The Varying Impact of FDI on Economic Growth and Development in China and Nigeria

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Abstract

This study is a comparative analysis; it investigates the varying impacts of FDI in China and Nigeria. It tries to explain why FDI has facilitated the rapid economic growth evident in China, yet not so well for Nigeria, even though both are FDI recipients and developing economies

KEYWORDS: FDI, SPILLOVER EFFECTS, CROWDING OUT EFFECTS, GLOBALIZATION, MNEs.

Introduction

Many economic literatures focus on testing whether Chinese growth depends on inward FDI rather than measuring their contributions. Therefore, the objective of this study is to assess the contributions of Foreign Direct Investment (FDI) in China's economic development in terms of the three indicators I.e. contribution to GDP growth, employment absorption, and its contribution to technology improvement and to compare same with Nigeria.

Specific Objectives are to:

A. To determine why the impact of FDI in China and Nigeria varies even though they are both developing economies.

B. Explore the empirical relationship between FDI and GDP in Nigeria and China

C. Examine the effects of manufacturing FDI on Economic growth in Nigeria and China.

D. Ascertain the long-run sustainability of FDI induced growth process

E. To proffer policy recommendations to better improve the effects of FDI in Nigeria.

Background of the study

The results of studies carried out on the linkage between FDI and economic growth in Nigeria are not unanimous in their submissions. A closer examination of these previous studies reveals that conscious effort was not made to take care of the fact that more than 60% of the FDI inflows into Nigeria is made into the extractive (oil) industry. Hence, these studies actually modeled the influence of natural resources on Nigeria's economic growth. In addition, the impact of FDI on economic growth is more contentious in empirical than theoretical studies, hence the need to examine the relationship between FDI and Growth in different economic dispensations. There is the further problem of endogeneity; this has not been consciously tackled in previous studies in Nigeria. FDI may have a positive impact on economic growth leading to an enlarged market size, which in turn attracts further FDI. Finally, there is an increasing resistance to further liberalization within the economy. This limits the options available to the government to source funds for development purposes and makes the option of seeking FDI much more critical. This study contributes to the literature by examining the relationship between FDI inflows and Nigeria's economic growth, hence addressing the country's specific dimension to the FDI growth debate. The study is different from previous studies in scope (number of years considered is longer). In addition, the effect of the major components of FDI on economic growth is examined, thereby offering the opportunity to assess the differential impact of oil FDI and non-oil FDI on Nigeria's economic growth. The study made conscious effort to address the endogeneity issue, and provide justification for the unrelenting efforts of the government to attract FDI, which are being misunderstood and resisted by the Nigerian populace.

Conversely, recent years have witnessed the emergence of China as one of the most important destinations for foreign direct investment (FDI), which reached US\$403.98 billion by the end of 1999 (MOFTEC, 2000). China is now the largest recipient of FDI in the developing world. However, the amount of FDI

will underestimate its overall consequences if spillover effects are significant (Murphy, 1992; O'Malley, 1994; Buckwalter, 1995). This study investigates the impact of FDI on the performance of Chinese locally-owned firms in manufacturing. Prior research on spillovers from foreign to locally-owned firms shows mixed results (Blomstrom and Kokko, 1997). Evidence to show that the productivity of local firms is enhanced because of FDI-induced spillovers (Caves, 1974; Globerman, 1979, Liu et al., 2000) is balanced by other studies finding negligible spillovers (Haddad and Harrison, 1993), or a negative correlation between FDI and the performance of the host country economy (Singh, 1992). These results may reflect the omission of important variables, such as the level of R&D expenditure and employees with technical degrees (Diankov and Hoekman, 2000). Spillovers are generally measured as the impact of the presence of foreign multi-national enterprises (MNEs) on productivity in domestic firms. Mixed findings may result from the fact that these studies use different proxies for foreign presence (G6rg and Strobl, 2001). In addition, these studies do not investigate non-productivity spillovers. At the national level, the importance of FDI for China's economy has been demonstrated by empirical research (Kueh, 1992; Zhan, 1993; Wang, 1995; Chen et al., 1995; Wu, 1999). At the micro level, studies examine technology transfer by MNEs (Lan and Young, 1996) and linkages between foreign subsidiaries and Chinese local firms (Li and Yeung, 1999). The results are generally qualitative and support the view that the entry and operation of MNEs promote the development of Chinese indigenous firms. Zhu and Tan (2000) find that the intensity of FDI inflow is positively correlated with labor productivity in several Chinese cities. Few industry-level analyses examine how far MNEs influence the performance of indigenous Chinese firms. One exception is Liu (2001), whose results indicate that FDI is positively associated with higher total factor productivity in an industry Liu's study regresses total factor productivity on the ratio of FDI to total capital in the same industry. However, spillover effects are usually measured as the impact of foreign share of capital or employment on the productivity of the domestically-owned sector in each industry (Caves, 1974; Liu et al., 2000). Indeed, the observed improvements in total factor productivity might be largely a result of the growth within the industry of the foreign sector itself.

This study differs from existing work in three respects. First, it examines not only productivity, but also non-productivity spillovers. Second, it explores the possibility that different types of ownership advantage of MNEs from the overseas Chinese (OC) and from non- Chinese (NC, i.e., western countries and Japan) might lead to contrasting effects on local firms. Third, it differentiates between the types of locally-owned Chinese firms, to examine whether their absorptive capabilities differ, and the extent to which they are able to benefit from the effects of spillovers.

Rationale for the study

Productivity spillovers take place when the entry or presence of MNE affiliates lead to productivity benefits in local firms, and the MNEs are not able to internalize the full value of these benefits (Blomstrom, et al., 2000). Kokko (1992) points out that the term 'spillover' has a broader meaning than 'imitation' or 'technology diffusion'. It is primarily associated with productivity-hence the interchangeable use of the terms 'productivity' and 'technology' spillover in much of the literature. According to Eden et al. (1997), MNE technology can spill over to host country firms in the following ways: (1) demonstration effects; (2) backward and forward linkages between MNEs and their local suppliers and buyers; (3) training of local employees by the MNE; (4) competition effects between foreign and local firms (Blomstr6m, et al., 2000). The existence of such spillovers should benefit domestic firms, as low-cost access to leading-edge technologies should be productivity-enhancing (Feinberg and Majumdar, 2001) Large multinationals such as Microsoft, IBM, Lucent Technologies, Intel, have recently established laboratories in China to benefit from employing the most promising Chinese scientists and technologists available at low cost. In the process of generating research results that are proprietary to the multinational, cooperation with local companies and research institutes supported the development of China's high-tech sector (Gelb, 2000). Interaction between local and foreign firms through component supply, subcontracting, licensing, and technical cooperation, can serve to upgrade the operations of Chinese firms. When cooperation occurs, normally the MNE provides training and technical services to Chinese partners. MNEs that are export-oriented may act as export catalysts to local firms by producing externalities which enhance their export prospects (Rhee and Belot, 1990).

These 'market access spillovers' may arise through the employment of local firms as suppliers and subcontractors to MNEs. These linkages provide knowledge about product and process technologies and foreign market conditions. Indirect channels exist through which local export performance can be improved. Local firms may learn how to succeed in foreign markets by copying MNEs. MNEs may also train local employees in export management and foreign market knowledge. Local firms acquire this knowledge if MNEs' employees move to local firms. There is considerable empirical evidence showing that foreign MNEs help the exports of local firms (Aitken et al., 1994; Kokko et al., 1997). With respect to China, Thoburn (1997) concludes that foreign MNEs have played a significant role in China's export growth. In 1994, foreign MNEs accounted for 41 per cent of China's overall exports (Mok, 2000). This may be primarily due to the growth in export-oriented FDI. Learning from their foreign counterparts may stimulate exports by local Chinese firms.

Relatively to China, Nigeria has not witnessed such a tremendous effect of FDI. Though many scholars have worked extensively on FDI and Nigeria, none has done a comparative study with China in whom we could learn from their experience. Given the above scenario, a study of this nature will be helpful to the Nigerian policy makers in solving Unemployment problems and enhancing technological improvements through spillovers in the manufacturing, industrial and agricultural sectors as evident in China.

Theoretical framework

That FDI is positively correlated with economic growth is situated in growth theory that emphasizes the role of improved technology, efficiency and productivity in promoting growth (Lim, 2001). The potential contribution of FDI to growth depends strictly on the circumstances in recipient countries. Certain host country conditions are necessary to facilitate the spillover effects. The effect of FDI on economic growth is analyzed in the standard growth accounting framework. To begin with, the capital stock is assumed to consist of two components: domestic and foreign owned capital stock. So,

$$k_t = k_{dt} + k_{ft}$$

We adopt an augmented Solow production function (Solow, 1956) that makes output a function of stocks of capital, labor, human capital and productivity (see Mankiw et al., 1992). However, we specify domestic and foreign owned capital stock separately in a Cobb–Douglas production function (Cobb and Douglas, 1928).

$$Y_{it} = A_{it} K^{\alpha}_{dit} K^{\lambda}_{fit} L^{\beta}_{it} H^{\gamma}_{it}$$

Where *Y* is the flow of output, $K_{dt}K_{ft}$ represent the domestic and foreign owned capital stocks, respectively, *L* is the labor, *H* is the human skills capital stock, and *A* is the total factor productivity, which explains the output growth that is not accounted for by the growth in factors of production specified.

Taking logs and differentiating Equation 1 with respect to time, we obtain the familiar growth equation:

$$y_{it} = a_{it} + \alpha k_{dit} + \lambda k_{fit} + \beta l_{it} + \gamma h_{it}$$
(2)

Where lower case letters represent the growth rates of output, domestic capital stock, foreign capital stock, and labor and human capital, and α ,*l*, β and γ represent the elasticity of output, domestic capital stock, foreign capital stock, labor and human skill capital, respectively.

In a world of perfect competition and constant returns to scale, these elasticity coefficients can be interpreted as respective factor shares in total output. Equation 2 is a fundamental growth accounting equation, which decomposes the growth rate of output into growth rate of total factor productivity plus a weighted sum of the growth rates of capital stocks, human capital stock and the growth rate of labor. Theoretically, α , β and γ are expected to be positive while the sign of l would depend on the relative strength of competition and linkage effects and other externalities that FDI generates in the development process as discussed in previous sections.

Following the established practice in the literature, K_d and K_f are proxied by domestic investment to GDP ratio (I_d) and FDI to GDP ratio (I_f), respectively in view of problems associated with measurement of capital stock. The use of rate of investment is hinged on the assumption of a steady state situation or a linearization around a steady state.

The final form of Equation 2 therefore is

$$y_{it} = a_i + \alpha I_{dit} + \lambda I_{fit} + \gamma h_{it} + \varepsilon_{it}$$
(3)

Where ε_{it} is an error term

(1)

Research methodology and organization of the study

This study is purely quantitative and qualitative, and builds on existing studies and methodologies. It uses regression analysis and other statistical and econometric techniques such as the OLS to test the varying impacts of FDI in China and Nigeria. The study is organized into four chapters: Chapter One covers the general introduction and literature Review. Chapter Two is for the presentation of data and analysis. Chapter three provides summary of the findings and lessons from china, and finally, chapter four states the policy recommendations, and concludes the study.

Scope and limitation of the study

This study investigates the varying impacts of FDI in China and Nigeria. It tries to ascertain as to why FDI has facilitated the rapid growth evident in China as against Nigeria, a fellow developing economy. The study covers a period of twenty (20) years (1985-2005). It is limited by some factors, prominent among them is: difficulty in convincing some Chinese officials to cooperate during the questionnaire session.

Statement of the problem

It is assumed that with a good capital base (domestic and foreign) and effective planning, a nation should be able to meet her macroeconomic objectives such as reasonable rate of inflation, Full employment, price stability, etc. However, this is not true in the case of Nigeria. With increased private foreign capital Investment in the Nigerian private Sectors, it is expected to advance economic growth by improving the industrial base of the various sectors. This expectation has not been met over the years. Instead of FDI to bring about growth and technological advancement, the reverse is the case in Nigeria unlike in China. Given the controversy surrounding the economic benefits and cost associated with FDI, it would be beneficial from the policy point of view to subject FDI in Nigeria to a critical comparative study to determine the existence and significance of any benefits and cost and to determine why the impact of FDI in China and Nigeria varies even though they are both developing economies.

Research question

Why are there variations in the over all impact of FDI on China and Nigeria's economic growth?

Research hypothesis

 $H_0 = FDI$ has a positive and significant impact on economic growth.

 H_1 =FDI has a negative impact on Nigeria's economic growth, vis-à-vis technology improvement.

Summary of findings

From the findings of the study the following can be inferred:

• The main determinants of FDI in China and Nigeria are market size (proxied by GDP), stable macroeconomic policies and a level of human capital that is tolerable by investors and of course, cheap labor in the case of China.

• FDI contributes positively to China's economic growth by its spillover effects. However, it has a negative relationship in Nigeria during the 1985-2005 periods. This violates economic theory that returns on investments generate and promote economic growth. Practically, the result is not surprising because in Nigeria, heavy investment in steel, machinery and ship building, together with modern manufacturing and all forms of modern transport are still absent, Toyo, (2000).

The FDI in the manufacturing sector in China has a positive relationship, while in Nigeria it has a negative relationship with economic growth, suggesting that the business climate is not healthy enough for the manufacturing sector to thrive and contribute to positive economic growth.

•Though there is a significant relationship in China's human capital to overall economic growth as captured by its share of employment absorption as a percentage of economically active population, it doesn't hold true for Nigeria as its not significant relationship of human capital to overall economic growth suggests that there is a shortage of skilled labor in the country.

• Finally, though trade bore a robust relationship to the overall sectors of the Chinese economy, it did not bear a robust relationship to the non-oil sector of the Nigerian economy; yet, it had a positive and significant relationship with the growth of the whole economy. In other words, trade is very important to growth of the oil sector since the oil industry is producing mainly for export.

Conclusion

This study has found evidence of both productivity and non-productivity spillovers, notably the development of high tech and new products and market access spillovers, each of which contributes to the upgrading of Chinese industries. Chinese policy towards FDI since 1979 has been predicated upon appropriating western technology, either directly or indirectly, and the findings demonstrate the existence of the indirect route. We find that non-Chinese firms' advantages, and the spillovers they confer, differ from those of overseas Chinese firms, as generally shown by the pattern of results and the magnitude tests. This shows that the character of spillover effects follows that of MNEs' ownership advantages, which differ by nationality of origin. This illuminates the issue of the appropriability of the returns on intangible assets by MNEs in host markets. The economic losses and disincentive effects that externalities pose for foreign investors are exactly congruent with the role that FDI plays in domestic industrial and economic development. This is a transition from a preoccupation with the source country perspective on gains and losses, to a position that accommodates host country development aspirations and priorities. The study finds that the segments of locally owned industry that are best able to internalize spillover benefits are those with the greatest absorptive capacity paralleling the findings of the technology transfer literature that center on formal transfers.

The spillover benefits that are enjoyed by COEs arise through interactions in final, intermediate and factor markets. These include learning within network relationships formed with western firms, subcontracting, training by western firms of local employees, and the transfer of technical skills to upgrade the services provided to the MNE by local industry. This study sheds light on the complexity of spillover effects in an emerging host economy. In doing so, it exposes some of the possible methodological weaknesses in the existing literature on these effects for all types of host. Apart from the shortcomings of existing studies noted in the Introduction, it is now clear that inconclusive findings can result from a failure to identify either or both the nationality of foreign investors and the forms of ownership of the beneficiary host firms. Conflicts between existing studies may arise on account of differences between the distributions of foreign investors, or in the forms of ownership in the host The findings in this study add to the state of knowledge in economy. the literature in three respects. First, the existence of non - productivity spillovers, e.g. notably in the form of the development of high-tech and new products by local firms

Second, clear evidence is presented that different types of ownership advantage of MNEs, linked to nationality, confer contrasting spillover effects on local firms in the host country. Third, the results suggest that absorptive capacities differ between the types of locally owned firm, and that form of ownership has a strong influence on how far, if at all, local firms are able to benefit from spillovers. Each of these new findings has implications for policy. The Chinese authorities have long put a premium on the transfer of technology to local industry to generate productivity gains. The results suggest that while the productivity gains are important to locally owned industry, the value of non productivity benefits should not be underestimated. These may be available even in modest technology industries. Therefore, policy to encourage diversity in inward investment may lead to improved export performance, and the development of high tech and new products by a wide range of locally owned firms. Under the WTO agreement, China is bound to follow a policy of non discrimination towards inward investors, and this study provides substantiation for the benefits of the full implementation of this. The Chinese authorities can expect that the range of spillover benefits, in products and in technical and management processes that are available to local firms should be at least as extensive as the different ownership advantages of the investing nationalities. association between absorptive capacity and ownership form has The implications for the policy of reform in the state owned sector. The results suggest that, wherever possible, SOE reform should precede inward FDI in order to mitigate the possibility of negative spillovers. These are detrimental not only to SOEs, but also to the welfare of the local economies. This suggests that the reform of SOEs should be a priority especially in the regions where both the foreign and the state owned sector are particularly large. While this reform is costly in terms of economic adjustment, the prospect of positive spillovers is a benefit of which policy makers need to be aware.

FDI in Nigeria induces the nation's economic growth. Although the overall effect of FDI on the whole economy may not be significant, the components of FDI positively affect economic growth and therefore FDI needs to be encouraged. This study suggested ten general areas which pose a challenge to policy makers in Sub-Saharan Africa (which Nigeria is a part of) concerned with Foreign Direct Investment (FDI). If FDI is expected to play a role in achieving the country's development objectives then an active policy is required to attract FDI and to make FDI work for development. If not, many of the challenges in this study may also be seen as part of a general development agenda that fosters (domestic) private investment. Of course, the details and relative importance of these will differ by country and there are exceptions.

References:

- Adelegan, J.O. 2000 "Foreign direct investment and economic growth in Nigeria: A Seemingly unrelated model". *African Review of Money, Finance and Banking*, Supplementary issue of "Savings and Development" 2000 Pp.5–25 Milan, Italy
- Aitken, Brian, Gordon H. Hanson & Ann E. Harrison 1994 Spillovers, Foreign Investment and Export Behavior; National Bureau for Economic Research Working Paper No. 4967, New York.
- Akinlo, A.E. 2004 "Foreign direct investment and growth in Nigeria: An empirical Investigation". *Journal of Policy Modeling*, 26: 627–39.

Aluko, S.A. 1961. "Financing economic development in Nigeria" *The Nigerian Journal of Economic and Social Studies*, 3(1): 39–67.

Anand, Jaideep & Andrew Delios 1996; How Japanese MNCs have Matched Goals and Strategies in India and China. Columbia Journal of World Business, XXXI (3), 50-62.

Anyanwu, J.C. 1998. "An econometric investigation of determinants of foreign direct Investment in Nigeria" In *Investment in the Growth Process: Proceedings of the Nigerian Economic Society Conference 1998*, pp. 219–40. Ibadan, Nigeria.

Ayanwale, A.B. and A.S. Bamire 2001 *The Influence of FDI on Firm Level* Productivity of Nigeria's Agro/Agro-Allied Sector; Final Report Presented to the African Economic Research Consortium, Nairobi.

Aremu, J.A. 1997. "Foreign direct investment and performance" Paper delivered at a Workshop on Foreign Investment Policy and Practice organized by the Nigerian Institute of Advanced Legal Studies, Lagos on 24 March.

Ari Kokko & Mario Zejan 2000; Foreign Direct Investment: Firm and Host

Country Strategies.

Ariyo, A. 1998 "Investment and Nigeria's economic growth" In *Investment in the Growth Process Proceedings of Nigerian Economic Society Annual Conference* 1998, pp. 389–415 Ibadan, Nigeria

Asiedu, E. 2001 "On the determinants of foreign direct investment to developing Countries: Is Africa different?" *World Development*, 30(1): 107–19.

Asiedu, E. 2003 "Capital controls and foreign direct investment" *World Development*, 32(3): 479–90.

Asiedu, E. 2005 Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institution and Political Instability.

UNU/WIDER Research Paper 2005/24; World Institute for Development Economics Research, Helsinki

Blomstrom, Magnus & Ari Kokko 1997; How Foreign Investment Affects Host Countries. Policy Research Working Paper No.1745 International Trade Department, World Bank, Washing-ton, D.C.,

Cantwell, John A. 1993. Technological Competence and Evolving Patterns of International Production in H. Cox, J. Clegg, & G

Ietto-Giles, editors, The Growth of Global Business; London: Routledge.

Caves, Richard E. 1974 Multinational Firms, Competition and Productivity in Host Country Markets; Economica, 41: 176-93

Central Bank of Nigeria 2004 Annual report and Statement of Accounts; Abuja Nigeria www.cenbank.org

Central Bank of Nigeria (various years): Central Bank of Nigeria Statistical Bulletin. Abuja, Nigeria.

Chen, Chung, Lawrence Chang & Yimin Zhang 1995 The Role of Foreign Direct Investment in China's Post-1978 Economic Development. World Development, 23(4): 691-703.

Cobb, C. W. and P.H Douglas 1928 "A Theory of Production" American Economic Review Vol.18, May Cohen, Wesley M. & Daniel A. Levinthal 1989. Innovation and Learning: The Two Faces of R&D. The Economic Journal, 99: 569-596.

Davies, Howard. 1996. High IQ and Low Technology: Hong Kong's Key to Success. Long Range Planning, 29(5): 684- 690.

De Gregorio, Jose. 2003. "The role of foreign direct investment and natural resources in Economic development". Working Paper No 196 Central Bank of Chile, Santiago

De Mello, L. R. 1997. "Foreign Direct Investment in developing countries and growth: A Selective Survey". Journal of Development Studies, 34(1):1-34.

Dees, S. 1998. "Foreign direct investment in China: Determinants and effects" *Economics of Planning*, 31: 175–94

Diankov, Simeon. & B Hoekman 2000 Foreign Investment and Productivity Growth in Czech Enterprises; the World Bank Economic Review, 14(1): 49-64.

Driffield, N. 2001 "The impact of domestic productivity of inward investment in the UK" *The Manchester School*, 69: 103–19

Durham, J.B. 2004 "Absorptive capacity and the effects of foreign direct investment and Equity Foreign portfolio investment on economic growth" *European Economic Review*, 48(2): 285–306.

Eden, Lorraine, Edwin Levitas & Richard J. Martinez. 1997. The Production, Transfer and Spillovers of Technology: Comparing Large and Small Multinationals as Technology Producers. Small Business Economics, 9: 53-66.

Ekpo, A.H. 1995. "Foreign direct investment in Nigeria: Evidence from time series data". *CBN Economic and Financial Review*, 35(1): 59–78.

Huang, Yiping & Xin Meng 1997 China's Industrial Growth and Efficiency: A Comparison between the State and the TVE Sectors. Journal of the Asia Pacific Economy, 2(1): 101-121.

Jerome, A. and J. Ogunkola 2004 "Foreign direct investment in Nigeria: magnitude, Direction and prospects". Paper presented to the African Economic Research

Consortium Special Seminar Series Nairobi, April

Kokko, Ari. 1992. Foreign Direct Investment, Host Country Characteristics and Spillovers. Stockholm School of Economics, Stockholm

Kueh, Y. Y. 1992. Foreign Investment and Economic Change in China; Quarterly 131: 637-90

Lan, Ping & Stephen Young. 1996. Foreign Direct Investment and Technology Transfer: a Case-Study of Foreign Direct Investment in North-East China. Transnational Corporations, 5(1): 57-83.

Lee, K. and M G. Plummer 1992 Competitive Advantages, Two-Way Foreign Investment and Capital Accumulation in Korea; Asian Economic Journal, 6: 93-114

Li, Xiaojian & Yue-man Yeung 1999 Inter-Firm Linkages and Regional Impact of Transnational Corporations: Company Case Studies from Shanghai, China. Geografiska Annaler, 81b (2): 61-72.

Li, Xiaoying and Xiaming Liu 2004 "Foreign direct investment and economic growth: An increasingly endogenous relationship". *World Development*, 33(3): 393–407.

Lim. E. 2001. "Determinants of and relationship between foreign direct investment and Growth: A summary of recent literature". IMF Working Paper No. 175. International Monetary Fund, Washington, D.C

Liu, Xiaming 1999 Comparative Productivity of Foreign and Local Firms in Chinese Industry. Paper presented at the 26th Annual Conference of the Academy of International Business United Kingdom Chapter, University of Strathclyde, Glasgow

Liu, Xiaohui. 2001. Total Factor Productivity and Foreign Direct Investment in Chinese Industries. Paper presented at the 28th Annual Conference of the Academy of International Business United Kingdom Chapter, Manchester Metropolitan University Business School.

Luo, Yadong. 1997 Performance Implications of International Strategy: An Empirical Study of Foreign-invested Enterprises in China. Group & Organization Management, 22(1): 87-116.

Macmillan. Buckwalter, D.W. 1995. Spatial Inequality, Foreign Direct

Investment, and Economic Transition in Bulgaria, the Professional Geographer, 47: 288-98.

MOFTEC 1996 the Orientation Directory of Industries for FDI In Regulations towards Foreign Direct Investment, Beijing, Social Science Publishing House

Murphy, A. B. 1992. Western Investment in East-Central Europe: Emerging Patterns and Implications for State Stability. The Professional Geographer, 44: 249-59.

Obinna, O.E. 1983. "Diversification of Nigeria's external finances through strategic foreign direct investment" Nigerian Economic Society Annual Conference Proceedings, Jos, 13-16th May

Obwona, Marios B. 2001. "Determinants of FDI and their impacts on economic growth In Uganda" *African Development Review*, 13 :(1) 46–80 Blackwell Publishers, Oxford UK

Obwona, Marios B. 2004. "Foreign direct investment in Africa" In *Financing Pro-Poor Growth: AERC Senior Policy Seminar VI, Kampala, Uganda, 2–4 March 2004 – Seminar Papers,* pp.60–95. Nairobi: African Economic Research Consortium.

Odozi, V.A. 1995. *An Overview of Foreign Investment in Nigeria 1960-1995*. Occasional Paper No. 11 Research Department, Central Bank of Nigeria

Ogiogio, G.O. 1995. "Planning horizon, government expenditure and economic growth in Nigeria" In A. Ariyo, ed., *Economic Reform Macroeconomic Management in Nigeria* Ibadan: The Centre for Public–Private Cooperation.

O'Hearn, D. 1990. "TNCs, intervening mechanisms and economic growth in Ireland: A Longitudinal test and extension of Bomschier model". *World Development*, March.

Olofsdotter, K. 1998. "Foreign direct investment, country capabilities and economic Growth" *Weltwitschaftliches Arckive*, 134(3): 534–47.

O'Malley, Eoin. 1994. The Impact of Transnational Corporation in the Republic of Ireland. In P. Dicken & M. Quevit, editors, Transnational Corporations and European Regional Restructuring, NGS, Utrecht

Oseghale, B.D. and E.E. Amonkhienan 1987 "Foreig debts, oil export, direct ¹⁵

foreign Investment (1960-1984)". *The Nigerian Journal of Economic and Social Studies*, 29(3): 359–80

Otepola, Ayorinde. 2002. *FDI as a Factor of Economic Growth in Nigeria*. Dakar, Senegal: African Institute for Economic Development and Planning (IDEP) May. Available on line from idep@unidep.org, http//unidep.org

Oyinlola, O. 1995 "External capital and economic development in Nigeria (1970–1991)" *The Nigerian Journal of Economic and Social Studies*, 37(2&3): 205–22.

Ostry, Sylvia and Michael Gestrin 1993 Foreign Direct Investment, Technology Transfer and the Innovation-Network Model Transnational Corporations, 2(3): 7-30.

Pamela Siler, Chengqi Wang & Yingqi Wei 2000 Productivity Spillovers from Foreign Direct Investment: Evidence from U.K. Industry Level Panel Data. Journal of International Business Studies, 31(3): 407-425.

Rhee, Y. W. & T. Belot 1990 Export Catalysts in Low-Income Countries", World Bank Discussion Papers No.72, Washington, DC

Ruben Tansini & Mario Zejan1997 Trade Regimes and Spillover Effects of FDI: Evidence from Uruguay. Mimeo, Stockholm School of Economics, Stockholm

Shi, Yizheng 1998. Technological Assets and the Strategy of Foreign Firms to Enter the China Market. Journal of International Marketing and Marketing Research, 23(3):129-138.

Solow, R. 1956. "A Contribution to the theory of economic growth" *Quarterly Journal of Economics*, 70: 65-94

UNCTAD 1999 Foreign Direct Investment in Africa: Performance and Potential. United Nations Publications UNCTAD/ITE/IIT/Mis.15 New York and Geneva: United Nations

UNCTAD 2000 Capital Flows and Growth in Africa New York: United Nations.

UNCTAD 2001, 2003 *World Investment Report* Geneva: United Nations Conference On Trade and Development

Vincent. 2000. Post-Mao Economic Transition: the Role of Non-State Enterprises.

Issues & Studies, 36(2): 1-31.

Web-site.http://www.moftec.gov.cn/moftec/official/html/statistics data Mok

Wheeler, D. and A. Mody 1992 "International investment location decision: The case of US firms". *Journal of International Economics*, 33: 57–70.

World Bank 1996 World Debt Tables: External Finance for Developing Countries,

Vol. 1 (Analysis and Summary Tables) Washington, D.C.: The World Bank.

World Bank 1998, 1999, 2004 World Development Indicators 1999; 2004 and 2007 CD-ROM

Zhang, K.H. 2001 "Does foreign direct investment promote economic growth? Evidence from Ea.st Asia and Latin America" *Contemporary Economic Policy*, 19(2, April): 175–85.

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Table: showing	data on	China
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TABLE SHOWING CHINA'S								
					EMPLOYMENT	MANUFACTURING		
	FDI NET		TOTAL EXPORTS	TOTAL IMPORTS	ABSORPTION	VALUE ADDED		
	INFLOWS							
	(BOP, current	GDP (Current	(BOP,CURRENT	(BOP,CURRENT	(% ECONOMICALLY			
YEARS	US\$)	US\$)	US\$)	US\$)	ACTIVE POP)	(ANNUAL %GROWTH)		
1985	1659000000	3.0491155	28163000000	40755000000	99.5	17.58451843		
1986	1875000000	2.9571593	29583000000	37172000000	99.5	9.144044876		
1987	2314000000	2.6821748	39171000000	38880000000	99.5	13.06369114		
1988	3194000000	3.0716664	45912000000	49972000000	99.5	14.88932133		
1989	3393000000	3.4229151	47823000000	52750000000	99.3	5.367402554		
1990	3487000000	3.5464436	57374000000	4670600000	99.1	2.305422544		
1991	4366000000	3.7661675	65898000000	54297000000	99.1	12.63666153		
1992	11156000000	4.1818056	78817000000	73819000000	99.1	18.73025131		
1993	27515000000	4.4050216	86852000000	98349000000	99	18.58571243		
1994	33787000000	5.592259	1.19181E+11	1.1157E+11	99	16.98456573		
1995	35849200000	7.2801078	1.4723999E+11	1.352824E+11	98.9	12.42349052		
1996	40180000000	8.5608956	1.71678E+11	1.54127E+11	98.8	11.12704754		
1997	44237000000	9.5265266	2.07239E+11	1.64415E+11	98.6	9.419958115		
1998	43751000000	1.0194586	2.07424E+11	1.63587E+11	98	8.06937027		
1999	38753000000	1.0832779	2.20964E+11	1.90323E+11	98.1	8.47465992		
2000	38399300000	1.1984803	2.7956148E+11	2.5068795E+11	97.4	10.58431053		
2001	44241000000	1.3248049	2.99409E+11	2.71325E+11	98.1	8.546082497		
2002	49307976629	1.4538314	3.6539533E+11	3.2801224E+11	97.9	10.02788544		
2003	47076719000	1.6409617	4.8500322E+11	4.4892424E+11	97.8	14.87544823		
2004	54936483255	1.9317103	6.5582658E+11	6.0654293E+11	97.9	8.836855888		
2005	79126731413	2.2342971	8.3688783E+11	7.1209013E+11	97.4	12.1059932709		

Source: World Development Indicators 2007, China's Bureau of Statistics, Nigeria's National Bureau of statistics.

Table: showing data on Nigeria.

TABLE SHOWING NIGERIA'S							
					EMPLOYMENT	MANUFACTURING	
	FDI NET		TOTAL EXPORTS	TOTAL IMPORTS	ABSORPTION	VALUE ADDED	
	INFLOWS						
	(BOP, current	GDP (Current	(BOP,CURRENT	(BOP,CURRENT	(% ECONOMICALLY		
YEARS	US\$)	US\$)	US\$)	US\$)	ACTIVE POP)	(ANNUAL %GROWTH)	
1985	485581320.9	28407930880	13429568192	9102971491	31.2	19.85383606	
1986	193214907.5	20210788352	5334783288	4243888500	29	-3.895663977	
1987	610552091.5	23441334272	7784041163	4953390194	28.4	5.093408585	
1988	378667097.7	22847727616	7238757173	51589953486	28	12.84588337	
1989	1884249739	23843508224	8423249445	5067935235	27.5	1.649576426	
1990	587882970.6	28472471552	14550381538	6908759515	26	7.616959095	
1991	712373362.5	27313352704	13140203698	10261492773	25.7	9.305800438	

1992	896641282.5	32710369280	12843759891	8990513022	25.2	-4.834700584	
1993	1345368587	21352759296	11072588287	9387575638	28.2	1.158017278	
1994	1959219858	23663388672	9829969085	9518139662	28.9	1.641429424	
1995	1079271551	28108826624	12341977056	12840774723	29.6	4.588522911	
1996	1593459222	35299151872	16849633975	11265317869	30.2	2.381630659	
1997	1539445718	36229369856	15993742204	14213155309	37.4	0.934943497	
1998	1051326217	32143818752	9854873211	13377182533	38.9	-5.425373554	
1999	1004916719	34776039424	13855898980	12063852369	41	2.139567375	
2000	1140137660	45983600640	20964886726	12017188987	41.1	3.542234421	
2001	1190632024	47999774720	19645113728	15736229435	53.6	5.235373974	
2002	1874042130	46710833152	18137167441	15797213468	44.8	13.65258312	
2003	2005390033	58294370304	27449225631	21866887089	46.8	6.16553688	
2004	1874032997	72053448704	38102191512	2.09812E+11	47.8	9.600000381	
2005	2013367378	98950504448	52232815855	24609285104	48.6	8.199999809	

Source: World Development Indicators 2007, China's Bureau of Statistics, Nigeria's National Bureau of statistics.

Table: showing regression results for China (1985-2005).

Dependent Variable: LGDP.

Variables	Coefficient	Std.Error	t-Statistics	Prob.
LFDI	0.299398	0.070172	4.266615	0.0007
LTEXP	0.982250	0.250732	3.917525	0.0014
LTIMP	-0.704088	0.290010	-2.427803	0.0282
EMP	1.497950	0.317400	4.719431	0.0003
MANUF	-0.005173	0.009365	-0.552316	0.5889
С	-160.8366	36.82515	-4.367576	0.0006

R-Squared	0.992792	Mean dependent var	1.193270
Adjusted R-squared	0.990390	S.D. dependent var	1.554247
S.E. of regression	0.152367	Akaike info criterion	-0.690095
Durbin-Watson stat	1.684195	Schwarz criterion	-0.391661
Sum squared resid	0.348235	F-statistic	47.20882
Log likelihood	13.24600	Prob (F-statistic)	0.000000

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Table: showing regression results for Nigeria (1985-2005).

Т

Dependent Variable: LGDP.

Τ

Variables	Coefficient		Std.Erro	r	t-Statistics	Prob.			
EMP	0.014167		0.0036	60	3.870461	0.0015			
LFDI	-0.056351		0.0469	81	-1.199447	0.2490			
LTEXP	0.602452		0.0746	76	8.067529	0.0000			
LTIMP	0.022916		0.0336	09	0.681840	0.5057			
MANUF	-0.005826		0.00404	42	-1.441467	0.1700			
С	10.33616		1.3887	79	7.442625	0.0000			
R-squared	ł		0.9597	72	Mean de	pendent v	ar	24.25	502
Adjusted I	R-squared	0.946	363	S.C	. dependent	var	0.418	3647	
S.E. of reg	gression	0.09	6957	A	kaike info crite	erion	-1.59	94144	
Sum squa	red resid	0.14	1010	So	chwarz criterie	on	-1.2	95709	
Log likelih	ood	22	2.73851		F-statistic				71.57576
Durbin-Wa	atson stat	2.265	315	Pro	b (F-statistic))	0.	000000	1
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