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*Proposal of a Metaclassification of  
Services in the context of the  
European System of Business Statistics*

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## ABSTRACT

*The ongoing revision of the European system of business statistics has been started as a consequence of the Single Market. It involves setting up a genuine system which can provide an effective response to all users' needs. In this context, work on classification plays an important role in guaranteeing methodological integrity and consistency.*

*Starting from three Council regulations defining classifications of activities and products and definitions of statistical units, Eurostat intends to continue the research on classifications of services to develop a logical structure which better fits productive activities on services.*

*Proposals made by M. Martini to adopt a bottom-up metaclassification of services overpass work on classifications. They encourage three avenues of research:*

- a) the use of metaclassification with regard to international classifications;*
- b) using metaclassification for surveys;*
- c) using metaclassification for enterprise registers.*

*A bottom-up classification strategy was utilised with positive results in the investigation of "innovative service offering to metropolitan Milan enterprises" (see M. Martini's document "Definition and Classification of Services" - fifth section). Eurostat is considering possibilities of partnership to extend the investigation to other European area characterised, as the Milan area, by concentrated and developed business services.*

*On going work on pilot surveys undertaken by Member states of the European Economic Area (EC and EFTA) provides a useful feedback on definitions and classifications. Voorburg group meetings complement the feedback from non EEA countries.*

*Trade associations represented at community level are closely involved in all these activities, offering advice, taking part in discussions and the preparation of texts and expressing the views of enterprises on what form the EBS should take.*

*All these activities could lead in three, four years time to a revision of classifications on services that, in keeping coherent evolution over time, should be based on different logical structures which better fit services productive activities in nowadays world global economy.*

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## **A. The consequences of the Single Market**

1. The process of European integration has received a new stimulus as a result of the decision on the SINGLE MARKET, whose principal aims are the establishment of four freedoms throughout the European Area: the free movement of persons, the free movement of goods and services, the free movement of capital and the freedom of establishment. This represents a fundamental rethink by decision-makers in both the public and private sectors, and sets enterprises in the Community one of their greatest ever challenges.
2. The Commission's aim is to take the necessary measures and propose the appropriate regulations which are required to guarantee the successful introduction and monitoring of the Single Market. It also has the task of taking action where this is needed to ensure transparency in the market place, improve the competitiveness of enterprises, ensure freedom of competition, and monitor and support industrial conversion, making sure that crucial decisions are taken at the right moment for problem sectors. The introduction and monitoring of the Single Market will also require increased vigilance in order not to lose sight of the primary objective of economic convergence and social cohesion.
3. Finally, the Single Market increases the role and weight of the European Community on the international stage. With its open outlook on the world, the Community is required to play a key role in the development of trade with traditional partners in the Western world and economies in the developing countries. The role of the Community is crucial in laying the foundation of market economies in the countries of eastern Europe.
4. All these political objectives very quickly have given rise to statistical objectives, including a large number dealing with Business Statistics. These statistical objectives need to guarantee each of the partners of the Single Market access to the information they require to take decisions and carry out their policies.

In the light of the Single Market, it has therefore been necessary to review every aspect of business statistics. This started with a careful study of their role and purpose, and once these had been redefined users' needs were analysed.

It proved necessary to take a fresh look at all these problems in the light of past experience and, given that statistics are an essential component in the infrastructure of the Single Market, a development programme had to be drawn up which allow them to fulfil the tasks required of them.

## **B. The European System of Business Statistics**

5. European Business Statistics have been at the centre of the EEC Information System since the first ECSC Treaty, providing very detailed information on industry (manufacturing enterprises) and introducing a very detailed system for iron and steel and coal statistics.

This system is based on very close co-operation between Eurostat, national statistical offices and national and Community trade associations.

6. Faced to new challenges, the current EBS system falls well short of the mark in both quantitative and qualitative terms, judging by the information produced on the Community as a whole. Despite the fact that the statistical observation systems on enterprises in several Member states are amongst the most sophisticated in the world, the system is lacking in a number of areas and is far from being able to meet the new demands imposed on it by the advent of the Single Market.
7. On a quantitative level, i.e. the number of different economic field covered, there are enormous gaps, mainly in the services sectors.
8. From a qualitative point of view, many diagnoses have been carried out and the problem areas are well known: structural differences which exist between national systems, national regulations on statistical confidentiality, delays on available data, no suitable systems of estimation which lead users very often to turn to unofficial sources of information and make do with figures of dubious quality.
9. The road forward involves setting up a genuine system of business statistics which can provide an effective response to all users' needs.

Eurostat intends to make a number of distinctions for the development of the EBS:

- **a common framework for all enterprises.** This involves defining the general information to be collected annually for all enterprises (including service enterprises). This common framework should make it possible to introduce a proper European survey of enterprises and define a set of common concepts, standards and methods which also take account of the specific requirements for each domain of statistics on enterprises;
- **a specific framework for statistics on energy and industry.** This framework should incorporate the various elements of statistics on industry: themes, concepts and variables from the annual survey on structure and activity, production statistics and short-term indicators. The framework for industry should therefore be a suitable methodological source for integrating specific sectoral developments (textiles, etc.), and contribute to the organisation of the statistical collections required;
- **a specific framework for statistics on services.** Here too, a general approach will assist comparisons of the various sectors and a sectorial approach will allow the in-depth treatment of important priority sectors. The priorities in Community terms are statistics on the retail trade, services offered to enterprises, transport activities, hotels and travel agencies, information and communication services, and financial and audio-visual services;

- **a specific framework for transport and tourism.** The main objectives are revising the transport directives, extending them to include air and maritime transport statistics, and implementing the Decision on tourism.
10. The establishment of the infrastructures required to carry out these developments is one of Eurostat's objectives. Included among these are:
- **the development of registers of statistical units**, which are updated regularly and contain key data on enterprises. These will serve as a basis for carrying out surveys, following short-term trends, cross-checking information already supplied to the authorities, monitoring panels and many other aspects of the use of registers;
  - **the alignment of statistical and accounting concepts** which will allow statistical questionnaires to be computerised, thereby lightening the burden on enterprises;
  - **the use of new technologies** to collect and transmit data by exploiting the work carried out under EDIFACT;
  - **rapid information systems** allowing such operations as calculating estimates and monitoring specific short-term trends.

### **C. A proposal for a metaclassification of Services**

#### **C.1. Work on classifications of services**

11. In the context of the introduction of the EBS system, work on classification plays an important role in guaranteeing methodological integrity and consistency.

Works on classifications led to the adoption of two Council regulations establishing NACE-Rev 1 (activities classification) and CPA (classification of products by activities) to be adopted as economic basis for national classifications.

These regulations have been complemented by a third one defining statistical units to be used in compiling data on business.

The concepts and classification given by the three Council regulations are compatible with similar recommendations given by the UN (ISIC and its introduction, CPA, SNA revision, etc.).

12. The international classification of productive activities, products and consumption constitute a conventional language established in view of economic statistics. As any language, classifications come about through rigorous comparisons, diplomatic mediation, and prudent compromises.

As any language, a classification can be studied from different perspectives: its evolution over time, compare it with *others* and analyse its logical structure.

In reviewing the current EBS in general, and in particular in distinguishing a specific framework on services, it was pointed out that classifications of productive activities tend to follow implicit criteria seen from a technical stand point as a process of transformation of things (mass and/or energy) by things (manpower or machines). These criteria used to classify manufacturing industry falls well short when applied to services.

13. A definition of services considered as "productive activities", where, in contrast to that for the production of goods, the activity should be described with a circular (non linear) scheme, of the inter subjective (non-objective) relations at the centre of which rests the need of the client (and not the good produced), gave the lead to work on linkages of classification of activities (ISIC, NACE), products (CPC, CPA), functions of consumption (COIP, PROCOME, COFOG, CHGS and WECC) and transactions (BOP). This work of linkage should point out the common criteria used by the different classifications. First results of this work have been presented to the Voorburg group at its seventh meeting.

#### C.2. Proposal for metaclassification of services

14. In parallel to the work of linkage of different classifications Eurostat asked M. Martini to research on definition and classification of services.

The document "Definition and Classification of Services" [M. Martini, 1993] proposes to adopt a bottom-up **metaclassification of services**, which, while it is different from international classifications (of the top-down type) of activities (NACE, ISIC), of products (CPC, CPA) and of functions (COIP, PROCOME, COFOG, CHGS, WECC), it is compatible with each of them and is also useful for the surveys and registers of enterprises for statistical purposes.

15. The metaclassification of services proposed is based on the application of the six distinct criteria defining the services, seen as actions performed by someone for someone else, which are the answer to as many questions:
  1. **For whom?** (Is the client a person, family, enterprise or institution?)
  2. **On what?** (Does the service intervene on the subject or objects - assets -of the client?)
  3. **For what?** (To what functional needs does it respond?)
  4. **From whom?** (Who is the service's agent?)
  5. **With what?** (What means are used?)
  6. **How?** (How does the agent's intervention interact with the client?)

**Six classificatory columns** are needed to be able to answer the above questions:

- a) of the subjects, clients (criterion 1) or agents (criterion 4)
- b) of the objects (criterion 2)
- c) of the functions of each type of subject (criterion 3)
- d) of the operations that can be performed on each object (criteria 2 and 3)
- e) of the ways of intervening in the subjects (criteria 2 and 6)
- f) of the means of intervention (criterion 5)

16. As shown in the example relating to Business Services, for each column of classification there is a corresponding hierarchical classification (according to genre and type) and a 1- or 2-figure code.

This means that each service activity may be characterized by a 6-criteria **code** (in 6 fields corresponding to the 6 questions).

The combination of a limited number of items for each of the six columns gives rise to a larger number of criteria than in the case of current classifications.

The 6-criteria codes of metaclassification are compatible with the language of **international classifications** mentioned above, with that of enterprises and with that of enterprise registers.

### C.3. The use of metaclassification with regard to international classifications

17. Metaclassification does not contradict the international classifications of activities, products and functions (to which it is linked by a univocal but not a biunivocal correspondence) and may be useful for:
- a) the logical checking of the items of the classifications which often don't use the six criteria explicitly ascribing varying degrees of importance to them at the different levels of classification, to see that they are complete and exclusive;
  - b) creating and arranging new items arising from combinations not yet used, without having to look over the entire classification system;
  - c) linking the classifications to each other which today has to be done using correspondence tables (not always univocal) equal to the two by two combination of all the classifications.

### C.4. Using metaclassification for surveys

18. The difficulty in applying the current classifications to surveys on the activities and products of service enterprises arises from:
- a) there being no correspondence between the items of the classifications and all the service activities carried out by the individual enterprises: since

the latter usually offer combinations of services, the items of the classifications are either too analytical (not broad enough) or too aggregate (too broad) with regard to reality;

- b) there being no correspondence between the language of the enterprises and that of the classifications constructed in a top-down method.

19. The 6-criteria classification makes it possible to codify univocally, without constraints, any of the enterprises' activities shown in their brochures, in handbooks or in the promotional lists where they are registered.

As shown in the Business Services example, the surveys on service activities may be carried out in two phases:

- a) a first phase, where a **textual analysis** of such documents enables the purely lexical variants to be distinguished from the essential ones, and is added to the codification of "type services" consistent with metaclassification;
  - b) a second phase, where it is possible to ask the enterprises to breakdown their turnover (their staff) according to a classification scheme which corresponds to their language and is, at the same time, compatible with the criteria of metaclassification.
20. Part of the reason why this is a practical method is that the enterprises interviewed are requested to fill in tables compiled from the crossover of only a small number of items corresponding to their language.

#### C.5. Using metaclassification for enterprise registers

21. A code of activity (primary or secondary) and/or of products is usually designated in the registers kept for statistical purposes by each enterprise or local unit.

These codes, corresponding to top-down classifications, often tend to exclude some activities that are carried out effectively (under extension) or to accredit a company with a greater field of activity than is actually carried out (over-extension).

This creates problems when defining the field of observation, derived from enterprise lists for surveys.

22. By applying metaclassification to enterprises listed in statistical registers, the activities, (main or secondary) and products, may be expressed under items which, while respecting the language of the enterprises, avoid the pitfall of over- and under-extension, and therefore, enable the problems of defining the field of observation to be kept to a minimum.



23. For registers, metaclassification may also be used for the textual analysis of their open declarations, carried out, ultimately, with expert systems.
24. Since metaclassification corresponds univocally (not biunivocally) to international classifications, it is compatible with the preservation of the ISIC-NACE (CPC-CPA) codes used in international comparisons.

#### **D. Conclusions**

25. The ongoing revision of the European system of business statistics has been started as a consequence of the Single Market. It involves setting up a genuine system which can provide an effective response to all users' needs. In this context, work on classification plays an important role in guaranteeing methodological integrity and consistency.
26. Starting from three Council regulations defining classifications of activities and products and definitions of statistical units, Eurostat intends to continue the research on classifications of services to develop a logical structure which better fits productive activities on services.
27. Proposals made by M. Martini to adopt a bottom-up metaclassification of services overpass work on classifications. They encourage three avenues of research:
  - a) the use of metaclassification with regard to international classifications;
  - b) using metaclassification for surveys;
  - c) using metaclassification for enterprise registers.
28. A bottom-up classification strategy was utilised with positive results in the investigation of "innovative service offering to metropolitan Milan enterprises" (see M. Martini's document "Definition and Classification of Services" - fifth section). Eurostat is considering possibilities of partnership to extend the investigation to other European area characterised, as the Milan area, by concentrated and developed business services.
29. On going work on pilot surveys undertaken by Member states of the European Economic Area (EC and EFTA) provides a useful feedback on definitions and classifications. Voorburg group meetings complement the feedback from non EEA countries.
30. Trade associations represented at community level are closely involved in all these activities, offering advice, taking part in discussions and the preparation of texts and expressing the views of enterprises on what form the EBS should take.
31. All these activities could lead in three, four years time to a revision of classifications on services that, in keeping coherent evolution over time, should be based on different logical structures which better fit services productive activities in nowadays world global economy.