

**THE DETERMINANTS OF FOREIGN DIRECT INVESTMENT
IN BRAZIL**

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**COLLEGE OF BUSINESS
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806435

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Abstract:

Brazil has been one of the significant recipients of foreign direct investment (FDI) among the newly emerging markets of global economy over the last 20 years, and has recorded rapid and sustained growth rates in a number of different industrial sectors. Indeed, FDI plays a significant role in the Brazilian economy. Brazil has been pursuing different foreign investment policies at different times depending on the development objectives and economic situation in the country. The present study has focussed on to empirically examine the influence of macroeconomic variables on Foreign Direct Investment in the Brazilian economy. The chosen macroeconomic variables are Gross Domestic Product (GDP), GDP per Capita (GDPPC), GDP growth rate(GDPGR), Trade ratio(TR), Exchange rate(ER), Inflation (INF) and rate of interest (Ri) as major determining factors. Regression method is applied to assess the functional relationship among these variables. The study is confined to the period of 20 years over 1990-2009 in Brazil. The findings of this study show that there is a strong positive relationship between Ex Rate, GDP, GDPPC and TR to the flow of FDI in the Brazilian economy. However, negative association between GDPGR, INF and Ri to FDI.

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LIST OF ABBREVIATIONS

FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GDPPPP	Gross Domestic Product Per Capita
GDPGR	Gross Domestic Product Growth Rate
TR	Trade ratio
ER	Exchange Rate
INF	Inflation
Ri	Rate of interest
BRL	Brazilian Real
APR	Annual Percentage Rate
BRIC	Brazil, Russia, India and China

CHAPTER ONE: BACKGROUND OF THE STUDY

1.1 Introduction

Foreign Direct Investment is largely viewed as a major stimulus to economic growth in developing countries. It is a device to deal with major growth obstacles such as shortages of financial resources, technology and skills. As such, FDI flow has captured the centre of attention for policy makers in developing countries including Brazil. FDI technically refers to investment made to acquire a lasting management interest (usually at least 10 % of voting stock) and acquiring at least 10% of equity share in an enterprise operating in a country other than the home country of the investor. FDI can take the form of either "green field" investment (also called "mortar and brick" investment) or merger and acquisition (M&A), depending on whether the investment involves mainly newly created assets or just a transfer of management functions from local to foreign firms.

1.2 Definition of FDI

Foreign direct investment, in essence, is simply investment that crosses over international boundaries. This kind of investment, however, is more complicated in practice. Before proceeding further into this paper it is worthwhile to have a clear idea about the basic definitions of what constitutes foreign direct investment and its related jargon.

Foreign Direct Investment (FDI) is the act of a company located in one country acquiring controlling equity of another company or entity located in a second country. The United Nations Conference on Trade and Development's (UNCTAD)

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References and Select Readings

Achy, L. and Kh. Sekkat, (2003), The European Single Currency and MENA's Exports to Europe, *Review of Development Economics*, 7, 563-583.

Agosin M. R. and R. Mayer (2000), Foreign investment in developing countries: Does it crowd in domestic investment?, UNCTAD working paper 146.

Agosin, Manuel R., and Ricardo French-Davis. 1995. "Trade Liberalization and Growth: Recent Experiences in Latin America." *Journal of Interamerican Studies and World Affairs*. 37(3): 9-58.

Agarwal, J. P. (1980), Determinants of foreign direct investment: A survey, *Weltwirtschaftliches Archiv* 116, 739-773.

Aizenman, J., and N. Marion (2004), The merits of horizontal versus vertical FDI in the presence of uncertainty, *Journal of International Economics* 62, pp. 125–148.

Alesina, A. and D. Dollar (2000) "Who gives foreign aid to whom and why?" *Journal of Economic Growth*, 5 (1), pp. 33-63.

Aliber, R. Z. 1970. "A Theory of Direct Foreign Investment." In *The International Corporation: A Symposium*, ed. C. P. Kindleberger. Cambridge Press: MIT Press.

Asiedu, E. (2001), "On the determinants of foreign direct investment to developing countries: is Africa different?", *World Development*, Vol. 30 No. 1, pp. 107-19.

Baer, W. and Rangel, G.B. (2001), "Foreign investment in the age of globalization: the case of Brazil", *Latin American Business Review*, Vol. 2 Nos 1/2, pp. 83-99.

Banco Central do Brasil: Annual Report 2001, Brasília, 2001, www.bacen.gov.br .

Barrell, R. and N. Pain (1996) "Domestic institution, agglomeration and foreign direct investment in Europe," *European Economic Review*, 43, pp. 29-45.

Barro, Robert. 1997. *Determinants of Economic Growth*. Cambridge, MA: MIT Press.

Basu, P., C. Chakraborty, and D. Reagle (2003) "Liberalization, FDI, and Growth in Developing Countries: A Panel Cointegration Approach," *Economic Inquiry*, 41, pp. 510-516.

Bengoa, M. and Sanches-Robles, B. (2003), "Foreign direct investment, economic freedom and growth: new evidence from Latin America", *European Journal of Political Economy*, Vol. 19, pp. 529-45.

Bevan, A. and Estrin, S. (2004) 'The determinants of Foreign Direct Investment in Transition Economies', *Journal of Comparative Economics*, 32: 775-787.

Biglaiser, G. And De Rouen, Jr., K. (2006), "Economic Reforms and Inflows of Foreign Direct Investment in Latin America." *Latin American Research Review* 41: 51-75.

Birch, Melissa H. 1991. "Changing Patterns of Foreign Investment in Latin America." *Latin American Business Review* 31(1): 141-158.

Birch, Melissa, and Garrett Halton. 2001. "Foreign Direct Investment in Latin America in the 1990s: Old Patterns, New Trends, and Emerging Issues." In *Foreign Direct Investment in Latin America: Its Changing Nature at the Turn of the Century*, edited by Werner Baer and William R. Miles, 13-32. Binghamton, NY: International Business Press.

Biswas, R. (2002) "Determinants of foreign direct investment," *Review of Development Economics*, 6 (3), pp. 492-504.

Blomstrom, M., Lipsey, R. and R., Zejan (1992), What explains developing country growth, NBER working paper 4132.

Borensztein, J., J. De Gregorio and J-W. Lee (1998), How does foreign direct investment affect economic growth?, *Journal of International Economics* 45, 115-135.

Brewer Th. L. (1993), Government policies, market imperfections, and foreign direct investment, *Journal of International Business studies* 24 (1), 101-120.

Brewer, Thomas. 1993. "Foreign Direct Investment in Emerging Market Countries." In Lars Oxelheim, Ed. *The Global Race for Foreign Direct Investment* (pp. 177-204). New York: Springer-Verlag.

Borensztein, E., J. Gregorio, and J. Lee (1998) "How does foreign direct investment affect economic growth?" *Journal of International Economics*, 45 (1), pp. 115-135.

Bosworth, B.P. and S. M. Collins (1999) "Capital flows to developing economies: Implications for saving and investment," *Brookings Papers on Economic Activity*, no. 1, pp. 143-169.

Campos N.F., and Y. Kinoshita (2002), the location determinants of foreign direct investment in transition economies, Centre for Economic Policy Research, CEPR.

Casson, Mark. 1990. "The Theory of Foreign Direct Investment." In *International Investment*, ed. P. J. Buckley. Aldershot: Edward Elgar.

Castanaga V., J. Nugent and B. Pashamova (1998), Host country reforms and FDI inflows: how much difference do they make?, *World Development* 26(7), 1299-1314.

Chen, T. J., and Y. H. Ku. 2000. "The Effect of Foreign Direct Investment on Firm Growth." *Japan and the World* 12 : 153-172.

Confederação Nacional da Indústria /CNI (2002) – *A indústria e o Brasil: uma agenda para o crescimento*.

Crenshaw, Edward. 1991. "Foreign Direct Investment as a Dependent Variable." *Social Forces*. 69:1169-1182.

Cushman, D. O. (1985), Real exchange rate risk, expectations, and the level of direct investment, *The Review of Economics and Statistics* 67 (2), 297-308.

Dasgupta, D., M. Nabli, C. Pissarides and A. Varoudakis (2002), Making Trade Work for Jobs: International Evidence and Lessons for MENA, World Bank mimeo.

Davidson, R., and J. G. MacKinnon. 1993. *Estimation and Inference in Econometrics*.
New York: Oxford University Press.

De Gregorio, J. (1992), Economic growth in Latin America, *Journal of Development International Country Risk Guide* (1999), Brief Guide to the Ratings System.

De Mello, L.R. (1999) "Foreign direct investment in developing countries and growth: A selective survey," *Journal of Development Studies*, 34 (1), pp.1-34.

Dijk, van M., 2002. The determinants export performance in developing countries. The case of Indonesian manufacturing. Ecis Working Paper 02.01.

Dunning, J.H. (1993) *Multinational Enterprises and the Global Economy*, Wokingham: Addison-Wesley.

Dunning, J.H., 1977. Trade, location of economic activity and the multinational enterprise. A search for an eclectic approach, in *The international allocation of economic activity*, ed. Ohlin, B., Hesselborn, P.O., Wijkman, P.M. Macmillan.

Encarnation D. J. and L. T. Wells, Jr. (1986) "Evaluating foreign investment," in T. H. Moran et al. *Investing in development: new roles for foreign capital?* Washington, DC: Overseas Development Council.

Ericsson, J. and M. Irandoust (2000) "On the causality between foreign direct investment and output: A comparative study," *International Trade Journal*, 15, pp. 1-26.

Ferrari-Filho, F. and De Paula, L.F. (2003), "The legacy of the real plan and an alternative agenda for the Brazilian economy", *Investigación Económica*, Vol. 63 No. 244, pp. 57

92.

Ferreira, C K L: "O Financiamento da Indústria e Infra-estrutura no Brasil – Crédito de Longo Prazo e Mercado de Capitais", Instituto de Economia/UNICAMP, Ph.D. thesis, Campinas/SP, 1995.

Foreign Investment Advisory Service – FIAS: "Legal, Policy and Administrative Barriers to Investment in Brazil", Vol. 1, report submitted to the Brazilian Ministry of Foreign Affairs, Brasilia, 2001.

Frenkel, M., Funke, K. and Stadtmann, G. (2004), "A panel data of bilateral FDI flows to emerging economies", *Economic Systems*, Vol. 28, pp. 281-300.

Froot, K., and J. C. Stein. 1991. "Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach." *Quarterly Journal of Economics* 106 : 1191-1217.

Galan, J.I. and González-Benito, J. (2006), "Distinctive determinant factors of Spanish foreign direct investment in Latin America", *Journal of World Business*, Vol. 41, pp. 171-89.

Galan, Jose, and Javier Gonzalez-Benito. 2001. "Determinant Factors of Foreign Direct Investment: Some Empirical Evidence." *European Business Review* 13 (5): 269-278.

Gastanaga, V.M., J. B. Nugent, and B. Pashamova (1998) "Host country reforms and FDI inflows: How much difference do they make?" *World Development*, 26, pp. 1299-1314.

Genser, Philip J, C., Yazdanbakhsh, M., & Mauricio L, B. (2007). A guide to modern statistical analysis of immunological data.

Grosse, R. and L. J. Trevino (1996) "Foreign direct investment in the United States: An analysis by country of origin," *Journal of International Business Studies*, 27, pp.139-155.

Grosse, Robert. 1997. "Foreign Direct Investment in Latin America." In *Generating Savings for Latin American Development*, edited by Robert Grosse, 135-153. Coral Gables, FL: North-South Center Press, University of Miami.

Hosseini, H. (2005), "An economic theory of FDI: a behavioral economics and historical approach", *The Journal of Socio-economics*, Vol. 34, pp. 528-41.

Hsiao, F.S.T. and Hsiao, M.W. (2006), "FDI exports, and GDP in East and Southeast Asia – panel data versus time – series causality analyses", *Journal of Asian Economics*, Vol. 17, pp. 1082-106.

International Monetary Fund – IMF: "International Capital Markets – Developments, Prospects and Key Policy Issues", Washington, September 2000. www.imf.org.

Jansen, W. Jos Stokman, Ad C.J. (2004), *Foreign Direct Investment and International Business Cycle Comovement*, ECB Working Paper No. 401; De Nederlandsche Bank Monetary & Economic Policy Working Paper No. 2003-10.

Jun, K. W and Singh, H. (1996). "The determinants of foreign direct investment in developing countries." *Transnational Corporations* 5: 67–105.

Kentor, Jeffrey, and Terry Boswell. 2003. "Foreign Capital Dependence and Development: A New Direction." *American Sociological Review* 68(2): 301-313.

Laplane, M. and Sarti, F. (1999) – *O IDE no Brasil: determinantes e estratégias*, in Chudnovsky, D. (1999), op. cit.

Lizondo, J. S. 1991. *Foreign Direct Investment*. Washington, DC: IMF.

Loree D. W. and S. E. Guisinger (1995), Policy and non-policy determinants of U.S. equity foreign direct investment, *Journal of International Business Studies* 26 (2), 281-299.

Lucas, R. E. B. (1993), On the determinants of direct foreign investment: Evidence from East and Southeast Asia, *World Development* 21 (3), 391-406.

Makdisi S., Z. Fattah and I. Limam (2000), Determinants of Growth in The MENA Countries, the Global Development Network.

MODY, A. and SRINIVASAN, K., 1998. Japanese and United States Firms as Foreign Investors: Do they march to the same tune? *Canadian Journal of Economics*, 31(4), pp. 778-799.

Montero, A. P. (2008) “Macroeconomic Deeds, Not Reform Words: The Determinants of Foreign Direct Investment in Latin America.” *Latin American Research Review* 43: 55-83.

Montero, A. P. (2009) “Political Governance and Macroeconomic Variables in Determining Foreign Direct Investment Flows: A Reply to John P. Tuman.” *Latin American Research Review* 44: 195-198.

Oman, Charles P. 2000. *Policy Competition for Foreign Direct Investment: A Study of Competition among Governments to Attract FDI*. Development Centre Studies, OECD.

Pucci, A. (2004) – O Brasil, a arbitragem e os investimentos estrangeiros, in *Vlaor Econômico*, 2 e 3 de maio.

Russ, K.N. (2007), "The endogeneity of the exchange rate as a determinant of FDI: a model of entry and multinational firms", *Journal of International Economics*, Vol. 71, pp. 344-72.

Sethi, Di, S. E. Guisinger, S. E. Phelan, and D. M. Berg. 2003. "Trends in Foreign Direct Investment Flows: A Theoretical and Empirical Analysis." *Journal of International Business Studies* 34 (2): 315-326.

SUN, Q., TONG, W. and YU, Q., 2002. Determinants of foreign direct investment across China. *Journal of International Money and Finance*, 21(1), pp. 79-113.

Thomas, D. and Grosse, R. (2001) 'Country-of-origin determinants of foreign direct investment in an emerging market: the case of Mexico', *Journal of International Management*, 7, 59-79.

Treviño, L.J. and Mixon, F.G. Jr (2004), "Strategic factors affecting foreign direct investment decisions by multi-national enterprises in Latin America", *Journal of World Business*, Vol. 39, pp. 233-43.

Tuman, John P., and Craig F. Emmert. 2004. "The Political Economy of U.S. Foreign Direct Investment in Latin America: A Reappraisal." *Latin American Research Review* 39: 9-28.

Tuman, J. P. (2006) "Regime Type, Rights, and Foreign Direct Investment in Latin America: A Brief Comment." *Latin American Research Review* 41: 183-196.

United Nations Conference on Trade and Development – UNCTAD: "FDI Determinants and TNC Strategies: The Case of Brazil", New York 2000; "World Investment Report 2001, Promoting Linkages", New York 2001, www.unctad.org/wir/index.htm and "World Investment Report 2002, Transnational Corporations and Export Competitiveness", New York 2002, www.unctad.org/wir

Walton, Michael. 2004. "Neoliberalism in Latin America: Good, Bad, or Incomplete?"

Latin American Research Review 39(3): 165-183.

WANG, J. and BLOMSTROM, M., 1992. Foreign investment and technology transfer: a simple model. *European Economic Review*, **36**, pp. 137-155.

Wang, Z. Q., and N. J. Swain. 1992. "The Determinants of Foreign Direct Investment in Transforming Economies: Empirical Evidence from Hungary and China." *Weltwirtschaftliches Archiv* 131 : 137-82.

WEI, Y. AND LIU, X., 2001. Foreign Direct Investment in China: Determinants and Impact. *Edward Elgar, UK*.

WEI, Y., LIU, X., SONG, S. and AND ROMILLY, P., 2001. Endogenous Innovation Growth Theory and Regional Income Convergence in China. *Journal of International Development*, **13**(2), pp. 153-168.

ZHANG, K.H., 2001. China's inward FDI boom and the greater Chinese economy. *Chinese Economy*, **34**(1), pp. 74-88.

ZHANG, K.H., 2001. What explains the boom of foreign direct investment in China? *Economia Internazionale*, **54**(2), pp. 251-274.

ZHANG, Z., 2001. Real Exchange Rate Misalignment in China: An Empirical Investigation. *Journal of Comparative Economics*, **29**, pp. 8-94.

ZHANG, A., ZHANG, Y. and ZHAO, R., 2001. Impact of Ownership and Competition on the Productivity of Chinese Enterprises. *Journal of Comparative Economics*, **29**(2), pp. 327-346.

ZHANG, K.H., 2000. Why Is U.S. Direct Investment in China So Small? *Contemporary Economic Policy*, **18**(1), pp. 82-94.

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