

# FOREIGN DIRECT INVESTMENT (FDI) : WHAT IS IT?

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## *Abstract*

This paper questions the official definition of FDI and argues that it is different from domestic direct investment, or “gross fixed capital formation”. After considering the official (IMF / OECD) definition of FDI, we analyse the transmission channels through which capital inflows impact on the domestic economy – showing that gross fixed capital formation constitutes a relatively small part of the overall impact. This is followed by a brief look at “FDI” patterns in South Africa, particularly the recent Barclays-ABSA deal. The value of the latter deal is shown to have been wrongly entered as “direct investment” insofar as it contributed little or nothing to gross fixed capital formation.

An attempt is also made to show that many past studies may have miss-specified and wrongly estimated the macroeconomic determinants or impact of FDI, officially defined. Finally, we provide an explanation for the role played by FDI using a broader definition of capital (including human capital) and allowing for indirect spillover effects on the domestic economy.

## **1.. Introduction**

The purpose of this paper is to question the official – and widely used – definition of ‘foreign direct investment’, or FDI. We argue that it is inconsistent with the definition of ‘domestic direct investment’, or gross fixed capital formation, as the South African Reserve Bank refers to it. Our main point is that *official* FDI in effect represents something quite different from additions to the domestic capital stock.

The standard definition of FDI is provided by the IMF (1993: para 175): “(FDI is) an investment that reflects the objective of obtaining a lasting interest by a direct investor in an entity resident in an economy other than that of the investor” (see also OECD, 1996). The “lasting interest” in the IMF definition implies that the foreign investor should have “a significant degree of influence on the management of the enterprise” (IMF, 1993: *ibid*). Essentially, what distinguishes direct investment from portfolio investment is the significant influence that gives direct investors a control over the management of the enterprise. Similarly, FDI is defined in terms of the notion of ownership, with a 10 per cent ownership of ordinary shares or voting stock being the cut-off point between FDI and foreign portfolio investment: the amount involved in a foreign institution acquiring 10 per cent or more of the shares or voting rights of a domestic enterprise constitutes FDI, whilst a corresponding investment lower than 10 % is defined as foreign portfolio investment. When a portfolio investor, who initially owned less than 10 per cent of a domestic enterprise, subsequently increases that investment above the 10 per cent

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benchmark, the additional shares in excess of 10 per cent are recorded as FDI (IMF, 1993: para 374).

As the name itself suggests, FDI may be reasonably considered as nothing more or less than “greenfield” investments in the creation of new capital facilities or in the expansion of existing facilities. In much the same way as domestic direct investment, FDI thus creates new production capacity and jobs, transfers or provides access to new technology and know-how, and may create or reinforce backward and forward linkages within the domestic economy and beyond.

Viewed from this conventional perspective, the formal IMF definition would seem to be pretty arbitrary. If a foreign investor acquired 9 per cent of the shares of a domestic enterprise, and the proceeds were used for greenfield investments, the transaction would be wrongly recorded as a foreign portfolio investment. Likewise, a foreign company acquiring 51 per cent ownership, with the proceeds being used for purposes other than greenfield investments, would be deemed to have made a foreign direct investment. The latter transaction involves a change of ownership (only) and is usually referred to as a cross-border acquisition or merger.

Acquisitions and mergers (A & M’s) are not necessarily inconsistent with the IMF definition above, or at least with its underlying intent, but they are surely not the same as greenfield investments. And yet A & M’s are supposed to constitute a significant proportion of FDI flows, formally defined, in both developed and developing countries (Mody, 2004). In South Africa too, FDI “(mostly) involves the acquisition of existing operations rather than the setting up of new enterprises” (Gelb & Black, 2004: 321 ). This is not to say that A & M’s do not add value to the domestic economy, but it does suggest, as we argue below, that the term FDI is quite different from its domestic equivalent, or gross fixed capital formation.

The rest of this paper is organized as follows. Section 2 looks at the transmission mechanisms through which capital inflows, including FDI, enter a country and impact on its economy. Section 3 gives a brief discussion of the recent Barclays takeover of ABSA Bank in South Africa and argues that very little, if any, of the total amount involved represented additions to the physical capital stock of the country. Section 4 considers some of the implications for empirical research, while section 5 provides a broader definition of FDI than the official one currently being used. Section 6 gives a brief conclusion.

## **2. Transmission Channels**

FDI may be viewed as one component of the annual capital flows on the balance of payments (e.g. Wurgler, 2000). In Fig 1 below (and in the rest of this paper) we focus only on those capital inflows that comply with the official definition of FDI (i.e. 10 per cent ownership or more). The figure shows that capital inflows may give rise to FDI (e.g. a new factory, hotel or residence) directly; or they may work their way through the equity

and bond markets and through foreign purchases of fixed assets. The critical issue here is what happens to the proceeds of these latter transactions, i.e. the selling of domestic equity, bonds and fixed assets to foreign buyers. Depending on the objectives of both the foreign investors and the sellers, some of the proceeds may be used for direct investment purposes, i.e. FDI.

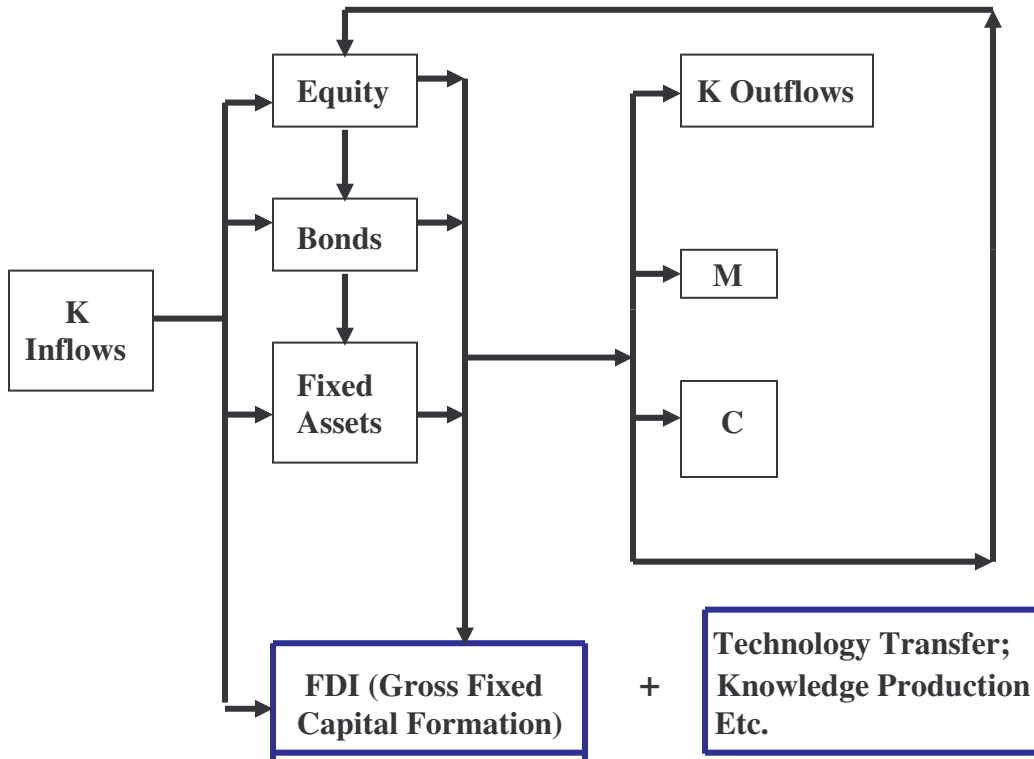


Fig 1

Alternatively, the proceeds may be used for private and public consumption purposes (C in Fig 1), spent on imports (M), or they may leave the country as capital outflows (in the form of outward portfolio or direct investments). Some proportion of the proceeds may also remain within the domestic financial markets as savings, at least within the relevant financial year. Conventionally it is assumed that these savings will ultimately be transformed into direct (capital) investments, i.e. effectively FDI.

The macroeconomic impact of (net) capital inflows is shown in the following total spending or demand function:

$$Y^d = (C)(1 + f_c) - M(1 + f_m) + (I)(1 + f_i) + X \quad [1]$$

where  $f_c$  is the fraction by which capital inflows boost consumption,  $f_m$  is the fraction by which they boost imports, and  $f_i$  is the percentage by which they boost (private and

public) investment.  $(I)(1 + f_i)$  represents gross fixed capital formation, with  $f_i(I)$  being FDI as defined officially.

### 3. South African Example

A good example of the point being made in this paper is the recent take-over by Barclays Bank in England of a large South African bank, ABSA. The Barclays bid came to about R 30 billion, representing just over 60 per cent of the issued shares, and was finally settled in July 2005. It appears to have been a straightforward A & M-induced change of ownership, with no explicit indication being given – apart from the usual “smart talk” at the official announcement – of any plans to augment the capital stock within the ABSA group. And yet the full value of the transaction appears to have been recorded as FDI in 2005: Q3 – as shown in Tables 1 and 2 below.

**Table 1: Financial Account (2003:Q04 to 2005:Q03) (R mill)**

	2003		2004				2005			
	04	2003	01	02	03	04	2004	01	02	03
<b>Direct investment</b>										
<i>Liabilities</i>	3 021	5 550	8,630	-1 605	2 007	-3 877	5 155	1 369	1 371	32 175
<i>Assets</i>	-1 017	-4 275	237	-9 785	-380	1 207	-8 721	-633	3 161	-1 700
<i>Net direct investment</i>	2 004	1 275	8,867	-11 390	1 627	-2 670	-3 566	736	4 532	30 475
<b>Portfolio investment</b>										
<i>Liabilities</i>	-6 107	7 548	5,105	14 095	2 984	22 691	44 875	7 808	25 281	7 296
<i>Assets</i>	-555	-1 001	-18	-1 493	-1 279	-3 156	-5 946	2 264	-1 541	-3 225
<i>Net portfolio investment</i>	-6 662	6 547	5,087	12 602	1 705	19 535	38 929	10 072	23 740	4 071
<b>Other investment</b>										
<i>Liabilities</i>	9 263	14 594	4 899	5 112	-2 888	3 758	10 881	22 291	-2 416	1 938
<i>Assets</i>	-17 762	-36 919	-11 102	3 251	1 589	4 099	-2 163	-6 343	746	-26 375
<i>Net other investment</i>	-8 499	-22 325	-6 203	8 363	-1 299	7 857	8 718	15 948	-1 670	-24 437

Source: SARB, 2005

**Table 2: Foreign Liabilities : Direct Investment (R mill)**

	2003	2004	2005	2006
Banking Sector:	165	1640	31 134	268

Source: SARB, 2005

The data shown in the first row of each table clearly indicates a gigantic jump in the value of FDI during (the third quarter of) 2005; and it is perhaps no coincidence that the actual values – R 32.2 billion for the country as a whole, and R 31.1 billion for the banking sector in 2005 – came close to the value of the Barclays-ABSA transaction. While the latter transaction is likely to confer many benefits on the ABSA group and its clients (see section 5 below), very few of these would have materialized in (the third and fourth quarters of) 2005. And if ABSA were to use the proceeds from the transaction to undertake greenfield investments during subsequent years, these would be rightly recorded as FDI – in the years that they happen. From a time series perspective, however, there is the obvious danger of double counting, i.e. of recording both the R 30 billion in 2005 and a subsequent investment of, say, R 10 billion in 2007 when the latter were funded entirely from the proceeds of the original transaction. It is of course possible that ABSA could use the proceeds from its Barclays transaction to buy shares in other listed domestic companies which then use the (second-round) proceeds to undertake greenfield investments – presumably the core assumption behind the official definition of FDI. But such investments are also likely only to materialize after (the third quarter of) 2005, thus giving rise to double counting once more.

It is clear that the Barclays-ABSA transaction did *not* involve direct or greenfield investments, at least not in 2005, and therefore should *not* have been recorded as FDI, or as part of gross fixed capital formation in 2005. Referring back to Fig 1, we argue that much of what is officially assumed to be FDI are in fact transfers of ownership that effectively add to domestic spending, including (direct) investment, capital outflows on the balance of payments or, in a given year, remain in the financial markets as savings.

#### 4. Implications for Empirical Research

Most empirical work on FDI has made use of officially recorded data and assumed, often implicitly, that the official figures represent additions to the host country's physical capital stock. We contend that the resultant empirical estimates suffer from a misspecification of the data and may have yielded spurious results. Following on from Fig 1 and equation [1] above, we may specify 'foreign direct investment' in terms of the *official or effective* definition used, i.e.

$$\mathbf{FDI}^b_t = \mathbf{FDI}_t + (f_c C)_t + (f_m M)_t + (f_s S)_t + (f_{k_o} KO)_t \quad [2]$$

where  $\mathbf{FDI}_t = f_i(I)$  in period  $t$ ;  $(f_s S)_t$  is the fraction by which capital inflows boost domestic savings in period  $t$  (which, over time, could be turned into direct investment, or FDI); and  $(f_{k_o} KO)_t$  is the fraction by which they boost capital outflows.

A generic version of the corresponding econometric equation may be specified as:

$$\mathbf{FDI}^b = \alpha_b + \beta_b X + \varepsilon_b \quad [3]$$

with  $\alpha_b$  and  $\beta_b$  being the estimated coefficients and  $\varepsilon_b$  the error term. The independent variable,  $X$ , may represent real GDP growth, often lagged several times, or the real effective exchange rate; while several empirical studies have also used dummies to account for the removal or relaxation of exchange controls (e.g. Blomstrom et al., 1994; de Mello & Luiz, 1997). Now, the equivalent econometric equation for FDI in the sense of *physical capital formation*,

$$\mathbf{FDI} = \alpha_f + \beta_f \mathbf{X} + \varepsilon_f \quad [4]$$

is likely to yield different results from those generated by equation [3], with  $\beta_b \neq \beta_f$ . Clearly, this difference will depend on the extent to which  $\mathbf{FDI}^b$  varies over time relative to FDI.

Several studies have also looked at the impact that FDI has on real GDP growth, again using official data (e.g. Fry, 1993; Borensztein et al., 1995; de Melo & Luiz, 1999; Alvaro et al., 2003). As before, the  $\beta$ 's in the following two generic equations are likely to differ:

$$\mathbf{y} = \alpha_b + \beta_b \mathbf{FDI}^b + \dots \quad [5]$$

$$\mathbf{y} = \alpha_f + \beta_f \mathbf{FDI} + \dots \quad [6]$$

where  $y$  represents real GDP growth.

## 5. Theoretical Observations

We have argued that FDI is generally perceived to augment domestic savings and add to the physical capital stock of the host country. Its role may thus be explained in terms of the standard Solow-Swan production function,  $Y = A K^\alpha N^{1-\alpha}$ ; or in growth terms,  $y = a + \alpha k + (1 - \alpha) n$ , where  $k$  and  $n$  are the growth rates of physical capital and labour, respectively. Allowing for FDI – as defined here – we have:

$$\mathbf{k} = s \sigma + \mathbf{k}_f \quad [7]$$

where  $s$  is the domestic saving ratio,  $\sigma$  is the output:capital ratio and  $\mathbf{k}_f$  is the growth rate of FDI (which can be positive or negative).

FDI is often accompanied by a transfer of new or enhanced technologies (e.g. Saggi, 2000); or in terms of the above model,  $a = a(\mathbf{k}_f)$ . Similarly, this impact of FDI can be captured by Romer's (1994) knowledge production function,

$$\dot{\mathbf{A}} = \mathbf{B} (\mathbf{K}_a)^\beta (\mathbf{N}_a)^\pi \mathbf{A}^\theta \quad [9]$$

where  $K_a$  and  $N_a$  are the capital and labour used in knowledge production. As before, FDI may augment  $K_a$  (or  $N_a$ ); or in growth terms,

$$\mathbf{k}_a = s_a \sigma_a + \mathbf{k}_{af} \quad [10]$$

where  $s_a$  is the savings proportion of domestic income allocated to investment in the knowledge sector,  $\sigma_a$  is the corresponding output:capital ratio, and  $\mathbf{k}_{af}$  is the growth rate of foreign capital invested in the knowledge sector (e.g. Haddad & Harrison, 1993; Kokko, 1994; Aitken & Harrison, 1999; see also Rattso & Stokke, 2007, who define technology absorption by extending Romer's 'A').

FDI may also have indirect or induced effects within the host country (e.g. Markusen & Venables, 1997; Kumar & Pradhan, 2002). These effects may happen through FDI-induced increases in the demand for mineral and material inputs supplied locally, or through FDI-induced increases in the supply of mineral and material inputs to domestic processing enterprises. The resultant multiplied increase in income may then induce new capital investments downstream or upstream, giving rise to further multiplied increases in income. Thus,

$$\mathbf{I}_d = \mathbf{I}_d (\mathbf{I}_f) \quad [11]$$

where  $\mathbf{I}_d$  and  $\mathbf{I}_f$  represent additions to the (value of) the physical capital stock made by domestic and foreign investors, respectively. A similar argument may also apply to exports, in the sense that the merged company may be better able to penetrate export markets, thus boosting exports in the host country (Pigato, 2001).

The empirical literature reveals a great deal of uncertainty about the perennial issue of causality (e.g. Kumar & Pradhan, 2002: Table A1). Most commentators would however agree that sustained economic growth, coupled with efficient financial markets (Alfaro et al., 2004) and a sufficient skills base (Boretsztein et al., 1995; Kokko et al., 1996; UNCTAD, 1999), are prerequisites for FDI, broadly defined to include technology and knowledge transfers.

## 6. Conclusion

This paper has questioned the official definition of FDI, on two counts. Firstly, the national accounts assume that foreign investors acquiring 10 % or more of the shares or voting power of a domestic enterprise are undertaking FDI – in the sense of adding to the physical capital stock of the host country. This is simply not true. In any given year, e.g. 2005 in the case of the Barclays takeover of ABSA Bank, most of the proceeds of the transaction may give rise to increased consumption, additional capital outflows on the balance of payments, or may remain in the financial markets as savings. FDI linked to the proceeds of the initial transaction, or induced by it, may only come later, e.g. in 2006 onwards; in which case there is a real danger of double counting, i.e. counting the full

value of the original transaction (in 2005) as well as subsequent investments (in 2006) that are financed by the proceeds from the selfsame transaction.

Secondly, the official definition does not explicitly account for the value of technology and knowledge transfers accompanying a foreign fixed capital investment. One response might be to concede that only a small portion of the value of the initial takeover or merger, e.g. R 30 billion in the case of the Barclays-ABSA transaction, represents gross fixed capital formation but that the full amount will, somehow, ultimately reflect additions to the broadly defined capital stock that also includes human capital. But this is at best a tenuous argument, the outcome of which would be purely coincidental.

If the broad definition of capital is to be used it should be made clear that FDI, officially defined, is only a part of that capital – probably a small part in the financial year that the transaction is concluded. Every effort should thus be made to estimate the value of the related capital investments *over time*, i.e. in the financial years that they are actually made. A similar requirement applies to the value of transferred technologies and additions to the stock of human capital: their values should likewise be estimated and apportioned to the financial years during which the spillovers actually happen. This is clearly no easy task: it may be necessary to obtain information first-hand from the players themselves, i.e. the foreign investor and the relevant domestic enterprise; similarly, estimates of the accompanying knowledge spillovers may have to be based on time-series analyses of the impact that FDI has on total factor productivity (e.g. Fry, 19993; Prescott, 1998).

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