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# Foreign Direct Investment in South Africa: Why Has It Been So Low?

Athanasios Arvanitis

Foreign direct investment (FDI) has played a considerable role in the development of South Africa's economy, although in more recent years FDI has remained at relatively low levels compared with other emerging market countries. Despite an improvement in overall macroeconomic conditions and South Africa's advantages in terms of natural resources and market size, foreign investors have shown limited interest in acquiring, creating, or expanding domestic enterprises. Annual FDI inflows to South Africa averaged less than 1½ percent of GDP during 1994–2002, compared with 2–5 percent in a group of comparator countries (see below).

It is generally considered that foreign investment can act as a catalyst for investment and economic development in South Africa. The significance of FDI for engendering growth was particularly stressed in the Growth, Employment and Redistribution Strategy (1996) and has been restated in official statements since then. As private investment has been inhibited by South Africa's low saving rates, foreign investment can help address the saving deficiency and promote economic growth. The role of FDI is also buttressed by developments in the growth literature that highlight the dependence of growth on the rate of technological progress and the empirical observation that FDI, by triggering a diffusion of new technologies and management practices to host countries, can support a faster pace of economic growth.[1]

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[1]Borensztein, de Gregorio, and Lee (1995); McMillan (1999); and Mody and Murshid (2002) show that FDI can "crowd-in" domestic investment as efficiency spillovers make private investment more profitable.

In addition to its positive impact on growth, FDI represents a source of foreign exchange inflows that can help strengthen South Africa's international reserves. In a recent report, Standard and Poor's underscores the need to improve the country's ability to attract FDI to allow for a sustained improvement in South Africa's external position. In recent years, the South African Reserve Bank (SARB), considering FDI resilient to swings in market sentiment, has used these flows to help eliminate its net open forward position (NOFP).[2] Market analysts have suggested that higher FDI levels could set the stage for the removal of the remaining capital controls.

Given FDI's potentially important role to South Africa's economy, this chapter seeks to

- Describe historical trends and characteristics of FDI to South Africa;

- Compare South Africa with a group of countries with similar credit characteristics to place South Africa's FDI position in perspective; and

- Discuss a simple framework to examine factors that are empirically important in attracting FDI to emerging market countries and to derive implications for South Africa.

## Trends and Characteristics of FDI

Over the last quarter of a century, South Africa has attracted very little foreign investment (Figure 5.1). For much of the time, this was due to the political environment: the imposition of trade and financial sanctions in the mid-1980s, the subsequent financial crisis, the tightening of capital controls, and the declaration of a moratorium on payments to external creditors, which effectively cut South Africa off from the international capital markets. Cumulative FDI inflows in 1980–93 amounted to just over $0.3 billion. After 1993, FDI increased, with two major events dominating this period: the partial sale of government shares in Telkom in 1997 and the takeover of De Beers by Anglo American in 2001.[3] Overall, however, FDI has stayed at relatively low levels averaging about 1½ percent of GDP during 1994–2002.

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[2]Empirical evidence for the relative volatility of FDI and other forms of capital is mixed. Claessens, Dooley, and Warner (1995) conclude that FDI can be as volatile as other types of flows. For South Africa, Nowak (2001) shows that, while FDI is less volatile than most other capital flows, it does not exhibit any persistence over time.

[3]The FDI inflows recorded in 2001 (see Figure 5.1) include accounting transactions associated with the change in ownership of the De Beers mining company. Actual FDI inflows were about $3.5 billion.

**Figure 5.1. FDI Inflows**
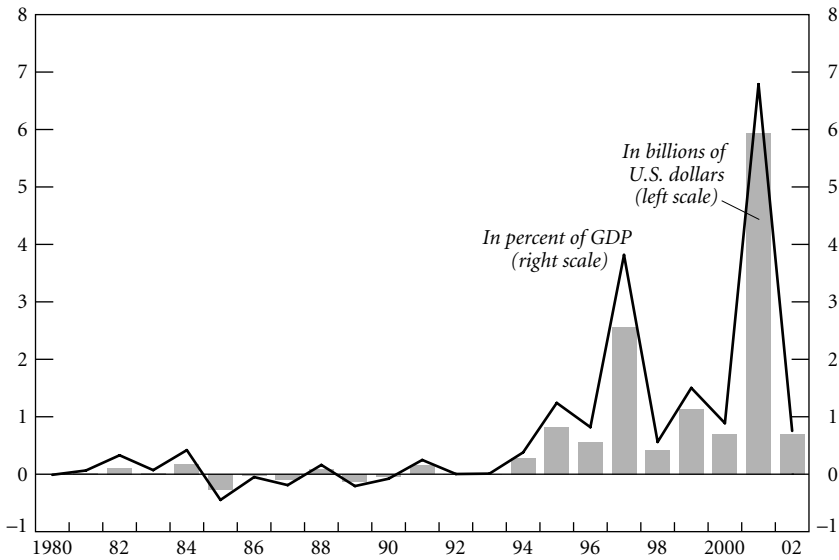


Source: South African Reserve Bank.

In terms of sectoral distribution, the FDI inflows have been relatively diversified. Contrary to what one would expect, the role of natural resources is less important despite South Africa's large mineral reserves.[4] Nonmining activities have drawn more than two-thirds of the FDI inflows, suggesting that the main aim of foreign investment in South Africa has been to capture domestic and regional markets (Figure 5.2).

As regards the origin of investments, the European Union (EU) has been the largest investor, accounting for about 90 percent of total FDI inflows. Investment from the United Kingdom outstrips investment from all other countries and accounts for three-quarters of the total (Figure 5.3). The United States and Asian countries complete the list of investors in South Africa.

In terms of the forms of FDI, a large part is investment in existing assets. Cross-border mergers and acquisitions are increasingly prominent,

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[4]In contrast, more than 60 percent of FDI in Africa is allocated to oil and natural resources (United Nations Conference on Trade and Development (UNCTAD) estimates).

**Figure 5.2.  FDI by Sector, Stock, End-2002**
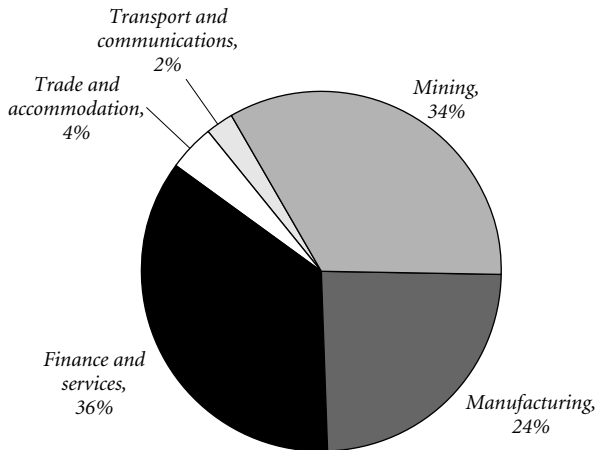


Source: South African Reserve Bank.

accounting for more than 60 percent of the total.[5] The restructuring and divestiture of state assets has been an important lever to attract FDI, as evidenced by the sale of government shares in Telkom in 1997 and the sale of South African Airways in 1999 (to be reversed later). Greenfield investment is relative uncommon in South Africa.

**Comparison with Other Countries**

The reduction of macroeconomic imbalances in the last several years has helped South Africa capture some of the FDI flows to emerging markets. Notwithstanding recent trends, however, South Africa receives far less FDI than countries with broadly similar credit characteristics (Box 5.1).[6] As a percent of GDP, South Africa receives about a half of the flows of similar Asian or Latin American countries. South Africa also attracts less FDI than countries with a noninvestment credit rating (Figure 5.4).

During 1994–2002, FDI added modestly to capital formation in South Africa. More important, the ratio of investment to GDP, at just 16 percent, is one of the lowest among the countries in the sample (Table 5.1). Domes-

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[5]The investment by Petronas in Engen, Dow Chemicals in Sentrachem, Coca Cola in SA Bottling, and more recently, the takeover of De Beers by Anglo American are among the more important mergers and acquisitions since 1994.

[6]Countries with broadly similar sovereign credit characteristics are used as comparators.

**Figure 5.3. FDI by Origin, Stock, End-2002**
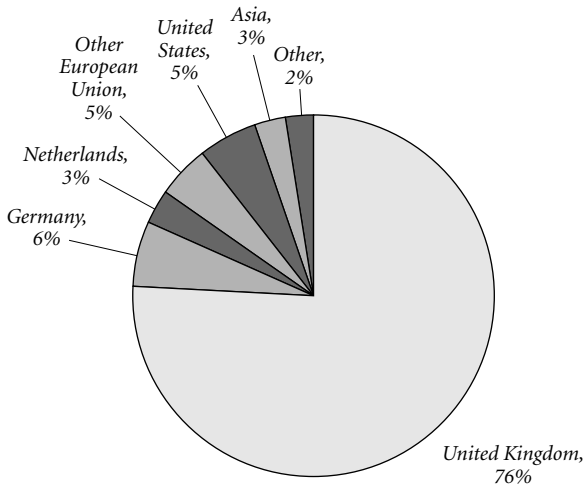


Source: South African Reserve Bank.

tic saving, at about 15 percent of GDP, has been insufficient to support significantly higher domestic investment rates (see Chapter 4). External capital will be needed to supplement domestic saving required for higher investment and growth. To this end, the role of FDI both as a source of growth and source of capital is becoming increasingly important.

## Determinants of FDI

The theoretical foundation on the location pattern of FDI is rather fragmented. Several theories have been put forward to explain FDI based on corporate strategies and investment decisions of firms facing worldwide competition and in the context of choosing to operate in a foreign location instead of exporting or entering into a licensing agreement with a local producer.[7] Shatz and Venables (2000) use two types of distinct theoretical models: a horizontal FDI model, in which the motive for FDI is to reduce the cost involved in supplying the market (domestic market-oriented

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[7]A summary of the recent literature on FDI is included in Lim (2001).

**Box 5.1. Comparator Countries and Sovereign Credit Ratings**

| | |
|---|---|
| BBB+: | Korea, Poland |
| BBB: | China, Malaysia, Tunisia |
| BBB–: | Egypt, Mexico, South Africa, Thailand |
| BB+: | Uruguay |
| BB: | Colombia, Costa Rica, Guatemala, India, Morocco, Panama, Philippines |

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   Note: Ratings are Standard and Poor's sovereign ratings for long-term currency risk as of mid-2002. The list excludes newly independent European countries due to unavailability of data prior to 1992, and oil producing small countries.

flows), and a vertical FDI model, where the motive is to take advantage of the low cost of production in a particular location (export-oriented flows). Both horizontal and vertical FDI models explain that FDI tends to cluster around a certain location (agglomeration) as linkages among firms create incentives to locate close to each other.

   These models, as well as Lim (2001) and Basu and Srinivasan (2002) suggest that five broad categories of factors are important in influencing FDI. These are market demand and size, agglomeration infrastructure, cost-related factors, investment environment, and country risk. Box 5.2 indicates variables that have been used in the literature to proxy these factors.

**Empirical Methodology**

   Within this framework, a panel data analysis is adopted to examine the determinants of FDI. The panel covers 17 countries (listed in Box 5.1) over the 1984–2001 period. The data sources are the IMF's World Economic Outlook and International Financial Statistics databases and the World Bank's World Development Indicators database. As discussed above, the country sample is determined by number of countries with a sovereign credit rating between BB and BBB+ in 2002. The dependent variable is the ratio of gross FDI to GDP.

   Two types of equations are estimated, one using the full sample of annual data and one with three-year averages to explore longer-run relations. The equations are estimated using both ordinary least squares (OLS), with White correction for heteroskedasticity, and generalized least squares (GLS), allowing for fixed effects in the cross section. Fixed-effects estimation allows

**Figure 5.4. Ratios of FDI to GDP, 1994–2002**
*(In percent)*
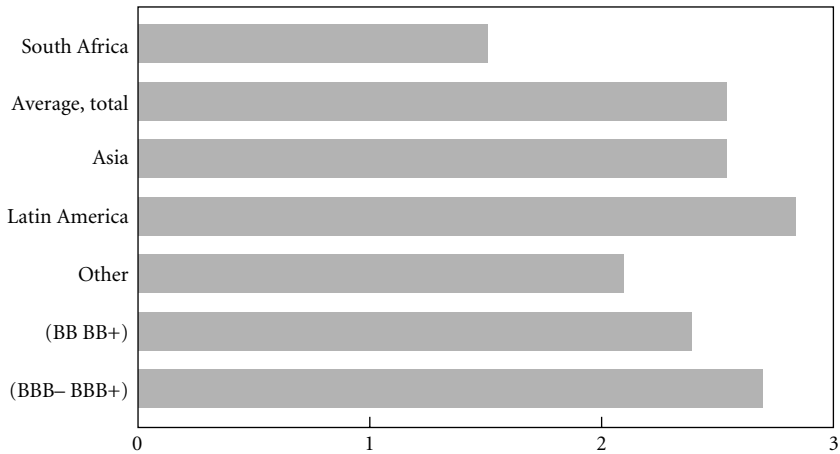


Sources: IMF, *World Economic Outlook* and *International Financial Statistics*.

**Table 5.1. FDI as a Source of Capital, 1994–2002**
*(Averages, in percent)*

|  | Total Investment/ GDP | FDI/Total Investment | Private Investment/ Total Investment |
|---|---|---|---|
| China | 36.1 | 12.7 | . . . |
| Colombia | 17.8 | 15.8 | 59.4 |
| Costa Rica | 18.6 | 17.7 | 77.3 |
| Egypt | 18.0 | 5.4 | 70.7 |
| Guatemala | 15.4 | 7.4 | 76.2 |
| India | 23.7 | 3.1 | 71.7 |
| Korea | 31.6 | 2.9 | 73.7 |
| Malaysia | 32.4 | 14.6 | 57.9 |
| Mexico | 19.4 | 15.2 | 80.7 |
| Morocco | 21.9 | 10.8 | 85.9 |
| Panama | 23.8 | 22.4 | 85.4 |
| Philippines | 21.6 | 9.3 | 78.3 |
| Poland | 21.2 | 11.8 | 76.4 |
| Thailand | 29.7 | 11.1 | 65.3 |
| Tunisia | 25.2 | 9.8 | 78.8 |
| Uruguay | 13.5 | 7.1 | 77.0 |
| Average, total | 23.1 | 11.1 | 74.3 |
| Average, Asia | 29.2 | 8.9 | 69.4 |
| Average, Latin America | 18.1 | 14.3 | 76.0 |
| Average, other | 21.6 | 9.4 | 78.0 |
| Average (BB–BB+) | 19.5 | 11.7 | 76.4 |
| Average (BBB–BBB+) | 26.7 | 10.4 | 71.9 |
| South Africa | 15.6 | 9.9 | 84.7 |

Source: IMF, World Economic Outlook database.

| Box 5.2. Possible Determinants of FDI | |
|---|---|
| Factors | Proxies used |
| 1. Market demand and market size | GDP per capita<br>Population<br>GDP growth |
| 2. Infrastructure and other externalities | Infrastructure (highway per square kilometer, telephone lines)<br>Degree of industrialization (domestic investment)<br>Stock of foreign investment (cumulative FDI) |
| 3. Cost-related locational factors | Dollar wages, unit labor costs, quality of labor<br>Cost of capital (lending rates)<br>Exchange rate volatility<br>Level of taxation |
| 4. Investment environment | Openness (trade) |
| 5. Country risks | Political risk index<br>Financial risk index |

for country-specific factors to drive FDI in individual countries; these effects are captured in the respective intercepts of the equations. Overall, a relatively large share of the variation in FDI can be explained by a small number of factors (Table 5.2). The results are fairly robust across the two specifications (three-year and annual data). As expected, the GLS approach, adjusting for group-wise heteroskedasticity, gives stronger results.

The GDP growth rate was used to proxy for potential market demand. To avoid endogeneity problems (larger market size may attract FDI that increases GDP) the variable was lagged by one period.[8] The results showed that countries with high growth rates tended to attract more FDI. Intuitively, given the relative persistence in growth rates, firms observing high growth rates could expect high future growth rates and thus establish their presence in fast-growing countries.

Infrastructure development were proxied by telephone lines per 1,000 people. Across all equations, the impact is positive and significant indicating that the quality of infrastructure is a dominant factor influencing FDI.

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[8]Lagged values are also indicative of information available to market participants.

**Table 5.2. Regression Results—Dependent Variable: FDI as a Percent of GPD**
*(White heteroskedasticity-consistent t-statistics in parentheses)*

| | Based on Three-Year Average | | | | Based on Annual Data | | | |
|---|---|---|---|---|---|---|---|---|
| | GLS | | OLS | | GLS | | OLS | |
| | Coefficient | t-statistics | Coefficient | t-statistics | Coefficient | t-statistics | Coefficient | t-statistics |
| Growth, lagged | 0.0342 | (4.958) | 0.0419 | (1.951) | 0.0296 | (6.753) | 0.0416 | (1.940) |
| Illiteracy rate | -0.0002 | (-2.381) | -0.0008 | (-2.003) | -0.0002 | (-3.989) | -0.0010 | (-2.903) |
| REER volatility | 0.0001 | (2.792) | 0.0002 | (0.919) | 0.0001 | (5.041) | 0.0001 | (-0.588) |
| Trade openness | 0.0270 | (5.650) | 0.0125 | (0.945) | 0.0209 | (5.441) | 0.0092 | (1.253) |
| Tax revenue to GDP | -0.0218 | (-3.983) | -0.0331 | (-2.961) | -0.0245 | (-4.841) | -0.0568 | (-2.892) |
| Telephone lines per 1,000 | 0.0001 | (16.055) | 0.0001 | (2.104) | 0.0001 | (19.561) | 0.0001 | (4.241) |
| Country risk, ICRG | | | 0.0032 | (0.864) | 0.0009 | (2.177) | 0.0027 | (1.402) |
| Constant, South Africa | -0.0070 | (-1.763) | -0.0041 | (-2.123) | -0.0090 | (-1.783) | -0.0144 | (-1.176) |
| Adj R² | 0.43 | | 0.46 | | 0.40 | | 0.42 | |
| Number of observations | 102 | | 102 | | 306 | | 306 | |
| D-W | 1.12 | | 1.18 | | 1.18 | | 1.01 | |

Source: Author's calculations.

Cost-related location factors were captured by a labor quality variable. Two reasons motivated this. First, data on wages are not available for many countries. Second, recent studies have shown that raw labor costs are not a significant attractor of FDI, but labor quality is.[9] Labor quality was proxied by illiteracy rates, and they were inversely related to FDI.

The ratio of tax revenue to GDP was used to proxy fiscal burden. As expected, the coefficient was negative and significant.

The variability of the real exchange rate can be expected to influence the choice for location of the production of a multinational company. The conventional view is that exchange rate volatility affects sales and influences the location decision of firms that want to capture or serve domestic markets.[10] The standard deviation of the level of the real effective exchange rate (REER) proved to be significant with a positive effect on FDI.

The degree of trade openness is positively and significantly correlated with FDI. This supports the argument that trade liberalization, by reducing trade and administrative barriers, improves the business environment and helps to attract FDI.

The inclusion of country risk, as proxied by the International Country Risk Guide (ICRG) or the Investment Profile index, had mixed results in the regressions and the variable was not significant in several equations. This is not surprising since the sample consists of countries with similar risk ratings.

## Implications for South Africa

Given South Africa's low levels of domestic saving and investment, higher FDI inflows are critical to spur growth. This chapter sheds some light on factors affecting FDI and draws some lessons:

- The degree of infrastructure development, trade liberalization, skills availability, and potential market size are among the important factors for determining FDI in a group of countries comparable to South Africa.

- South Africa has some way to go before it reaches the FDI levels of comparator countries. In 1994–2001, South Africa had lower rates of growth, less trade openness, less deep telecommunication infrastructure, weaker labor skills, and slightly less competitive tax rates (Table 5.3). In part, this

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[9]Lim (2001).
[10]Goldberg and Kolstad (1994).

**Table 5.3. Differences Between South Africa and Comparator Countries**
*(Averages over 1994–2001)*

| Variables | South Africa | Average, Asia | Average, Latin America | Average, Others | Average (BB–BB+) | Average (BBB–BBB+) |
|---|---|---|---|---|---|---|
| GDP per capita (in U.S. dollars) | 3,279 | 2,988 | 3,671 | 2,111 | 2,505 | 3,545 |
| GDP growth rate | 0.03 | 0.06 | 0.03 | 0.05 | 0.04 | 0.05 |
| Openess to trade ratio | 0.49 | 0.90 | 0.52 | 0.60 | 0.57 | 0.80 |
| Tax to GDP ratio | 0.25 | 0.21 | 0.21 | 0.31 | 0.21 | 0.25 |
| Phones per 1,000 population | 111 | 138 | 141 | 101 | 105 | 155 |
| Illiteracy rate (in percent) | 15.73 | 14.85 | 11.40 | 33.22 | 20.36 | 15.94 |

Sources: IMF, World Economic Outlook and International Financial Statistics databases; and World Bank, World Development Indicators database.

explains why South Africa scores below other countries in cross-country FDI comparisons.

• The empirical analysis also suggests that fixed effects for South Africa are significant. Other omitted factors, unique to South Africa, may therefore be important in influencing firms' investment decisions. The statistically significant negative value of the intercept in South Africa's equation implies that these other factors reduce the ratio of FDI to GDP by 0.4–1.4 percentage points relative to other countries.

• Recent business surveys have identified crime as the leading constraint on investment, followed by the cost of capital, labor regulations, and skills shortages.[11] To the extent that these factors are perceived to be less of a problem in other countries, there would be perceived costs to investing in South Africa that would be reflected in the negative fixed effects coefficients.

The government has launched a comprehensive industrial strategy to promote investment in an environment of macroeconomic stability. This includes initiatives to address the skills shortage in South Africa and implement the free trade agreements with the European Union and other Southern African Development Community (SADC) members. The empirical analysis presented here suggests that these measures will have a positive impact on FDI inflows.

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[11]GJMC–World Bank Survey, 1999; and World Business Environment Survey, 2000.

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