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SEMINAR ON STRATEGIC ISSUES IN BUSINESS STATISTICS

SESSION I: REDUCING RESPONDENT BURDEN

**SIMPLIFIED BUSINESS INFORMATION -  
PRODUCING QUALITY STATISTICS BASED ON ADMINISTRATIVE DATA: A  
TRUE POSSIBILITY?**

Note by the National Statistical Institute of Portugal

*Summary*

The Conference of European Statisticians selected in June 2008 (ECE/CES/74) the topic “Strategic issues in business statistics” for a seminar to be held at its 2009 plenary session. The Bureau, acting on behalf of the Conference, approved the outline for the seminar at its February 2009 meeting (ECE/CES/2009/2) and requested Portugal to prepare a note to provide basis for the discussion.

The present note describes the setting up of the Simplified Business Information system and how this information source has been used in the current statistical production in Portugal. The Simplified Business Information is a joint effort of four public institutions and makes it possible to acquire administrative and statistical information in a coherent and coordinated manner. The impact of the use of this system on the quality of statistics and the advantages stemming from its use are also discussed.

## I. INTRODUCTION

1. Statistical production in Portugal is faced with a new paradigm: as of 2006, statistical data on enterprises, which were previously based on surveys, are essentially produced from administrative data, namely the Simplified Business Information system (IES). This model results from the joint efforts of four public institutions and makes it possible to acquire administrative and statistical information in a coherent and coordinated manner. This is conducted electronically, on a single occasion, for the whole population of enterprises, which simultaneously comply with their legal obligations, including in the field of statistics.
2. This document describes, in addition to the setting up of IES, how the National Statistical Institute of Portugal has been making use of this information source in the current statistical production, which is not restricted to the production of statistics within the scope of the Regulation concerning structural business statistics (SBS) regulation. Rather, it covers other statistical areas, including intra-Community trade and even national accounts. The impact of IES use on the quality of statistics produced is also discussed, and so are the advantages stemming from the use of such an information source.

## II. THE SIMPLIFIED BUSINESS INFORMATION SYSTEM

3. As of the beginning of the past decade, the National Statistical Institute of Portugal (hereinafter referred to as Statistics Portugal) has been seeking to use administrative sources for statistical purposes in a number of different areas. Notwithstanding the efforts meanwhile developed, the outcome was poor, especially in the field of business statistics. In 2005 some administrative/tax information was made available on Portuguese enterprises. However, surveys still had to be conducted and it was still necessary to combine different sources of information – surveys and administrative data – to prepare the national accounts.
4. In early 2006, a programme set up by the Portuguese government with the purpose of simplifying and modernising the administration in order to make life easier for enterprises and citizens gave its results. A number of national public entities took part in the creation of a system that made it possible to acquire administrative data while simultaneously complying with the following legal obligations of enterprises:
  - (a) Presentation of annual accounting and tax statements to the Ministry of Finance (tax administration);
  - (b) Recording of the presentation of accounts within the framework of commercial registry legislation;
  - (c) Supply of statistical business data to Statistics Portugal, to meet information needs aimed at fulfilling its obligations arising from participation in the European Statistical System;
  - (d) Accounting data reporting for statistical purposes to Portuguese Central Bank, within the scope of its participation in the European System of Central Banks.

5. The “Simplified Business Information (IES)” system was thus set up via Decree-Law No 8/2007 of 17 January. IES implementation was only possible with the involvement of all interested parties. In addition to the public institutions behind its creation, it also had the committed support of the Chamber of Chartered Accountants, of enterprises supplying software to other enterprises and of insurance and banking supervisors. However, the policy support underlying this system must be considered as the key factor enabling its setting-up.

6. Once implemented, the system has been accepted and acknowledged by all intervening parties – i.e. enterprises – as a measure effectively allowing for the reduction of the administrative burden. This stems from the whole system having been developed in a coordinated way: information needs have been exhaustively identified as far as their different purposes were concerned, with recourse to harmonised concepts and definitions in the case of common needs. Each entity has undertaken not to have enterprises report information that was already covered by IES. The fact that data would only be supplied electronically in the same format and on a single occasion, while simultaneously complying with four legal obligations, is a significant advantage for enterprises, notwithstanding the initial costs associated with the need to adapt their information technology systems. Other important success factors have been the involvement of the Chamber of Chartered Accountants, which has promoted some fifty workshops throughout the country, counting on the participation of over 23 000 accountants (those generally responsible for complying with these legal obligations on behalf of enterprises), the commitment of software houses and also the strong policy support culminating in the creation of tailor-made legislation for the IES.

7. The national statistical system had then at its disposal basic statistical data exhaustively covering Portuguese enterprises, encompassing a wide range of mutually consistent statistical variables originating in a single source, and definitions fully in line with statistical needs. Also, the production of structural business statistics has had its time schedules shortened by at least 6 months.

### **III. IMPACT OF THE SIMPLIFIED BUSINESS INFORMATION SYSTEM ON THE PRODUCTION OF STRUCTURAL BUSINESS STATISTICS**

#### **A. Structural Business Statistics Survey**

8. At the outset of Statistics Portugal’s participation in the preparation of the IES, it defined as its main goal to phase out the annual conduct of the Structural Business Survey (SBS), with a view to producing these statistics exclusively from administrative data. This goal was reached during the very first year of operation of the IES, and was even one of the features leading to the acceleration of the process of setting up the IES system.

9. The comparison of results obtained from the IES with those of previous sample surveys has led to an unequivocal conclusion: despite the use of highly dissimilar methodologies, there was no break in the series and data supplied by enterprises in the IES were not much different from those reported in previous years of survey.<sup>1</sup> On the other hand, the fact that there were

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<sup>1</sup> It should be noted that the IES system allows Statistics Portugal to establish ex post contacts with enterprises to check data and clarify any doubts regarding the statistical data transmitted. However, the outcome of these contacts

available data for the whole population of enterprises<sup>2,3</sup> is also a guarantee of output quality, which already substantially narrows down the error associated with estimation.

10. However, it is worth noting that some sectoral statistical data (industry, construction or trade) envisaged in the SBS Regulation are not acquired through IES<sup>4</sup>. These information needs were incorporated into other statistical operations that already existed or were specifically created for that purpose. In this case, data collection is based on surveys with very small samples compared with those from the Structural Business Survey.

11. The use of administrative data has brought greater consistency to statistical data produced, both as regards structural business statistics and business demography, as well as sectoral statistical operations. A number of studies and initiatives are under way to ensure coherence and compatibility of statistical data with those originating in different sources.

## **B. Other business surveys**

12. With the implementation of IES, Statistics Portugal undertook not to collect data that were part of the IES in any other statistical operation it conducts. This is the case, for example, of the “Number of persons employed” variable, existing as a compulsory variable in a number of Community requirements.

13. This impossibility, which is envisaged in the law, has led to the in-house development of a system allowing each statistical operation to use the variables needed from the Data Warehouse specifically created with IES data.

14. Hence, for each of those sample business surveys, it is possible to acquire information from different variables forming part of the IES for every enterprise participating in the sample, or to use IES data in the output validation process.

15. The creation of IES and the use of administrative data has been an opportunity taken by Statistics Portugal to ensure consistency for all business statistics. Actually, in addition to the fact that coordinated samples had been defined for some time with the purpose of reducing the statistical burden on the same enterprises, based on the IES, statistical output in different areas has been produced guaranteeing the respective coherence. This means that output was thereafter gauged based on IES information, in order to ensure consistency, using calibration methods. This

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and any possible adjustments to basic information are not shared with the remaining institutions involved because they fall within the scope of statistical confidentiality.

<sup>2</sup> One could assume that the fact that Statistics Portugal started to acquire information for the whole population of enterprises would lead to an increase in the overall statistical burden on them. However, this is not the case, given that the overwhelming majority of the collected variables are made up of business obligations as regards taxes or the presentation of accounts, i.e. administrative obligations.

<sup>3</sup> Although enterprises have the legal obligation to present their accounts, there are nonetheless a few that do not comply with such an obligation, for example, in case accounts have not been approved by the shareholders' meeting, where applicable. These situations, although rare, require estimates to be produced for non-responses, which correspond to less than 4% of total enterprises.

<sup>4</sup> This option derives from the acknowledgement that this would place an excessive burden on enterprises with an even wider set of variables, which in some cases shift away from accounting data.

has improved the quality of statistical data produced to a considerable extent, thereby clearly responding to user needs.

### **C. International trade statistics**

16. IES collects data regarding variables on trade in goods and services within and outside the European Union (total annual figures).

17. These data are thus liable to be compared with output from international trade statistics. As regards intra-Community trade – which in the data analysis process uses administrative data resulting from the Value Added Tax (VAT) or information on the VAT Information Exchange System (VIES) – IES data are a further source of information validating business reporting within the framework of the Intrastat system.

18. Benefits reaped from IES used in the analysis of intra-Community trade statistics are immense, given that the methodological aspects underlying the IES system and the Intrastat system are more closely linked than they are with data obtained from VAT. Therefore, as of 2006 data could be checked at business level and hence the quality of international trade statistics was considerably improved. This is a remarkable advantage, especially since IES includes enterprises that are below the threshold,<sup>5</sup> as shown by the estimation for this business segment based on VAT data.

### **D. National accounts**

19. Given that there is no single source of information allowing for the production of statistics with the level of detail and comprehensiveness required by national accounts, these often rely on various sources, namely surveys, administrative sources or other, which are not always mutually consistent.

20. IES was set up taking into consideration national accounts' needs for statistical data. Hence, a detailed set of information liable to be used in the preparation of national accounts was made available to Statistics Portugal, both in terms of variables and coverage, with the advantage of ensured data coherence and consistency. In fact, as a result of the IES, national accounts could access variables, for example, on production, imports, exports and employment. In the latter field, they could even access data on hours worked and temporary employment: these variables play an important role, and are always difficult to measure. In addition, it is also possible to access data on business activities by (domestic and external) markets.

21. Therefore, in the rebasing of Portuguese national accounts the incorporation of this new source of information was deemed an advantage, given that:

(a) It would allow for the coverage of the corporate sector, by eliminating the statistical error associated with the output estimation and extrapolation process;

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<sup>5</sup> Within the scope of the Intrastat system and aiming at reducing the statistical burden on small-sized enterprises, thresholds are defined below which enterprises are not required to report data on trade with Community partners. However, national statistical institutes must estimate those data.

(b) A single source contains information on the supply and income approaches; and

(c) It contains elements making it possible to compare and validate several national accounts aggregates such as production, intermediate consumption, Gross Value Added (GVA), employment, compensation, surplus, imports and exports.

#### **IV. THE USE OF ADMINISTRATIVE DATA AND THE QUALITY CONCEPT**

22. One tends to simplistically state that, in general, the quality associated with statistical data produced from surveys is better than that produced from administrative data. Theoretically, this stems from the fact that national statistical institutes can have their strict reporting requirements complied with via surveys, and generally administrative sources do not incorporate the information needs of national statistical institutes.

23. There is thus a trade-off when using administrative data, permitting to reduce the statistical burden and enhance the quality of statistical data produced. In fact, these data do not adopt the same definitions and do not cover all units deemed necessary to the production of statistics. Also, they may not be sufficiently comprehensive as regards the variables it collects, the manner in which information is validated by the entity holding it is often unknown, and the data may not be available within the appropriate deadlines. Hence, national statistical institutes must produce estimates, occasionally having to resort to the combination with data from other sources or statistical operations.

24. These factors may hamper the adoption of administrative data by a number of national statistical institutes; there may be doubts regarding the quality of these sources, associated with difficulties in producing estimates and/or combining different statistical sources. A strong collaboration among public entities is therefore of the essence, in order for administrative data to take account of the concerns of statistics and to be used by statistical systems with no reservations.

25. It could be considered very difficult to foster the combination of the needs and interests of the various national public entities with statistical needs. However, entities are expected to be effectively available to build or adjust their systems aiming at their streamlining and optimal use, bearing in mind that all parties involved will reap their benefits, in particular enterprises and citizens.

26. It will thus be possible to make an effective contribution to reduce the administrative burden, both from the viewpoint of the enterprises' perceived burden and the real costs associated with compliance with their statistical obligations. This task will be better fulfilled if national statistical institutes are involved from the very outset in the review of accounting standards associated with business obligations. Hence, they may, on the one hand, integrate information needs and, on the other, allow the legal obligations of enterprises to integrate statistical data requirements, making it easier to use information for statistical purposes.

27. Despite there always being a trade-off, as mentioned, and the use of administrative data being never without difficulties, the IES system developed in Portugal is somehow innovative, given that it minimises the drawbacks usually associated with the use of administrative data:

(a) First of all, IES covers a wide range of structural business statistics acquired through the same source, which grants it a high level of coherence;

(b) Given that its electronic transmission has an associated set of almost 2000 editing rules, it ensures consistency across elements supplied by enterprises from an early stage;

(c) The fact that this system allows Statistics Portugal to contact enterprises in order to check information acquired and make possible adjustments – addressed in full respect for the principles of statistical confidentiality – is an additional quality assurance factor;

(d) Finally, and perhaps the main advantage, IES has been set up with the active participation of Statistics Portugal, the national statistical authority, which ensured that statistical needs have been taken into consideration from the inception. Hence, it was possible to ensure the coverage of variables, units, definitions and time schedules compatible with the needs of national statistical production.

28. In sum, the IES is a system developed in partnership with Statistics Portugal, with the purpose of allowing for the replacement of surveys with the use of administrative data, with all aspects in which the use of administrative data is generally deemed to be instrumental having been taken into account.

## V. CONCLUSION

29. It is not irrelevant that statistics are produced from surveys or administrative sources (in the latter case, whether or not combining them with surveys). There are obvious differences at the level of output quality in these two options.

30. Bearing in mind that the administrative or statistical burden associated with the carrying out of surveys may affect the quality of enterprises' responses, due to fatigue or lack of time, or also due to non-response or lack of quality in information reported, the option of using administrative data must be carefully weighted. Moreover, there is pressure on statistical systems to reduce the statistical burden, given that it is perceived to be an important component of the administrative burden. This occurs probably because the immediate advantages resulting from the information supplied are not recognised or it is deemed to be a "less important" legal obligation or also because the statistical burden is often considered to be associated with surveys/forms issued by other public entities.

31. As a result, the path that statistical systems will inevitably follow is to use administrative data, phasing out data collection through surveys. To this end, national statistical institutes will have to work out methods to overcome difficulties associated with coverage (in terms of population and variables), scope, definitions, statistical units, data validation and the combination of different sources. Alternatively, in collaboration with entities holding administrative data, they can develop one or more coherent and integrated systems to gather administrative data, which statistical systems may use directly.

32. The IES system was developed with the direct involvement of Statistics Portugal and the concern of satisfying the information needs of the different intervening entities. This not only

allowed for access to the required information, but also made it possible to streamline and make optimal use of data reported by enterprises.

33. The creation of the IES system is acknowledged by all as a measure long demanded by the Portuguese administration. Enterprises were required to report substantially identical information to four different entities on distinct occasions and formats. Notwithstanding the costs that enterprises had to bear in adapting their information technology systems, they consider that there can be no turning back to the former state of affairs.

34. Overall, for the Portuguese statistical system, IES represents a giant leap forward towards the improvement of the coverage, coherence, punctuality, timeliness, comparability and accuracy of business statistics; in sum, towards improved quality for statistical data, while taking into consideration all their qualifying dimensions.

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