

Deutsche Bundesbank's FDI micro database*

By Alexander Lipponer

1. Introduction

Direct investment plays a crucial role in the internationalisation of economic activities. Comprehensive, systematic statistics on capital links between Germany and other countries that are compiled in accordance with international standards are therefore essential for economic analysis and policy-making as well as for international comparability.

The Deutsche Bundesbank has been carrying out annual full sample surveys on direct investment stocks in accordance with the provisions of the Foreign Trade and Payments Regulation (*Außenwirtschaftsverordnung*) since 1976. Previously, information on capital links between Germany and other countries could only be derived from cumulating flows as they appeared in the balance of payments statistics. This yielded only a limited amount of information about the structure and scale of direct investment stocks. It was only the systematic collection of data on the primary and secondary direct investment stocks of non-residents in Germany and residents in external economic areas that made it possible to obtain reliable results as to the nature and extent of cross-border capital links.

The database presented here, which was set up solely for academic research purposes, goes back to 1989. *Time series* for individual enterprises are available from 1996 to 2001. From 1989 to 1995 individual data is available but can not be linked over time. As these statistics contain confidential individual data reports, use of the database is subject to restrictions. In particular, the data may only be used on the Bundesbank's premises.

* This article represents the authors' personal opinions and does not necessarily reflect the views of the Deutsche Bundesbank.

2. Direct investment stock statistics

2.1 General remarks

The database mainly contains those data from the direct investment enterprises' balance sheets that are needed to calculate the direct investment stocks. The data contain only a limited amount of information about the direct investors.

2.2 Reporting requirements

With regard to the reporting procedure and the data to be reported, direct investment stock statistics¹ are governed by sections 56a and 56b ("Residents' assets in foreign economic territories") and sections 58a and 58b ("Non-residents' assets in the economic territory") of the Foreign Trade and Payments Regulation (*Außenwirtschaftsverordnung*).²

Table 1

Reporting requirements for outward and inward FDI

From reporting year	Capital shares or voting rights	Balance sheet total of affiliate
1989	> 20 % (prev. \geq 25 %)	> DM 500,000
1993	> 20 %	> DM 1 million
1999	10 % to less than 50 %	> DM 10 million ³
	\geq 50 %	> DM 1 million ⁴
2002	\geq 10 %	> € 3 million

Over the years, several adjustments have been made to the reporting exemption limits, which has invariably led to distinct changes being made in the number of reports that have to be submitted. However, as the changes to the exemption limits have mainly involved smaller units being added or removed, there have been only minimal changes to the amounts of investment.

¹ See Deutsche Bundesbank p. 18–21.

² Regulation on the implementation of the Foreign Trade and Payments Act (*Außenwirtschaftsgesetz*) of 18 Dec 1986 (Federal Gazette I (*Bundesgesetzblatt I*), p. 2671), last amended by virtue of article 342 of the Seventh Regulation on the amendment of responsibilities (*Zuständigkeitsanpassungs-Verordnung*) of 29 Oct 2001 (Federal Gazette I (*Bundesgesetzblatt I*), p. 2858).

³ For reporting year 2001 € 5 million.

⁴ For reporting year 2001 € 500,000.

were available on around 15,000 direct investment enterprises in Germany in which some 11,000 foreign investors had a participating interest.

It has to be noted at this point, that the Bundesbank's reporting requirements and the methodology to calculate direct investment stocks is not fully in line with the OECD benchmark definition for FDI stocks.⁷

2.3 Primary and secondary FDI

Only *direct* capital credit relations are included when calculating "primary" direct investment stocks. In the case of *indirect* FDI relations, a distinction is made as to whether the primary direct investment enterprise is a holding company or not.

The participating interests of holding enterprises are considered to be "secondary" direct investment. Indirect FDI which is held via non-holding companies is referred to as "other corporate assets in foreign economic territories".

The (consolidated) total of „primary“ and „secondary“ FDI is referred to as „primary and secondary direct investment“. Consolidation consists in deducting primary direct investment in *dependent* holding companies from the aggregate as these funds would otherwise be counted twice.⁸

Constructing a consolidated sum of this kind can be no more than an aid. On the one hand, the holding companies raise funds and invest them in their own country, too; on the other, a fair proportion of the direct participating interests in the holding company remain within the holding company itself and are not transferred to secondary holdings. One can only speculate about the extent to which these effects cancel each other out.

"Other corporate assets in foreign economic territories" cannot be consolidated with the primary and secondary direct investment without considerable extra effort being involved because consolidating the investment relations in

⁷ On this issue, see OECD (1996), p. 11–13, which is based on IMF (1993), and IMF and OECD (2000); specifically on problems of making international comparisons of FDI data, see Deutsche Bundesbank (1997) and Jost (1997); for a detailed analysis of the Bundesbank's methodology used to calculate FDI stocks, existing deviations from the OECD benchmark definition and the divergent methodology used for FDI flows, see Lipponer (2002).

⁸ This applies only to holding companies with secondary participating interests which are subject to the reporting requirements. If a holding company is 50% or less foreign-owned or if the holdings of a dependent holding company are below the reporting exemption limits or if, for instance, the holdings of a dependent foreign-owned German holding company are outside Germany *only* or the holdings of a dependent German-owned holding company abroad are in Germany *only*, primary FDI in this holding company are included in the consolidated total as then no double-counting has to be avoided.

this manner would require complete balance sheet consolidation. This would, however, only blur, rather than clarify, the regional and sectoral structure of the direct investment relations.

2.4 Items reported

2.4.1 German direct investment abroad

A domestic investor subject to reporting requirements must report the following items.

- *About itself*
 - name, economic sector⁹, legal form, domicile
 - from reporting year 2002, turnover, number of employees and balance sheet total
- *About its participating interest abroad*
 - name, economic sector⁹, legal form, domicile
 - type of participating interest (primary or secondary)
 - turnover, number of employees
 - balance sheet date, balance sheet data¹⁰
 - from reporting year 2002 and for listed companies, market value

2.4.2 Foreign direct investment in Germany

A domestic enterprise subject to reporting requirements (primary direct investment enterprise) must report the following

- *First, about itself*
 - name, economic sector⁹, legal form, domicile
- *About its foreign investor*
 - name, domicile, country
 - where appropriate, country of the main company¹¹
- *About its investments in Germany (indirect FDI for the foreign investor)*
 - name, economic sector⁹, legal form, domicile

⁹ Since 1995 allocation to economic sectors has been based on the classification in NACE Revision 1. The database contains reports from about 65 different sectors at the two-digit level. Before 1995 the breakdown was based on the Federal Statistical Office's classification of economic activities (WZ79).

¹⁰ Balance sheet data as taken from the trade balance sheet before allocation of profits.

¹¹ Country of the parent firm of a non-resident investor if the latter is a dependent affiliate.

- *Details about itself and its participating interests*
 - type of participating interests (primary or secondary)
 - turnover, number of employees
 - balance sheet date, balance sheet data¹⁰
 - from reporting year 2002 and for listed companies, market value

2.4.3 Balance sheet data

The following data from the balance sheet of the direct investment enterprises are taken from the reporting forms and included in the database.

- subscribed capital unpaid
- sum of tangible fixed assets and intangible assets
- financial fixed assets
 - ▷ *of which* shares in affiliated enterprises / participating interests
 - ▷ *and* loans to affiliated enterprises / enterprises with which there is a participatory relationship
- current assets
 - ▷ *of which* claims against affiliated enterprises / enterprises with which there is a participatory relationship
- other assets
- deficit not covered by own funds
- subscribed capital or called-up capital, endowment capital, shareholders' deposits
 - ▷ *of which* limited partners' deposits (only for inward FDI)
- capital reserves
- revenue reserves
- profit or loss carried forward
- profit or loss for the financial year
- liabilities
 - ▷ *of which* liabilities against affiliated enterprises or enterprises with which there is a participatory relationship
 - ◇ *of which* liabilities against such enterprises in Germany (inward FDI) or abroad (outward FDI)
 - ◇ *and* liabilities against such enterprises in Germany (outward FDI) or abroad (inward FDI)
- other liabilities
- balance sheet total

3. Outlook

In the past, analyses for Germany have been carried out using only aggregate data;¹² using the database presented here, a broad range of issues can, in principle, now be analysed at firm level. The impact of the legal form on direct investment abroad and the connection between the direct investment enterprises' business success or lack of success and the investment activities of the parent companies can be analysed. Issues relating to FDI and control rights can be analysed using the degree of participation, even if this does not always give clear information about the actual voting rights. For German FDI abroad a detailed analysis can be made by economic sector of the investor and direct investment enterprise and by country. It is therefore also possible to carry out an analysis with regard to the type of investment (vertical/horizontal) – at least up to a point. In any case, it is possible to analyse the geographical specialisation of German FDI¹³ and the regional distribution of the German direct investment enterprises.¹⁴ However, more far-reaching, specific data would be needed to analyse the determinants of the investment of the economic sectors in the different countries; these data are often not easy to obtain. In principle, the impact of corporate size on FDI activity could be analysed.¹⁵ But at the moment this can only be done by taking the direct investment enterprises as a basis. From reporting year 2002 this could be extended to the size of the direct investors and it will then also be possible to analyse the effects of direct investment abroad on employment in the parent companies in Germany.

Some issues can only be analysed using additional data or at the aggregate level. But as the *published* aggregate data provide no information on certain positions for reasons of confidentiality – although information is available – use of the micro database may be useful in this case too.

It is possible to combine our micro database with firm level data from the balance of payments and the banking statistics. Although it is theoretically feasible to combine them with other statistics on the firm level, in practice a considerable amount of extra effort is involved. But combining data might yield far more information about the investors and direct investment enterprises.

¹² For example, Jost (1997), Pain and Hubert (1999) and Pain and Hubert (2001).

¹³ Comparable to Braunerhjelm and Lipsey (1998).

¹⁴ See Lipsey (1999), for US direct investment activity in Asia.

¹⁵ An analysis of this kind using data for the United States and Sweden is given in Blomstrom and Lipsey (1991).

References

- Blomstrom, M./Lipsey, R.* (1991): Firm Size and Foreign Operation of Multinationals, *The Scandinavian Journal of Economics*, 101 – 107.
- Braunerhjelm, P./Lipsey, R.* (1998): The geography of multinational firms, *Economics of Science, Technology and Innovation*, 33 – 58.
- Deutsche Bundesbank* (1997): Problems of international comparisons of direct investment flows, *Monthly Report*, 77 – 84.
- (2002): International capital links, *Special Statistical Publication* 10.
- IMF* (1993): *Balance of Payments Manual*, Fifth Edition.
- IMF/OECD* (2000): Report on the Survey of Implementation of Methodological Standards for Direct Investment.
- Jost, T.* (1997): Direct Investment and Germany as a business location, *Economic Research Center of the Deutsche Bundesbank*, Discussion Paper 2/97.
- Lipponer, A.* (2002): A “new” micro database for German FDI, in: H. Herrmann/R. Lipsey (eds.): *Foreign Direct Investment in the Real and Financial Sector of Industrial Countries*, Berlin/Heidelberg/New York, 215 – 244.
- Lipsey, R.* (1999): The Location and Characteristics of U.S. Affiliates in Asia *National Bureau of Economic Research Working Paper* 6876.
- OECD* (1996): *OECD Benchmark Definition of Foreign Direct Investment*, Third Edition.
- Pain, N./Hubert, F.* (1999): Innovation and the Regional and Industrial Pattern of German Foreign Direct Investment, in: *Innovation, Investment and the Diffusion of Technology in Europe: German Direct Investment and Economic Growth in Postwar Europe*, 168 – 194.
- Pain, N./Hubert, F.* (2001): Fiscal Incentives, European Integration, and the Location of Foreign Direct Investment, mimeo.