

# Relationship between Foreign Direct Investment and Country Population

Abdul Aziz (Corresponding author)

School of Business and Management, Morgan State University

Baltimore, Maryland, USA

Tel: 1-443-885-3285 E-mail: azizmsu@yahoo.com

Bilal Makkawi

School of Business and Management, Morgan State University

Baltimore, Maryland, USA

Tel: 1-443-885-4459 E-mail: Bilal.makkawi@morgan.edu

Received: December 22, 2011

Accepted: March 14, 2012

Published: April 16, 2012

doi:10.5539/ijbm.v7n8p63

URL: <http://dx.doi.org/10.5539/ijbm.v7n8p63>

## Abstract

The research on the factors that influence foreign direct investment (FDI) has ignored the role of population of a country. Such neglect seems to be motivated by the theoretical support for the assumption that large population is likely to be negatively related to economic growth. Based on a review of the latest research on the role of population in economic growth and the determinants of FDI, it was hypothesized that a country's population would be positively related to FDI. The data from 56 African and Asian countries supported the hypothesis.

**Keywords:** Foreign Direct Investment, Population

## 1. Introduction

In recent decades multinational enterprises (MNEs) have been searching for new markets for their products and services and at the same time both developed and developing countries were making efforts to attract investment from outside sources. Despite a large number of studies on the factors that influence a multinational enterprise's foreign investment decision, so far the empirical evidence on the role of the population as a determinant of foreign direct investment (FDI) has been lacking. This paper explores the relationship of a country's population with economic growth and presents empirical evidence of its influence on the inflow of FDI.

## 2. Determinants and Benefits of FDI

Earlier research has shown that FDI by MNEs contributes to economic growth (De Gregorio, 1992; Giroud, 2007; Lensink & Morrissey, 2000; Olivia & Rivera-Batiz, 2002). Domestic investment may accelerate economic growth but new technology is usually acquired through FDI (Yao & Wei, 2007). Borensztein, De Gregorio, and Lee (1998) believe that FDI results in technology diffusion necessary for economic growth through a process of 'capital deepening'. FDI provides capital for continuing and new commercial or industrial activity, when there is a reduction in capital from other sources (Noorbakhsh, Paloni & Youssef, 2001). They further argue that in addition to providing employment, FDI can also be a source of transfer of managerial skills and technology. The technical knowledge possessed by MNEs leads to the production of new capital goods at a lower cost. In fact investments by MNE's have a spillover effect (Crespo & Fontoura, 2006) as the increased level of FDI by MNEs provides a boost to productivity of domestic firms. Buckley, Wang and Clegg (2007) showed that locally owned and state owned Chinese enterprises benefit from the presence of affiliates of MNEs both in labor-intensive and technology-intensive industries. Domestic firms may also benefit when employees move from affiliates of foreign firms to local organizations, since foreign firms provide more comprehensive on-the-job training. But the benefit is not across the board. Xu (2000) found that technology transfer provided by U.S. MNEs contributes to growth in productivity in DCs (developed countries) but not in LDCs (less developed countries).

## 3. The Effect of FDI on Economic Growth

The increased efforts to attract more FDI stem from the belief that FDI has several positive effects (Alfaro,

Chanda, Kalemli-Ozcan & Sayek, 2004). These effects include among other things, productivity gains, technology transfers, and the introduction of new processes, managerial skills, and know-how in the domestic market, employee training, international production networks, and access to markets. Yao and Wei (2007) analyzed the gains in production by host countries and concluded that FDI is a major contributor to the economic growth of developing countries who are trying to 'catch up' with the more advanced economies of the world. Beugelsdijk, Smeets, and Zwinkels (2008) found that both vertical and horizontal FDI have a positive effect on the growth of the host country.

However, the belief that FDI has a positive influence on economic growth has been widely challenged. Bloomstrom, Lipsey, and Zejan (1994) have argued that positive effects of FDI on the host economy may depend on a variety of political, economic, legal and cultural factors. For example, the positive effects of FDI are possible only when per capita income of the host country is high. Balasubramanyam, Salisu, and Sapsford (1996) consider that trade openness is essential for maximizing the benefit from FDI. Borensztein et al. (1998) observed a 'crowding out' effect of FDI on domestic companies, where competition of foreign investment in product and financial markets resulted in displacement of domestic firms. Furthermore, Aitken and Harrison (1999) found the effect of foreign firms on domestic productivity to be minor in nature as opposed to the Borensztein et al. (1998) study that found an increase in productivity as a result of increased FDI.

#### **4. Factors Affecting FDI by Multinational Enterprises**

Despite mixed findings about the effect of FDI on the economic growth of a country, both developing and developed countries are making tremendous efforts to attract inward FDI.

Many countries have changed their policies to facilitate the flow of FDI and operation of multinational corporations within their borders (Noorbakhsh et al., 2001). Others have removed barriers that earlier restricted FDI and offered tax incentives and subsidies (Herzer, Klasen & Nowak-Lehmann, 2008). However, such efforts may not yield a desirable outcome of attracting foreign capital without an empirical evidence of the mode of entry of MNEs into a foreign market (Agodo, 1978). Without such an understanding, measures taken by various countries to attract FDI may not be effective and ultimately may waste resources. Therefore, an understanding of the dynamics of the decision making process of MNEs to enter a given market is critical in understanding the levels of inward FDI.

Earlier research suggests that MNEs consider many factors in their decision to invest in a host country. Agodo (1978) showed that investments by U.S. manufacturers in Africa were determined by the expected return on investment, size of the domestic market, amount of raw material, political stability and a favorable investment climate. Contrary to the expectations, the rate of growth, wage levels and, tax concessions and tariff protection did not influence the decision. Belington (1999) found that demand for MNEs products, seeking out new markets, size of the host market, host area or country's total income and GDP, infrastructure, labor and unemployment rates determined FDI. Bellak, Leibrecht, and Ried (2008) in a study of Central and Eastern European countries (CEEC) found that higher unit labor costs and higher total labor costs were negatively related but higher productivity was positively related to FDI. This suggests that labor cost should be considered as a determinant of FDI together with labor productivity rather than by itself. Bitzenis, Tsitouras, and Vlachos (2009) concluded that bureaucracy, high taxation, corruption, and the labor market structure were impediments for investments in Greece. Although corruption was found to be negatively correlated in developing countries to FDI inflow (Wei, 2000), the opposite was not true. A low level of corruption was not associated with high investments. The effect of exchange rates of the host country on the level of inflow of FDI is not conclusive. Froot and Stein (1991) argued that appreciation of host country's currency may actually increase FDI, but other studies concluded that depreciation of the host country's currency actually increases FDI by U.S. companies (Klein & Rosengren, 1994). Based on a review of empirical studies Blonigen (2005) found mixed results for the role of exchange rates on attracting FDI. The legal framework of a country may also play a significant role in FDI. Blonigen (2005) believes that a lack of legal protection of a company's assets reduces the chances of investment and a lack of high quality institutions increases the cost of doing business and discourages foreign investment. Apparently, trade protections are likely to increase foreign investment but the results from various studies have been mixed (Blonigen, 1997; Grubert & Mutti, 1991; Kogut & Chang, 1991).

The level of economic development seems to be a factor in determining investments made by MNEs. Morisset (2000) found that FDI in African countries was highly correlated with market size and GDP in 1996 and 1997 and with natural resources (UNCTAD, 1999). Morisset (2000) suggested that African countries need to become internationally competitive in order to attract FDI. Pigato (2000) recommended that in order to increase FDI, Africa needs to have human capital with diverse modern skills rather than low cost labor. Morris and Aziz (2011)

found that FDI in Asian and African countries was positively related to some of the factors of the World Bank index of 'ease of doing business'.

### 5. Population and Economic Growth

One of the important potential determinants of FDI, the host country's population seems to have been largely ignored by empirical research on the inflow of FDI. Interestingly enough the role of population in economic growth has been a subject of debate among economists for a long time. One of the most influential theories of population was proposed by Thomas Robert Malthus (1766-1834) who asserted that large population was a big problem for developing countries. He believed that the food supply would increase at an arithmetic rate while population, if remained unchecked, would increase at a geometric rate (Malthus, 1992). The reason for slower increase in food production as explained later may be due to scarcity of land and the law of marginal diminishing returns to labors and farming land (Nagarajan, 2007). Malthus also believed that there will be a constant tension between population and available resources, and that there would be a self-regulating system of population fluctuations (Caldwell, 1998). Malthus' idea that population growth was dangerous was generally accepted by most people in the late 19<sup>th</sup> century and early decades of the 20<sup>th</sup> century (Carey, 1992). This meant that countries with large populations were not expected to witness any economic growth. Malthusian ideas had far reaching implications for the debate on the influence of the population on economic growth in countries with large populations such as India and China. For example, influenced by Malthusian ideas, census reports in India during the latter part of the 19<sup>th</sup> century emphasized that natural causes which controlled population were removed (Caldwell, 1998), because of the stable government provided by the British. This fear of unchecked population growth was reflected in the 1951 Indian census report that drew attention to the inadequacy of natural mechanisms of famine and disease (Caldwell, 1998). Fearful Indian officials and political leaders believed that the prosperity of India heavily depended on checking population growth. Various studies and reports supported the idea of intervention by the government in reducing population growth through family planning methods. Eventually, in 1951 the Government of India announced the establishment of family planning program to begin in 1952, urging Indians to have a smaller family.

Similarly, China took measures to curb the growth of the population. Chinese government was involved with family planning since the 1950's (Riley 2003) but its most famous policy of 'one-child campaign' began in 1979. Initially Chinese government believed that a large population would increase its political strength and provide labor for its economic development. However, fear that higher population would hinder economic growth and a desire to improve maternal and child health resulted in reversal of the earlier policy and marked the beginning of population control. Voluntary and educational programs to curb the population targeted rural families who were taught the benefits of smaller families by encouraging later marriages and longer interval between children. These campaigns had little effect on population growth partly because of a lack of availability of birth control devices and medical facilities (Riley, 2003).

The efforts of both India and China resulted in slowing down the population growth rate mainly due to a general belief that large population would be detrimental to economic growth. However, during the 1970s, this thinking was revised by those who believed that population growth was neutral and can even be a positive factor in economic development (McNicoll, 1984). Nagarajan (2007) argues that the classical (Malthusian) theory has failed because it did not consider the potential effect of technology. Technological advancement may moderate or even offset the negative effects of population growth, by augmenting the quality and productivity of the factors of production, land, labor and capital and it may also contribute to income growth. Bloom and Freeman (1988) analyzed the relationship between size of a population and economic growth and found that developing countries during the 1965-1985 periods were able to shift their labor force from low-productivity agriculture to higher-productivity industry and service sector. Another assumption, derived from Malthusian theory that higher per capita income would result in higher population was contradicted by the data from 76 countries. It showed that the birth rates were significantly and negatively correlated with per capita GNP (Ehrlich & Liu, 1997). Using a statistical technique called meta-regression analysis, Headey and Hodge, (2009) provided the most recent test of the classical theory. The analysis was based on 42 studies with 471 estimates of population growth. The analysis indicated that the effect of population growth has been more adverse since 1980. According to the authors, it is puzzling since the population growth in most developing countries had slowed down during this period. However, more interesting finding of the study was a lack of support for the hypothesis that the effect of the population growth would be more adverse in developing countries. On the contrary, lower population growth in OECD (Organisation for Economic Co-operation and Development) countries resulted in sluggish economic growth.

Despite the simplicity of the assumption that larger population would have an adverse effect on the economic

growth and welfare of the country, the debate continues largely due to a lack of an unequivocal empirical support. Recent developments with India and China emerging as future economic powers have dampened the enthusiasm of those who argued against the benefits of large population. Since FDI and economic growth are positively correlated and since prior studies have not been conclusive on the negative effect of population growth on economic activity, it is conceivable that the population growth and the level of FDI are positively related. In this global economy, the role of FDI could not be undermined and therefore, the size of the population may not be ignored by MNEs as they seek to increase their profits in international markets. Consequently, countries such as India and China with very large populations tend to attract high levels of FDI. In 2005 India was forecasted as the greatest consumer market opportunity, receiving the highest FDI confidence index. India's consumption in 2006 rose by 21.38% to \$11 billion (Kilgore, Joseph, & Metersky, 2007).

Both India and China are credited with large domestic markets mainly due to large populations, enhancing their competitiveness. Economies of scale, for a large number of products are possible because of a large domestic market without having to depend on exports. The number of households that own consumer durable products reflects the economies of scale for both of these countries. In China, for example, a significant number of urban households own a washing machine [95.9], refrigerator [90.2], color television [133.4] and mobile phones [111.4] per 100 urban families (Winters & Yusuf, 2007). Similarly, in India, a large proportion of urban households own transistor radio [44.5%], television [64.3 %], and bicycles [24.7] (Winters & Yusuf, 2007). A large percentage of the family income in these countries is spent on food and other necessities where economy of scale is not important due to a large demand. Moreover, the success of a multinational corporation which is likely to invest in the manufacturing of consumer durables depends on the size of the market and the purchasing power of its potential consumers that may be offered by large populations in emerging economies. The purchasing power of the highest 10% income earners in China and India is \$ 550 billion and \$150 billion respectively (Winter & Yusuf, 2007).

Winters and Yusuf (2007) believe that in about half a century, China and India would be the largest economies of the world due to their large labor force and expanded skills base. These countries are not only future industrial giants but they are also past industrial giants. Such a scenario will not be entirely unfamiliar to these countries and may only be an interesting repetition of history. As recently as 1820, China and India together accounted for 50% of the world's GDP (Gupta & Wang, 2009).

## **6. Population and FDI**

The examples of China and India point out the advantages of a large population. Large populations provide a large market for products and services offered by MNEs, have a large labor force and a vast skill base. Admission to institutions of higher learning in these countries is highly competitive and only those with a high potential are admitted. Apart from the quality of human resources, the number of graduates in these countries is also astounding. China and India produce five million and three million graduates respectively each year (Gupta & Wang, 2009). Yet the demand for highly trained professionals is still far greater than the supply. The cost of these professionals for a multinational corporation is much lower than employing home country nationals, but scarcity is contributing to a rapid increase in the cost of technical and managerial personnel.

Considering the advantages of a large population, it was hypothesized that MNEs would make larger investments in countries with larger populations. The present study explores the relationship between the size of the population and inflow of FDI in some Asian and African countries.

## **7. Methodology**

### *7.1 Sample*

The sample included 56 countries of Sub-Saharan Africa (SSA) and Asia. All the countries in the regions, for which the data was available, were included with the exception of west Asian countries. This included 36 African and 20 Asian countries. A list of countries included in the sample is provided in Appendix A.

### *7.2 Measures*

The inflow of FDI to various countries of Sub-Saharan Africa and Asia represents the dependent variable. FDI inflow data for these countries for a period from 2000 to 2010 were extracted from the World Bank database (2011). The independent variable is the population of the country extracted from United Nations database (United Nations, Department of Economic and Social Affairs, Population Division, 2011).

## **8. Analysis and Results**

In order to investigate the relationship between the inflow of FDI and the population, the Pearson correlation

coefficients for SSA ( $n=36$ ) and Asian ( $n=20$ ) countries as well as for the combined sample ( $n=56$ ) were calculated and are provided in Table 1.

Insert Table 1- Here

The results showed that the size of the country population and inward FDI were positively correlated ( $p<.01$ ) for the SSA and Asian countries as well as for the combined sample for all the years from 2000 through 2010.

## 9. Discussion and Conclusion

The hypothesis of a positive relationship between the population and FDI has been strongly supported by the results of the present study. As discussed earlier, the emergence of the two most populous countries of the world China and India as future financial powers establishes a prima-facie case in favor of a positive impact of the population on economic growth. If we assume that FDI is positively related to economic growth of a country (Alfaro et al., 2004, Beugelsdijk et al., 2008, Yao & Wei, 2007) the present findings of a positive relationship between the population and FDI indirectly refute Malthusian doctrine of a disastrous effect of a large population on the economic growth of a nation. The findings of the present study suggest that MNEs may be considering population of a country as a factor in their decision to invest in a country. The population of a country in itself is perhaps not important but it has important implications for its economic growth. Factors associated with a large population may however be difficult to ignore. A large population implies a sizeable middle class with spending power and an appetite for products and services offered by MNEs. Another important factor in the success of a multinational enterprise may be the availability of a highly educated, trained and skilled workforce. Considering a high number of graduates coming out of Indian and Chinese universities, these two countries may continue to attract foreign investments. However, other countries with larger populations may have difficulties in receiving foreign investments if they lack or have insufficient number of universities and technical institutions necessary for developing a highly skilled workforce. There is evidence that inflow of FDI may be related to the availability of skilled labor (Zhang & Markusen, 1999). Although the percentage of qualified personnel in a large country may be small, but if the number of graduates is high enough to meet the human resource needs of MNEs, such countries may attract foreign investments. Future research may investigate a direct impact of the size of a middle class and number of graduates on the decision of MNEs to invest in a country.

## References

- Agodo, O. (1978). The determinants of U.S. private manufacturing investment in Africa. *Journal of International Business Studies*, 9, 95 -107. <http://dx.doi.org/10.1057/palgrave.jibs.8490671>
- Aitken, B. J., & Harrison, A. E. (1999). Do domestic firms benefit from direct foreign investment? Evidence from Venezuela. *The American Economic Review*, 89, 605-618. <http://dx.doi.org/10.1257/aer.89.3.605>
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: The role of local financial markets. *Journal of International Economics*, 64, 89-112. [http://dx.doi.org/10.1016/S0022-1996\(03\)00081-3](http://dx.doi.org/10.1016/S0022-1996(03)00081-3)
- Balasubramanyam, V. N., Salisu, M., & Sapsford, D. (1996). Foreign direct investment and growth EP and its countries. *The Economic Journal*, 106, 92-105. <http://dx.doi.org/10.2307/2234933>
- Bellak, C., Leibrecht, M., & Ried, A. (2008). Labour costs and FDI flows into Central and Eastern European Countries: A survey of the literature and empirical evidence. *Structural Change and Economic Dynamics*, 19, 17-37. <http://dx.doi.org/10.1016/j.strueco.2007.03.001>
- Beugelsdijk, S., Smeets, R., & Zwinkels, R. (2008). The impact of horizontal and vertical FDI on host's country economic growth. *International Business Review*, 17, 452-472. <http://dx.doi.org/10.1016/j.ibusrev.2008.02.004>
- Billington, N. (1999). The location of foreign direct investment: An empirical analysis. *Applied Economics*, 31, 65-76. <http://dx.doi.org/10.1080/000368499324561>
- Bitzenis, A., Tsitouras, A., & Vlachos, V. A. (2009). Decisive FDI obstacles as an explanatory reason for limited FDI inflows in an EMU member state: The case of Greece. *The Journal of Socio-Economics*, 38, 691-704. <http://dx.doi.org/10.1016/j.soec.2009.03.001>
- Blomstrom, M., Lipsey, R. E., & Zejan, M. (1994). What Explains Developing Country Growth?, NBER Working Paper No. 4132 (Cambridge, MA: National Bureau of Economic Research).
- Blonigen, B. A. (1997). Firm-specific assets and the link between exchange rates and foreign direct investment. *American Economic Review*, 87, 3, 447-465.
- Blonigen, B. A. (2005). A review of the empirical literature on FDI determinants. *Atlantic Economic Journal*, 33,

383-403. <http://dx.doi.org/10.1007/s11293-005-2868-9>

Bloom, D. E., & Freeman, R. B. (1988). Economic development and the timing and components of population growth. *Journal of Policy Modeling*, 10, 57-81. [http://dx.doi.org/10.1016/0161-8938\(88\)90035-X](http://dx.doi.org/10.1016/0161-8938(88)90035-X)

Borensztein, E., De Gregorio, J., & Lee, J-W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45, 115-135. [http://dx.doi.org/10.1016/S0022-1996\(97\)00033-0](http://dx.doi.org/10.1016/S0022-1996(97)00033-0)

Buckley, P., Wang, C., & Clegg, J. (2007). The impact of foreign ownership, local ownership and industry characteristics on spillover benefits from foreign direct investment in China. *International Business Review*, 16, 142-158. <http://dx.doi.org/10.1016/j.ibusrev.2006.12.006>

Caldwell, J. C. (1998). Malthus and the less developed world: The pivotal role of India. *Population and Development Review*, 24, 675-696. <http://dx.doi.org/10.2307/2808021>

Carey, J. (1992). *The Intellectuals and the Masses: Pride and Prejudice among the Literary Intelligentsia, 1880-1939*. London: Faber and Faber.

Crespo, N., & Fontoura, M. P. (2006). Determinant factors of FDI spillovers- What do we really know? *World Development*, 35, 410-425. <http://dx.doi.org/10.1016/j.worlddev.2006.04.001>

De Gregorio, J. (1992). Economic growth in Latin America. *Journal of Development Economics*, 39, 59-84. [http://dx.doi.org/10.1016/0304-3878\(92\)90057-G](http://dx.doi.org/10.1016/0304-3878(92)90057-G)

Ehrlich, I., & Lui, F. T. (1997). The Problem of population and growth: A review of the literature from Malthus to contemporary models of endogenous population and endogenous growth. *Journal of Economic Dynamics and Control*, 2, 205-242. [http://dx.doi.org/10.1016/0165-1889\(95\)00930-2](http://dx.doi.org/10.1016/0165-1889(95)00930-2)

Froot, K. A., & Stein, J. C. (1991). Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach. *Quarterly Journal of Economics*, 106, 4, 1191-1217. <http://dx.doi.org/10.2307/2937961>

Giroud, A. (2007). MNEs vertical linkages: The experience of Vietnam after Malaysia. *International Business Review*, 16, 159-176. <http://dx.doi.org/10.1016/j.ibusrev.2006.11.003>

Grubert, H., & Mutti, J. (1991). Taxes, tariffs and transfer pricing in multinational corporate decision making. *Review of Economics and Statistics*, 73, 285-293. <http://dx.doi.org/10.2307/2109519>

Gupta, A. K., & Wang, H. (2009). *Getting China and India Right*. Hoboken, N.J.: John Wiley.

Headey, D. D., & Hodge, A. (2009). The effect of population growth on economic growth. *Population and Development Review*, 35, 221-248. <http://dx.doi.org/10.1111/j.1728-4457.2009.00274.x>

Herzer, D., Klasen, S., & Nowak-Lehmann D. F. (2008). In search of FDI-led growth in developing countries: The way forward. *Economic Modelling*, 25, 793-810. <http://dx.doi.org/10.1016/j.econmod.2007.11.005>

Kilgore, M., Joseph, A., & Metersky, J. (2007). The logistical challenges of doing business in India. *Supply Chain Management Review*, 11(7), 36-43.

Klein, M., & Rosengren, E. S. (1994). The real exchange rate and foreign direct investment in United States: Relative wage effects. *Journal of International Economics*, 36, 373-389. [http://dx.doi.org/10.1016/0022-1996\(94\)90009-4](http://dx.doi.org/10.1016/0022-1996(94)90009-4)

Kogut, B., & Chang, S. J. (1991). Technological capabilities and Japanese foreign direct investment in the United States. *Review of Economics and Statistics*, 73, 401-413. <http://dx.doi.org/10.2307/2109564>

Lensink, R., & Morrissey, O. (2000). Aid Instability as a measure of uncertainty and the positive impact of aid on growth. *The Journal of Development Studies*, 36, 31-49. <http://dx.doi.org/10.1080/00220380008422627>

Malthus, T. R. (1992). *An Essay on the Principle of Population*. (2nd Ed.). Selected and introduced by Donald Winch, Cambridge: Cambridge University Press.

McNicoll, G. (1984). Consequences of rapid population growth: An overview and assessment. *Population and Development Review*, 10, 177-240. <http://dx.doi.org/10.2307/1973081>

Morisset, J. P. (2000). Foreign direct investment to Africa: Policies also matter. *Transnational Corporation*, 9, 107-125.

Morris, R., & Aziz, A. (2011). Ease of doing business and FDI inflow to Sub-Saharan Africa and Asian countries. *Cross-Cultural Management*, 18, 400-411. <http://dx.doi.org/10.1108/13527601111179483>

Nagarajan, S. (2007). *Population and development: Threads of a narrative*. Unpublished manuscript, The Center for Global Development, Washington, D.C.

- Noorbakhsh, F., Paloni, A., & Youssef, A. (2001). Human capital and FDI to developing countries: New empirical evidence. *World Development*, 29, 1593-1610. [http://dx.doi.org/10.1016/S0305-750X\(01\)00054-7](http://dx.doi.org/10.1016/S0305-750X(01)00054-7)
- Olivia, M. A., & Rivera-Batiz, L. A. (2002). Political institutions, capital flows, developing country growth: An empirical investigation. *Review of Development Economics*, 6, 248-262. <http://dx.doi.org/10.1111/1467-9361.00152>
- Pigato, M. (2000). *The Foreign Direct Investment environment in Africa. Africa Region*. Working Paper Series, No. 15. Washington, DC: The World Bank.
- Riley, N. E. (2004). China's population: New trends and challenges. *Population Bulletin*, 59, 2, 1-36.
- United Nations Conference on Trade and Development (UNCTAD). (1999). *Foreign Direct Investment in Africa: Performance and Potential*. New York and Geneva: United Nations publication.
- Wei, S. (2000). How taxing is corruption on international investors? *The Review of Economics and Statistics*, 82, 1-11. <http://dx.doi.org/10.1162/003465300558533>
- Winters, L. A., & Yusuf, S. (2007). *Dancing with Giants: China, India and the Global Economy*. World Bank and Institute of Policy Studies. Washington, D.C. and Singapore. <http://dx.doi.org/10.1596/978-0-8213-6749-0>
- World Bank. (2011). *World Development Indicators & Global Development Finance*. [Online] Available: <http://search.worldbank.org/data?qterm=fdi&language=EN>
- Xu, B. (2000). Multinational Enterprises, Technology Diffusion, and Host Country Productivity Growth. *Journal of Development Economics*, 62, 477-493. [http://dx.doi.org/10.1016/S0304-3878\(00\)00093-6](http://dx.doi.org/10.1016/S0304-3878(00)00093-6)
- Yao, S., & Wei, K. (2007). Economic growth in the presence of FDI: The perspectives of newly industrializing economies. *Journal of Comparative Economics*, 35, 211-234. <http://dx.doi.org/10.1016/j.jce.2006.10.007>
- Zhang, K., & Markusen, J. (1999). Vertical multinationals and host country characteristics. *Journal of Development Economics*, 59, 233-252. [http://dx.doi.org/10.1016/S0304-3878\(99\)00011-5](http://dx.doi.org/10.1016/S0304-3878(99)00011-5)

Table 1. Correlation Coefficients between Country Population and FDI (\$ M) for Asian, African Countries and Combined Sample

Variables	Asian (N=20)	African (N=36)	Combined Sample (N=56)
FDI & Population 2000	0.66**	0.55**	0.69**
FDI & Population 2001	0.64**	0.65**	0.67**
FDI & Population 2002	0.58**	0.65**	0.62**
FDI & Population 2003	0.59**	0.58**	0.64**
FDI & Population 2004	0.61**	0.52**	0.65**
FDI & Population 2005	0.62**	0.43**	0.66**
FDI & Population 2006	0.67**	0.44**	0.71**
FDI & Population 2007	0.71**	0.43**	0.73**
FDI & Population 2008	0.67**	0.60**	0.70**
FDI & Population 2009	0.67**	0.50**	0.71**
FDI & Population 2010	0.65**	0.48**	0.69**

\*\*  $p < 0.01$

## Appendix A – Countries included in the sample.

Sub-Saharan African Countries ( <i>n</i> =36)		Asian Countries ( <i>n</i> =20)
1. Angola	19. Malawi	1. Afghanistan
2. Benin	20. Mali	2. Bangladesh
3. Botswana	21. Mauritius	3. Bhutan
4. Burkina Faso	22. Mozambique	4. Cambodia
5. Burundi	23. Namibia	5. China
6. Cameroon	24. Niger	6. Hong Kong, China
7. Central African Republic	25. Nigeria	7. India
8. Chad	26. Rwanda	8. Indonesia
9. Congo Rep.	27. Sao Tome & Principe	9. Lao P Dem. Rep.
10. Congo-Dem. Rep.	28. Senegal	10. Malaysia
11. Cote d'Ivoire	29. Sierra Leone	11. Maldives
12. Eritrea	30. South Africa	12. Mongolia
13. Ethiopia	31. Sudan	13. Nepal
14. Ghana	32. Tanzania	14. Pakistan
15. Guinea	33. Togo	15. Philippines
16. Kenya	34. Uganda	16. Singapore
17. Lesotho	35. Zambia	17. Sri-Lanka
18. Madagascar	36. Zimbabwe	18. Taiwan, Pr. of china
		19. Thailand
		20. Viet Nam