

The use of micro-data to enhance the compilation and analysis of BoP statistics: the case of South Africa

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Introduction

Sound macroeconomic policy formulation depends heavily on the availability of timely, reliable and accurate statistics. Traditionally, estimates of balance-of-payments aggregates are based on data obtained from international trade statistics, information acquired from international transaction reporting systems, statistics collected via enterprise surveys, administered records and/or a combination of the aforementioned. Since statistical discrepancies arise in most cases from the incomplete coverage of transactions, misclassifications, different timing and asymmetric valuations, statistical agencies or central banks can never afford to become complacent when it comes to the quality of available data sources. In order to enhance the compilation and analysis of official balance-of-payments statistics, data collection systems have to be reviewed and expanded on an ongoing basis to ensure that potential data gaps are identified and addressed in a timely and efficient manner. At the same time new or alternative data sources could provide additional checks and balances, a precondition for the compilation of reliable and accurate balance-of-payments statistics.

The South African Reserve Bank (the Bank) is officially responsible for compiling balance-of-payments statistics in South Africa. This brief presentation will focus mainly on the Bank's practical experience in using micro data to supplement existing data sources in recent years. More specifically, attention will be paid to the use of micro data in the computation of international trade in services, primary income payments to the rest of the world and the compilation of inward direct investment statistics.

International Transactions Reporting System (ITRS)

In South Africa, like in many other countries, the International Transactions Reporting System (ITRS) is a by-product of past (and existing) foreign-exchange control regulations. In terms of the system, Authorised Dealers in foreign exchange (*i.e.* resident banks and bureaux de change – Authorised Dealers with limited authority) report the settlement of transactions between South African residents and non-resident parties to the Bank on a daily basis (indirect reporting). In addition, the system also makes provision for the direct recording of foreign-exchange transactions between major domestic companies and their overseas counterparties for which prior approval was obtained from the Bank (direct reporting). In view of the fact that South African residents (*i.e.* individuals or

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enterprises) are still subject to exchange control regulations, all international settlements have to be made via local Authorised Dealers in foreign exchange.

In accordance with official government policy to liberalise exchange control regulations gradually – the Bank took a decision in 1999 to broaden the responsibilities of the then Exchange Control Department (now known as the Financial Surveillance Department) in the Bank to collect a more comprehensive set of data from reporting entities. What was significant was the fact that the detailed set of information that had to be collected from Authorised Dealers in foreign exchange was better aligned to meet the requirements of balance of payments manuals to assist compilers in the computation of balance-of-payments statistics. At the same time, a decision was taken to replace the previous system which captured transactions related to the purchase and sale of foreign currency manually to an electronic (same source) reporting system. International experience has shown that with the liberalisation of exchange controls, a reporting and compliance vacuum could easily develop if existing systems were not timeously aligned to serve as a complementary source of information for balance-of-payments purposes.

After extensive international research, the Electronic Data Interchange for Administration, Commerce and Transport (EDIFACT) was found to be the most suitable international standard of a paperless process to report balance-of-payments transactions. EDIFACT, as an electronic data interchange standard (EDI), has the advantage that data are extracted from the accounting systems of Reporting Entities, thereby eliminating the manual and dual capturing of transactions while at the same time speeding up the reporting process to the Bank. Hence, the Bank adopted the EDIFACT standard (incorporating the balance-of-payments Customer Transaction Report Message (BOPCUS)). In 2001, the electronic Cross Border Foreign Exchange Transaction Reporting System (ITRS) was introduced, which replaced the previous-paper driven system, as a compulsory reporting system to be used by all reporting entities based on the EDIFACT international standard. The reporting entities report – by means of BOPCUS, in Extensible Mark-up Language format (XML) – all the details of payments made to foreign parties by South African residents as well as payments received by South African residents from foreign entities, irrespective of the value of the underlying transaction. The ITRS was further enhanced by the introduction of a simplified BOPCUS version 2 in 2004 to accommodate additional reporting requirements of primarily balance-of-payments compilers.

With the subsequent enhancements to the reporting system, the Bank managed to create a world-class, cost-effective reporting system which provides

- accurate (same source) and up-to-date information that is validated via the Bank's Data Exchange Architecture (SARBDEX);
- comprehensive detail of each and every transaction, including the names, surnames (of individuals), addresses, identity numbers, company registration numbers, telephone numbers and the physical addresses of transactors;
- the timeous receipt of information – value date plus two days;
- reliable and stable 24-hour submission time where all files are logged and acknowledged;
- guaranteed confidentiality by using Internet encryption, SARBDEX senders validation and SWIFTNET;

- the elimination of time-consuming verification and balancing of transaction records against separate returns by using an automated balancing module;
- the virtual elimination of paper in the system; and
- legislation to enforce the reporting process.

In keeping with most recent developments in an ever-changing financial environment, it is envisaged that further enhancements to the technical specifications of the system will be implemented by the end of 2013, requiring an additional costly investment in this regard.

International trade in services

The comprehensive measurement of international trade in services is complex, especially if balance-of-payments compilers have to rely on sample surveys which are often, due to insufficient coverage, not representative. Unlike enterprises importing and/or exporting merchandise on a regular basis, transactions in international trade in services undertaken by domestic entities may occur on a fairly infrequent basis. Although data recorded by an ITRS reflect the settlement of transactions in services between residents and non-residents, the accurate classification of transactions remains a major challenge. By analysing the value of transactions per reporting category, for example, in descending order, specific enterprises could, in the first instance, be identified alongside the verification of the appropriate classification of transactions. Second, by questioning certain transactions, confirmation could also be obtained that different types of transactions were not lumped together. Once verified, information obtained for specific categories in the ITRS could be used to construct mini-sample surveys, allowing compilers to collect more detailed information from a group of enterprises and/or individuals in accordance with the methodological guidelines contained in various manuals.

Primary income payments to the rest of the world

The computation of dividends declared by listed and unlisted South African companies to resident and/or non-resident shareholders is done in South Africa by making use of different methodologies. For companies that enjoy a primary listing on the Johannesburg Stock Exchange, information pertaining to the issued share capital and the dividends payable per share are available publicly. Based on the distribution of shareholding between resident and non-resident investors, that is, information obtained from share registrars and other sources, the value of dividends payable to non-resident shareholders can be determined.

Dividend declarations by unlisted domestic companies are more difficult to account for in balance-of-payments statistics because in many cases unlisted companies do not have an established dividend policy. In addition, dividend declarations by this group of companies may not necessarily reflect underlying economic fundamentals or be aligned with the underlying phases of the business cycle of an economy. Information obtained from an ITRS, however, allows balance-of-payments compilers to identify unlisted domestic companies (fully or partially

owned by foreign companies) which, on an irregular basis, pay dividends to foreign shareholders. The system also affords balance-of-payments compilers the opportunity to verify the transaction details.

Inward direct investment statistics

The Bank has been collecting data on inward and outward direct investment statistics by using sample surveys since 1956 – quarterly surveys which often contain preliminary estimates are reconciled on an annual basis with audited balance-sheet information furnished to the Bank in annual sample surveys. To ensure that samples remain representative, Censuses of Foreign Transactions, Liabilities and Assets are conducted at regular intervals, such as every five to ten years. For intervening years, sample surveys are then utilised to determine capital flows, opening and closing stock balances and valuation adjustments. The success of maintaining representative sample surveys depends largely on the ability and capacity of compilers to keep track of changes in the economic landscape on a continuing basis. In achieving this objective, the Bank's Balance of Payments Division has recently embarked on an exercise whereby it tracks, on a micro basis, transactions in mergers and acquisitions, new inward direct investment transactions and disinvestment transactions. By focusing on individual group structures, before drilling down into transaction details, a vast amount of time and effort is saved in identifying the appropriate companies to be surveyed for various purposes.

Conclusion

The management of statistical processes to produce quality statistics remains a difficult and challenging task. In this regard, the more active use of micro data has in recent years made a significant contribution towards enhancing the compilation and analysis of balance-of-payments statistics in South Africa. Policy makers in need of timely and frequent statistics have also benefitted tremendously from the availability of micro-data.