisions) decree No. 17 of 1995 that establishes the Autonomous Foreign Exchange Market (AFEM).

The composition of Nigeria's Gross Domestic Product (GDP) shows that the economy is agrarian in structure with agriculture accounting for 40.4 per cent of GDP between 1989 and 1998. The low capacity utlization of the manufacturing sector, estimated at below 30 per cent, is a major factor responsible for the sector's low contribution to the economy. The available production capabilities in the Nigerian economy, the amount of investment goods and other resources required to exploit the opportunities opened up by the SAP are so enormous that a large component of external financing is needed. However, the policy indicates Nigeria's high preference for FDI as against any other type of foreign capital inflow for financing development programmes.

Given the acknowledged high potential of the DFI in enhancing the productivity of the local firms, what is the experience of Nigerian firms in this regard? This is the question this paper seeks to answer.

Foreign Investment and the Nigerian Economy

Over the years, successive Nigerian governments have viewed DFI as a vehicle for political and economic domination of Nigeria and hence the thrust of government policy Nigeria and hence the thrust of government policy (indigenisation policy) through the Nigeria Enterprise Promotion Decree (NEPD) has been to regulate DFI, with a maximum of 40% foreign participation allowed. This has resulted in a decline in both private and foreign investment and has therefore slowed down growth in all sectors of the economy including the agro/agro-allied sector. This has consequently reduced long-run levels of per capita consumption and income. The trend had been attributed to the debt crisis and global shocks which affected the country in the 1980s, and which has set off a protracted period of macroeconomic instability with an eventual drop in external financing. This therefore discouraged foreign participation in the economy as DFI formed only a small percentage of the nation's gross domestic product (GDP) though marginally rising from –0.80% in 1980, to 1.80% in 1990. In an attempt to create a suitable climate for investment and growth within the economy, and to stimulate her economic recovery efforts from a prolonged and severe recession, the Nigerian Government introduced the Structural Adjustment Programme (SAP) comprising a package of economic policy measures in July 1986. The programme incorporates trade and exchange reform reinforced by monetary and fiscal measures, which are geared towards diversifying the mono-export base by stimulating domestic production and discouraging use of improved inputs for local production. The supply side of the package seeks to enhance aggregate output with special emphasis on agro/agro-allied and manufacturing sectors for which specific policy measures were designed. The implementation of SAP was expected to bring about some improvements in the economy. For instance, the sharp exchange

rate depreciation was expected to discourage importation and make multinationals that have profited through export trade (from the former over-valuation of the Naira) to prefer investment in the domestic economy if they were to maintain their established trade links.

Review of Relevant Literature

Most empirical studies on spillovers from foreign investment in developing countries have focussed on Mexico using manufacturing data by ownership type. Blomstrom and Persson (1983) used 1970 census data for 215 Mexican manufacturing industries to observe that labour productivity is significantly higher in sectors where foreign firms employ a higher share of the labour force. Blomstrom (1986) further examined the impact of foreign presence on the dispersion of productivity and on the growth rate of total factor productivity. Using sector-level data set, he obtained a negative relationship between foreign presence and increased productivity growth, and obtained a positive relationship between foreign presence and increased productivity growth. Grossman and Helpman (1990) in their study, revealed that productivity growth is driven by private sector research and development. This they claimed results in new intermediate goods that enhance final good productivity and also contribute to public knowledge. Haddad and Harison (1992), in their study of Morocco's manufacturing sector showed that firms with some foreign ownership exhibit higher levels of overall multi-factor productivity, though the rate of growth of productivity is higher for their wholly domestically-owned counterparts.

In Africa, most work on FDI has focussed on the macro determinants on investment flows into the various countries. For instance, Obwona (2001) observed that macroeconomic and political stability and policy consistency are the most important determinants of attracting FDI into Uganda. Anyanwu (1998) noted that the FDI in Nigeria shows a great deal of sensitivity to changes in domestic investment, change in domestic output or market size, indigenisation policy and change in the openness of the economy.

This study will contribute to the existing literature, with a slight variation, in that it will examine the impact of FDI on productivity at the firm-level in the agro/agro-allied sector of the Nigerian economy. Thus, it will allow for an explicit comparison of the behaviour of foreign and domestic firms in the sector, while controlling for firm-specific attributes such as size. It is also pertinent to note that little attention has been paid to this area in Nigeria.

Justification for and Objective of the Study

In an attempt to augment balance of payment problems and stimulate economic growth, most developing nations including Nigeria, now recognize that an inflow of foreign investments may offer some special advantages in form of spillovers as it usually consists of external resources such as technological, managerial and marketing expertise, in addition to capital (Sjoholm, 1999). However, since foreign direct investments are made with a view to controlling the enterprise and sharing in its profits, the more dominant the proportion of such enterprises in a country's structure of industries, the greater the tendency to feel concerned about possible loss of autonomy in the control of the economy. Thus the strategies adopted towards foreign private investment in most developing nations comprise a combination of investment incentives designed to promote capital inflow as well as regulatory measures aimed at maximizing the country's net benefits from the capital inflow. Nonetheless, the different results concerning spillovers from DFI suggests that such effects are not automatic but are affected by various economic and technological factors which may be country-specific.

This paper aims at determining the effect of foreign direct investment in Nigeria's agro/agro-allied sector from the 1987 through 1996 periods by examining the relative performance of domestic and foreign firms in the agro/agro-allied sector of the Nigeria economy.

RESEARCH METHODOLOGY

Data Collection Procedure: Data were obtained from agro/agro-allied companies listed in the first tier market (comprising firms with some foreign components), and the second tier foreign exchange markets (involving domestically owned firms) as contained in the publications of the Nigerian Stock Exchange Commission and Central Bank of Nigeria. The panel nature of the data,

which combines cross-section and time series, allows us to go beyond cross-section analysis comparing partial productivity measures (such as labour productivity) across different firms in the sector.

Analytical Technique

Data were analysed using descriptive statistics, correlation and regression techniques to achieve the stated objectives of the study.

The model employed is based on the neoclassical two-factor production function:

$$Y_{it} = A_{it} f(L_{it}, K_{it}) \dots\dots\dots\dots(1)$$

Where

Y_{it}	=	output of firm i at time t
A	=	level of productivity of firm i at time t
L	=	number of employees of firm i at time t, and
K	=	capital stock of firm i at time t

Relative Performance of Foreign and Domestic Firms : A measure of the relative performance of foreign and domestically owned firms is obtained by employing such indicators as: Output per worker derived from total value of output divided by the ratio of total value of labour remuneration to minimum wage, instead of dividing by the number of workers. This approach allows for partial adjustment in different skills composition among employees across firms. For instance, if a foreign firm has very few workers but pays them much more due to their greater skill, this will show up in a greater number of efficient workers for the firms.

Real wage are computed as the ratio of total value of remuneration to the firm's number of employees. In order to control for firm size, weighted means (with weights given by total sales) are computed to allow for a comparison of domestic and foreign firms of similar sizes. Following Haddad and Harrison (1992), firm's specific measure of multi-factor productivity is computed from a regression of output on labour and capital inputs (equation 1).

An estimate of A_{ij} is an appropriate measure of the level of productivity as it is assumed to vary across firms within each sub-sector j. Expressing equation 1 in logarithms gives:

$$Y_{it} = A_{ij} + b' X_{it} + e_{it} \dots\dots\dots\dots (2)$$

Where i = 1, ..., N and t = 1 ..., T. Y_{it} is output (in logarithm) for the jth firm at time t, X_{it} is a 2 x N matrix of inputs, b' is a 1 x 2 vector of constant parameters to be estimated, and a_i is a 1 x N

vector of intercepts representing the effects of the variables specific to the ith firm and invariant over time. However, if firm's productivity is expressed as a function of both firm and industry level FDI, then:

$$a_{ij} = L_o + L_1 FDI_j + V_{ij} \dots\dots\dots\dots(3)$$

Substituting a_{ij} into equation (2) results in a single step procedure:

$$Y_{ijt} = [L_0 + L_1 FDI_j + V_{ij}] + b'X_{it} + e_{it} \dots\dots(4)$$

The a_{ij} for each firm is obtained by including i dummy variables which takes the value one for the corresponding i and zero otherwise. The error term e_{it} represents the effect of omitted variables that are both time and cross-sectional varying. It is assumed that e_{it} is characterized by an independently and identically distributed random variable. With these properties of e_{it},. Ordinary Least Squares (OLS) estimator of a_{ij} and b' in equation (2) is the best linear unbiased estimator (BLUE).

It should be noted that equation (1) does not include any simultaneous effect of domestic productivity on foreign presence, although it has been argued in recent literature that suc effects may well be important (Cartwell, 1989; Kokko, 1996). For example, the opportunity to benefit from spillovers of domestic firms may be an argument to locate a foreign affiliate in a market where existing firms are highly competitive. The computational procedure for estimating the slope parameters of this model does not require the dummy variables for the individual effects can actually be included in the matrix of explanatory variables. The variables can be transformed by subtracting form each cross sectional unit the mean of its time series observation, then applying the least squares method without the intercepts to the transformed data. The estimates of the N intercept parameters can then be obtained as the means of the residuals for each cross sectional unit by using equation 5.

$$a_i = Y_i - h'X_i \dots\dots\dots\dots\dots5$$

In order to capture the effect of DFI on the firm level productivity, the variable DFIDUM was included to take the value of 1 if a firm had DFI and 0 if otherwise. Further more an additional independent variable (Spillover) defined as the ratio of assets of firms with DFI to the assets of all firms in the sub-sector was included. The assumption is that if foreign participation has beneficial spillover effects, we would expect the coefficient to be positive.

In this paper, equation 4 is expressed as:

$$LnY_{ijt} = B_o + B_1DFIDUM + B_2LnK_{ijt} + B_3LnL_{ijt} + B_4S + B_5LnRM + B_6Spill + e_{it} \ldots 6$$

Where,

LnY_{ijt} is natural log of output of firm i of subsector j at time t;

B_o the level of firm productivity;

DFIDUM Dummy variable (Firm with DFI = 1, otherwise =0)

$B_2LnKijt$ natural log of Capital Stock;

B_3LnL_{ijt} natural log of Labour estimate;

Spill the ratio of assets of firms with DFI to the assets of all firms in the sub-sector (measuring Spillover effects of DFI)

B_4S Firm Size;

B_5LnRM natural log Raw Material; and

e_{it} error term.

In order to correct for possible bias in the estimates when the ordinary least squares (OLS) estimation method is used, the fixed effect method described above was employed, since we are assuming constant growth in firm productivity over the period of study. Furthermore, we carried out the first difference estimation of the model in order to ascertain the possibility of measurement errors. This is running the regression with one year lag of the independent variables.

RESEARCH RESULTS

On the whole, foreign firms have larger size (almost two and half times the size of capital invested) than domestic firms. Foreign firms employ almost three times the size of domestic firms' labour and almost eight times the size of export. In which case, foreign firms are more export oriented. This result shows the dominance of foreign firms compared to their domestic counterparts. The productivity measure obtained is presented in Table 2.

Effect of DFI on Productivity

The results obtained from the analysis of data are shown in Equation 7 and Tables 3 and 4.

In analysing the effect of direct foreign investment on the productivity growth rate of domestically owned firms in the sector, evidence of spillover of knowledge or new technology is

$$LnY = 0.667 + 0.028LnL + 0.331LnK^* + 0.445LnDFI_{sub}^* + 0.0001DFI_{firm} + 0.352LnRM^* + 0.163Size$$
$$(0.070) \quad (0.163) \quad (0.224) \quad (0.000) \quad (0.125) \quad (0.310)$$

$$R^2 = 0.304 \qquad F = 2.74^* \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(7)$$

Table 1: Share of foreign ownership of companies in the Nigerian Agro/agro-allied sector

Sub-sector	Number of listed companies	Number of foreign companies	Percentage of invested capital owned by foreign company
Food/Beverages/Tobacco	17	12	37.28
Fishing/Farming/Poultry/Animal Husbandry	10	4	29.93
Distilling	5	4	30.47
Plywood/Wood Products	3	1	8.40
Textile/Leather	6	6	40.58
Furniture/Footwear	3	2	37.37
Conglomerates	8	8	42.98
Total	*52*	*38*	-

Source: Nigerian Stock Exchange Factbook and Central Bank of Nigeria Statistical Bulletin (Various Issues).

Table 2: Some characteristics of sample firms

Characteristics	All firms mean	S.D.	DFI mean	S.D.	Domestic mean	S.D.
Capital (N'000)	50349.00	107623.69	62925.00	127558.00	26160.00	41391.00
Employment	1552.00	1939.00	1970.00	2141.00	682.00	970.00
Output (N' 000)	922079.00	1986382.00	1173125.00	2293772.00	430447.00	1008935.00
Size	8.86	29.16	9.84	31.47	6.93	23.92
Export Value (N)	64253.00	257259.00	84997.00	300197.00	10734.00	30838.00

Source: Data Analysis, 2000

expected to be revealed in the form of higher productivity levels and growth rates. The coefficients of the regression variables of labour and capital are therefore expected to be positive and statistically significant. The results obtained from the analysis is presented in Tables 3 and 4. The evidence of spillover of knowledge or new technology is revealed in the form of higher productivity levels and growth rates for domestically owned firms in sub-sectors with a large foreign presence.

For all firms in the sector, all the included variables were both positive and significant as expected (Table 3). The similarity of the results obtained from both the OLS and first difference estimate suggests the absence of measurement error. The magnitude of the coefficients of labour and capital suggests the percentage contribution of each factor to total firm output The labour coefficient suggest a low level of labour's

Table 3: Effect of DFI on firm productivity

Coefficient	OLS	First Difference
B_o	11.873	12.164
LnL	0.024	0.022
	(0.22)	(0.023)
LnK	0.123*	0.123*
	(0.35)	(0.036)
LnRM	0.546*	0.534*
	(0.44)	(0.045)
Size	8.40*	8.30*
	(3.52)	(3.58)
Spill	8.903*	8.30*
	(3.68)	(3.58)
DFIDUM	0.983*	9.79*
	(0.184)	(3.73)
R^2	0.427	0.408
F	50.418*	46.746*

Source: Data Analysis 2000

Table 4: Effect of DFI on firm productivity by foreign and domestic firms

Coefficient	Domestic Firms			Foreign Firms		
	OLS	First Difference	Fixed Effects	OLS	First Difference	Fixed Effects
B_o	6.357	7.247	11.633	13.618	13.855	10.964
LnL	0.141*	0.147*	0.008	0.061*	0.065*	-0.023
	(0.031)	(0.032)	(0.132)	(0.028)	(0.028)	(0.099)
LnK	0.129	0.071	0.011	0.101*	0.093*	0.013
	(0.118)	(0.114)	(0.245)	(0.036)	(0.038)	(0.170)
LnRM	0.765*	0.786*	0.371	0.376*	0.353*	0.511*
	(0.082)	(0.081)	(0.023)	(0.050)	(0.052)	(0.170)
Size	3.98	4.90	6.870	7.20*	7.10*	0.166
	(3.95)	(3.98)	(6.194)	(3.39)	(3.44)	(0.264)
Spill	25.464*	32.919*	0.481*	7.368*	7.704*	0.082
	(10.25)	(10.06)	(0.188)	(3.75)	(3.805)	(0.140)
R^2	0.672	0.673	0.171	0.263	0.241	0.203
F	50.56*	50.48*	1.702	20.680*	18.525*	2.627

Source: Data analysis (2000)
(figures in parenthesis are the t-values)
* Significant at 5% level

contribution to total output and therefore possible low productivity of labour in the sector. The percentage contribution of labour to firm's total output is about 2 percent. This figure is relatively low. This is plausible given the high rate of underemployment and unemployment in the economy. About 18.5 percent and 21.9 percent of Nigeria's labour force has been noted to be both underemployed and unemployment in 1998 respectively (Yesufu 2000). The reported low capacity utilisation of the industries may be responsible for the low value of the capital

coefficient. The average capacity utilisation in the industrial sector has been put at 37.2 per cent in 1997. The percentage contribution of capital to firm's total output is about 12 percent. This is just about the range of the prevailing interest rate in the economy during this time. The interest rate was about 16.1 percent in 1997 implying that the contribution of capital to total output was not up to the lending rate. This suggest an inefficient use of capital by the firms. Furthermore, the coefficient of the size variable suggests that the big firms are not necessarily best performers in the industry. The variables included to capture the spillover effect (Spill and DFIDUM) are both positive and significant

confirming the positive spillover effect of DFI on the productivity of firms in the sector.

The equation 7 was estimated also at the sectoral level.. The equation suggests a positive contribution of capital, DFI and raw materials. The Size variable was also positive while the labour variable was negative. The positive spillover effect of DFI is confirmed and an 100 percent increase of DFI to the sector will induce a 44 percent increase in output. The proxy for DFI effect at the firm level included however did not reveal any significant contribution of DFI at the firm level suggesting a rather low effect of DFI at the firm level.

The non-significant coefficient on DFI_{-firm} suggests that the productivity of foreign owned firms deviate from the sectors best practice frontier. In which case, foreign ownership of firms is not a guarantee of best performance. This may be because of little or no competition faced by these foreign firms from domestic firms. The positive and significant coefficient on size suggests that larger firms are more likely to achieve higher levels of productivity. Apparently, from these results, it could be deduced that although the foreign firms are large in size, they are not necessarily operating at the best practice frontier. Wheras the foreign firms are to induce greater competition, causing firms that cannot approach the best-practice frontier to exit the industry, if the policy in place enables firms with lower productivity to remain in the industry, the overall productivity may be lowered.

When the analysis was broken down into foreign and domestic firm basis, the result obtained is presented in Table 4. From the table it could be seen that the fixed effect estimation method was not particularly good. This may mean that the assumed constant growth in the industry did not hold true.

For domestic firms the labour variable suggest a possible low productivity and lower wage rate as depicted by the low value of the coefficient. Both the sign and the magnitude of the labour variable obtained for the foreign firm was more than for the domestic firms suggesting that foreign firms utilise manhours of labour better than their domestic counterparts, in other words, the foreign firms obtain higher labour productivity. This may also be an indication of better remuneration and working conditions of the workers of the foreign firms. The connection of the foreign firms with the large multinationals

could be responsible for this observed result. For every 100 percent increase in manhours of labour made available in the foreign firms, about 6 per cent increase in output is obtained while 1.4 percent increase would be obtained for domestic firms. The coefficient of the capital variable suggests an overcapitalisation of the foreign firms. As at the sectoral level this may be because of the low capacity utilisation of the firms recorded during the study period. It may also be because of the devaluation of the national currency (Naira) which made the share assets bear a nominally high value. The contribution of raw materials to overall output obtained for domestic firms is almost twice that of foreign firms. This is feasible considering the possible difference in the technology being used. The foreign firms are likely to have more sophisticated technology that will ensure a better conversion of the raw materials than that of the domestic firms.

The size variable suggests that while big sized firms are more productive (sell more) among the domestic firms, the small sized firms explain most of the sales of the foreign firms. This result can also be related with the level of technology of the firms.

The variable measuring spillover suggests a significant and positive effect of DFI on firm's productivity of both domestic and foreign firms.

Interestingly, while the coefficient for labour is significant for foreign firms, it is the coefficient for capital that is significant for domestic firms. This suggests that the potential of capital to contribute significantly to the output growth of domestic companies is high. It was also noted that the significance of capital is suggestive of the high need of investment for domestic firms. Thus, it can be safely asserted that while foreign firms achieve a higher level of growth rate or productivity due to labour, domestic firms could achieve commensurate growth if given enough capital.

The coefficient of DFI sector measures the so-called spillover effect – the extent to which the presence of DFI increase the rate of productivity growth after accounting for other factors. The result presented above shows that at the firm-level, the firms with foreign investment achieve higher rates of productivity, since the coefficient is both positive and statistically significant. However, at the sub-sectoral level, the coefficient is both negative and statistically

significant. This suggests that at the sub-sectoral level, the presence of DFI did not increase the rate of productivity growth contrary to expectation. The non-significance of the labour variable raises questions on whether there is a spillover on labour productivity. This may suggest that firms with foreign investment achieve a lower rate of labour productivity growth rate.

CONCLUSION

This study set out to compare the relative performance of domestic and foreign firms in Nigeria's agro/agro-allied sector. The result obtained reveal that, on the average, foreign firms tend to be larger in size, more export oriented and to employ more hands.

A comparison of the firm level productivity measures show that foreign firms' productivity is higher than that of their domestic counterpart. The results of the impact of DFI on productivity growth showed that there is positive and significant spillover effect at the firm level. However, the extent of the spillover may not extend to the sectoral level. The non-significance of the labour variable suggests that there is little or no spillover effect on labour productivity. The result obtained in this study seem to support the findings of earlier studies on the spillover effect in developing countries that higher levels of foreign investment was not necessarily associated with rising labour productivity among domestic firms.

Policy Implications

The findings of this study suggest the need for an intensification of the drive for DFI by the Nigerian government especially for the agro/agro-allied sector which is a prime mover of the economy. The sector is very important for the sustainability of the economy since the Nigerian economy is agro-based. The low-level/ lack of positive spillover effect of labour variable suggest the need for a policy to encourage the firms to take manpower development seriously. This may be if form of tax concessions for firms engaged in such manpower development or refund of such amount so spent on the venture. The lower rate of contribution of capital obtained relative to the lending rate suggests the need for a more efficient use of capital by the board of management of the companies.

REFERENCES

Anyanwu, J.C. 1998. "An Economic Investigations of the Determinants of Foreign Director Investment in Nigeria" *Proceedings of the 1998 NES Annual Conference*, 219-241.

Barro, R.J. 1991. "Economic Growth in a Cross-section of Countries" *Quarterly Journal of Economics*, 106: 407-443.

Barro, R.J. and X. Sala-I-Martin. 1992. "Convergence" *Journal of Political Economy,* 100: 223–51.

Blomstrom, M. 1986. Foreign Investment and Productive Effective Efficiency: The Case of Mexico. *Journal of Industrial Economics* 35 Sept.

Blomstrom, M. and E.W. Person. 1983. Foreign Investment and Spillover Efficiency in an Under-developed Economy: Evidence from the Mexico Manufacturing Industry: *World Development,* 11: 6.

Cartwell, J. 1989. *Technological Innovation and Multi-national Corporation*. Oxford: Brasil Blackwell

Central Bank of Nigeria. 1992. *Economic and Financial Review* 30: 3.

CBN/NISER 1992. *The Impact of Structural Adjustment Programme on Nigerian Agriculture and Rural Life. National Report.* Vol. 1, Lagos.

Grossman, G. and E. Helpman. 1990. "Comparative Advantage and Long-run Growth" *American Economic Review,* 80: 796-815.

Haddad, M. and A. Harrison 1993. "Are there Positive Spillovers from Foreign Direct Investment? Evidence from Panel data for Morocco" *Journal of Development Economics,* 42: 51-74.

Kokko, A. 1996. Productivity Spillovers form Competition between local firms and Foreign Affiliates. *Journal of Development Economics,* 11: 307 – 325

Nigeria Stock Exchange. 1999. *Fact Book*. Weiss Publishers, Lagos.

Obwona, Marios B. 2001. Determinants of FDI and their Impact on Economic Growth in Uganda. *African Development Review* 2001. Blackwell Publishers Oxford. UK. 46-80.

Sjoholm, Fredrick. 1999. "Technology Gap, Competition and Spillovers from Direct Foreign Investment: Evidence from Establishment Data." *Journal of Development Studies,* 36 (1): 53 -73

Taylor, M. P. and L. Sarno. 1997. Capital flows to Developing Countries: Long–and Short – term Determinants. *The World Bank Economic Review,* 11(3): 451-470

Yesufu, T. M. 2000. *The Human Factor in National Development: Nigeria*. Ibadan: Spectrum Books Limited.