SIGMA

The bulletin of European statistics

CONTENTS

EDITORIAL

The disappearance of the Community's internal borders, the globalization of the world economy, deregulation – three simultaneous revolutions which make statistical observation and the measurement of external trade particularly difficult.

How do the trade flows of the global economy fit in with what has so far generally been called 'external trade'? How are these global flows portrayed – or not portrayed – in present-day statistics? What is the relationship between the multinational decision-making centres? What is the impact of these group decisions on the national economies, either individually or at European level?

Whether it is for the preparation of negotiations or the monitoring of international agreements, for measuring international trade in services or monitoring direct investment, statistics must be adapted to a large number of new situations.

In cooperation with Eurostat, the national and European customs authorities are setting up a whole array of new instruments to serve the needs of not only the public authorities but also the business world.

Maintaining coherent figures with world trade in the throes of liberalization and providing a picture of a constantly shifting, sometimes unclear situation using the most suitable means of investigation that can be found – these are the challenges which Europe's statisticians, often with very limited means, have to face.

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**Director for statistics on international and
intra-Community transactions,
relations with third countries**

WHAT EXTERNAL TRADE?

The effects of the global village
An interview with Mr Yves Franchet

In a world economy which is looking increasingly like a village economy on a global scale, political frontiers are no longer synonymous with economic frontiers. The decisions behind more than half the world's trade relate to 'establishment trade'. More than USD 100 billion in the table of world trade has to be ranked as 'not accounted for'. These are some of the problems that statistics will be able to cope with only if it has the means and the tools to do the job.

THREE REVOLUTIONS AT ONCE

'The way we measure the external trade of the Community's Member States is simultaneously undergoing three separate revolutions, forcing statistics to rethink some of its methods and to innovate...

The internal frontiers have vanished

The birth of the single market spelled the end of the traditional way of measuring internal trade, based on customs statistics. Intrastat,[1] the new system, does not have the pedigree of a customs origin: it is simply a set of statistics like any other, beset with the same doubts and uncertainties as any other statistics. It is based on direct input by the operators themselves, and has paved the way for a highly interactive Community-wide system of business statistics. Might such a system be transposable one day to the statistics of external trade?

The global village economy

A substantial part of the Community's external trade now comprises what is generally known as "establishment trade" – trade between companies within the same group, the same family, all dependent on the same decision-making centre. In trade between the United States and Europe, for example, almost twothirds of trade by volume is the result of transactions between associated companies. What, in such a context, is the significance of a "trade deficit"? What, if anything, does a widening, or a narrowing, in the trade gap mean? How can we analyse it? The stock markets will react to a volume variation of 1% in either direction... that may be no more than the decision of one big corporation to modify its policy towards its subsidiaries. The frontiers which until recently were the measure of trade are becoming increasingly irrelevant to the measurement of "external" trade.

Deregulation

Under the old system, external trade flows were measured by drawing on data derived from many forms of legislation – exchange controls, various compulsory declarations, and so on. As these have disappeared, so have the statistics which they generated. This means that our ability to measure flows of capital, services and, to a certain extent, goods, has deteriorated.

Just the beginning...

As we go through these changes, many people are continuing to reason as though the economic world still revolved around the import and export activities of national economies. But the economy has gone worldwide, and it is driven by multinational decision-making centres.

The transactions of centres such as these are so large that they can exceed the budgets of some governments. But our means of monitoring and measuring these transactions are very limited. Add to that the fact that the next 50 years should see world economic activity multiply fivefold in all the key sectors – energy, transport, industry, agriculture – and it is clear that we have only seen the beginnings of the upheaval.

When we look at the world economy from this standpoint, what is the effect of this globalization on the significance of external trade? I think that's a question for the economists: let's see if they can restore some meaning to international discussions which all too often no longer seem to have any at all...

Explaining the unexplained

Our present conceptions mean that most analyses and forecasts are wrong far too often. The analytical table of world trade shows something like USD 100 billion as "not accounted for". Annual variations are much, much less than the total not accounted for. With

unknowns of that magnitude, it is simply not possible to say whether a particular economy is doing better or worse.

Improving the view

First, the internal frontiers

Naturally, Member States are still interested in the flows of trade amongst themselves. The figures for that trade determine their contributions to the Community budget, and determine also their perception of the progress of the single market, and whether they support or oppose Community policies. National questions are very important, and they are going remain that way long after the single European currency has been introduced: Member States will be asking for high-quality statistics on intra-Community trade, and our task will be to ensure that this trade is monitored by a reliable, affordable data-collection system.

Alternatives to deregulation

Traditional systems of data collection are disappearing. Balance of payments statistics, for example, will have to look beyond the data supplied by the central banks towards new forms of data-gathering, new forms of inquiry, so that we can improve the accuracy of certain variables. And we shall have to improve the data on trade in services, and the way we measure direct investment.

Focusing on the decision-making centres

Large-scale comparison exercises are our approach to seeing our way through the globalization of the world economy. How do Europe's imports of American products compare with European exports of similar goods to the United States? How do we explain the enormous observable differences? We started a pilot project on this last year with the United States and Canada, and we shall be seeking to continue it over the next few years and, in time, extend it to other parts of the world, in order to improve our understanding of the mechanics of these flows.

New approaches

What is lacking is a comprehensive analysis in sufficient detail to permit reflection on the ways in which trade flows in the world economy are overlaid on what has hitherto generally been known as "external trade": what are the relationships between the multinational decision-making centres, which between them probably account for some 60 to 70% of world trade? Is that trade reflected in external trade figures, and if so, how? It would be no surprise to learn, for example, that certain fluctuations, which had been assumed to indicate an improvement in the performance of one nation's economy, are no more than the result of a group decision, and have nothing at all to do with the economic performance of the nation in question...

There is quite a lot to be argued over here...'

BETTER CONSOLIDATED BALANCES

For some time to come, the Community's balance of payments with the rest of the world will continue to be computed by consolidating the balances of the 12 Member States. How does Eurostat contribute to coordinating these data?

'Yes indeed. The Member States send their balances to us, and we make every effort to consolidate them. We don't always find a particularly helpful breakdown between trade within the Community and trade beyond the Community's external frontiers, and in this case we also have to make efforts, with the Member States, to separate the two.

The way we are setting about this is to examine the asymmetries which can disclose certain differences. This highly technical approach should within a few years allow us to produce accurate definitions, and enable us to aggregate only what is genuinely extra-Community. We are doing this as part of a broader IMF programme, and in close cooperation with the Committee of Governors of the Central Banks.

It is from the Committee of Governors, in fact, that we are receiving most new demands for balance of payments statistics. This is an area of particular interest to them as the precursors of the future European Monetary Institute, which will have the task of following up Maastricht for the early implementation of Phases 1 and 2 of monetary union.'

CLEARLY DEMARCATED ROLES

How will the statistical monitoring of external trade be divided in the future between Eurostat, the European System of Central Banks and the European Central Bank?

'The division of responsibilities has been discussed several times in the CMFB.[2] When the 1993–97 statistical programme was drawn up, it was decided that the work should be shared out as follows:

- monetary and financial statistics will be the purview of the European Monetary Institute, the future Central Bank;
- for the balance of payments, a number of working parties have been established, to be coordinated by Eurostat. One of those working parties, dealing with movements of capital, will be managed by the Committee of Governors;
- the other working parties will continue under the wing of Eurostat, whilst Eurostat itself will retain general responsibility for "financial accounts" and for ecu statistics.

That is what has been agreed for the present. There may be a case for reviewing the share-out after Phase 2 of EMU, but it is too early to say. The point is that we have here an eminently workable system: excellent coordination, no duplicated efforts, good relations between the central banks and the NSIs, clearly demarcated tasks and clearly defined responsibilities. I cannot praise too highly the quality of cooperation we have had with the Committee of Governors.'

In its relations with well-established institutions such as the IMF or the Committee of Governors, the 'European institution' does not have the prestige of a political body, nor is it regarded as an international institution. That must pose problems for European statistics – problems of perceived role, in particular.

'Not at all! As far as statistics is concerned, the IMF and the Committee of Governors has recognized us for what we are, and acknowledged the vital role we play.

Our methodological work has proved to be essential particularly in redefining the IMF manuals and in the sharing-out of tasks

5

amongst the interested parties just mentioned. Our coordinating role is very well accepted by Member States, and we get excellent cooperation from them.

In effect, Maastricht has given the Committee of Governors a role very similar to that played by the Bundesbank, which in Germany has the right to request statistical data whenever the need arises, without any further formality. The Treaty of Rome did not give European statistics this strength, and the initial results were slightly out of balance. But we fairly quickly found a good basis on which to work together, and relations now between Eurostat and the Committee of Governors are excellent. I cannot say too strongly how much we appreciate this.'

MONITORING INTERNATIONAL AGREEMENTS

Does statistics have a role to play in monitoring the quotas resulting from international agreements – the Multifibre Arrangement, steel, and so on?

'Of course. Statistics is a means of monitoring, checking that what has happened is properly in line with the agreements, for each category of products, for each zone and for each country.

Statistics is just one of the means of monitoring. In negotiations, it is just one of the elements taken into consideration. Negotiating skills call for the observance of procedural disciplines extending far beyond our own concerns.'

One jump ahead

Are statistics timely enough, and accurate enough, for this role?

'For agreements such as the MFA and steel, the time-lag is not too great and, since the customs classification has kept pace, it is sufficiently precise. But we are liable to come up against the problem of classifications which are insufficiently developed for certain future negotiations. The fact is that work is only ever done on classifications when there is a need... that is why we must try to keep one jump ahead of future negotiations – to perceive future needs for more precise data before they arise. The approach to classifications we have now adopted takes

account of this, certainly more than was done in the past. But more still needs to be done.'

MEASURING INTERNATIONAL TRADE IN SERVICES

Negotiations are under way – in GATT in particular – to bring in a new way of measuring international trade in services. What progress is being made?

'The GATT negotiations have been dominated, of course, by agriculture and industrial products – steel in particular. Other new areas, such as broadcasting and home entertainment, and telecommunications, have not yet reached the stage where statistics becomes an important issue: these negotiations are still aiming essentially at global procedures and recognition of principles.

For the present, the legal position is occupying the centre of the stage, setting up the rules of international law which will be needed before there is any question of monitoring hypothetical quotas.

There has not yet been any great expression of concern about statistics on international trade in services. We shall nevertheless be trying to make progress in this area.'

DIRECT INVESTMENT

The present method of monitoring direct investment relies on statistics. How?

Illusory frontiers

'Yes, direct investment is playing a growing role in the analysis of economic policy. It seems to be one of the areas where the globalization effect is strongest.

The fact is that external trade statistics are a poor pointer to direct investment. Trend analysis suffers very much from a lack of analysis of investment decisions as the world economy goes global.

There are several possible approaches to improving this situation:

- with the OECD, we have redefined direct investment;
- a new IMF manual has been drawn up with our participation, and is now finished. Methodologically it is an outstanding piece of work, but it is very, very complex to put into practice. We

shall have to ensure that similar phenomena are treated in the same way throughout the Community and the European Economic Area;

- we are carrying out a series of supplementary surveys to identify and measure direct investment flows. We are looking not just at amounts, but at the sectors concerned, at their impact on those sectors, on employment, on value-added, and so on;
- the one fundamental analysis that is missing is the "why" factor – the reason for the movements recorded.

As far as the global economy is concerned, I think it is certainly with regard to these two factors – direct investment and international services – that we are made most strongly aware of the need to use more than simple external trade as a yardstick. We have no analysis of the flows emanating from international decision-making centres.'

Group statistics?

Are such centres going to be willing to let us have the data?

'We have picked up some quite interesting signals from another statistical domain, that of statistics of groups. Reactions seem to be somewhat mixed for the present. France is in favour and pushing hard; the Netherlands and Germany seem equally reticent, somewhat opposed to the idea of preparing statistics of industrial groups. Maybe they fear that the decisions taken might one day come to the notice of the Commission, and lead to questions, perhaps even to legislation.

We have noticed that the attitude of the major groups seems fairly distant towards work on classifications or towards surveys aimed at using statistics to estimate their economic transactions. The Unice[3] recently said that it was not really in favour of group statistics. Perhaps they see a risk of operators being identified, restrictive policies being implemented, etc.

Quite apart from these sometimes divergent considerations, we must not overlook the technical problems. How do you define a European group? The big conglomerates we are talking about are more international than Community... And they are much more flexible than ordinary businesses,

which are tied to a physical exist-
ence which has never burdened
holding companies...

Clearly, this is an important issue.
It may provide the answer to a
number of fundamental questions.
But monitoring these phenomena
is going to require substantial re-
sources, and a properly defined
strategy.

As statistical investigations go, it's
certainly worth giving some
thought to...'.[4]

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[1] See *Sigma* No 5/92, p. 17–22.

[2] Committee on Monetary, Financial and
Balance of Payments Statistics.

[3] Union of Industries of the European
Communities.

[4] Interview with Mr Yves Franchet, Direc-
tor-General of Eurostat, on 28 January
1993.

Anticipating the Changes

Interview with Mr Carlos Muñoz Betemps

Statistics seem to serve the needs of European customs authorities quite adequately. These needs are, moreover, changing, as customs authorities find themselves working to provide both businesses and governments with information. Matters are being looked at from a new angle, to meet the requirements of a modern, efficient economy.

After training as a customs and excise inspector and, in particular, after taking part, while at the Spanish Ministry of Industry, in the preparatory negotiations for Spain's accession to the EC, Carlos Muñoz Betemps came to the European Commission. Previously, as Deputy Director-General at the Secretariat of State for Relations with the European Community, his duties had included special responsibility for contact with workers' and employers' organizations and monitoring the progress of accession negotiations. In the Spanish Directorate-General for Customs and Excise he dealt with the adaptation of Spanish legislation to that of the Community.

From 1986 to 1988 he was deputy head of the private office of Mr Manuel Marín, Vice-President of the Commission.

Since 1989, he has been Director of the Customs Directorate of the Commission's Directorate-General for Customs Union and Indirect Taxation (DG XXI).

IDEALLY...

Ideally, what should statistics measure for the purposes of monitoring the correct implementation of the common external tariff and the various 'territorial defence' measures in external trade?

'To enable the correct implementation of the common external tariff to be monitored, ideally statistics should establish the extent to which imports have enjoyed preferential treatment (e.g. Lomé, Turkey, end-use) or have been subject to the payment of normal Common Customs Tariff duties.

For all large-scale trade transactions

To enable the correct implementation of the Common Customs Tariff to be monitored, Community external trade statistics should, in fact, provide data on any product involved in large-scale trade or any product covered by restrictive Community regulations (e.g. chemical weapons, drug precursors and nuclear waste).

In practice, this is a problem of nomenclature: the Combined Nomenclature must be structured in such a way as to cover these products individually, without, however, increasing the number of subheadings disproportionately and thus making the Common Customs Tariff unmanageable. We have to find the happy medium between the desirable and the feasible.

Preferential measures

The Customs Code[1] lays down that from 1 January 1994 preferential measures, autonomous suspensive measures and tariff quotas shall apply solely at the declarant's request. Failing such a request, the import duties provided for in the regulations on the Combined Nomenclature and the organization of the markets shall apply.

At present, it is still up to the customs authorities to decide whether or not a preferential arrangement should apply.[2]

The Commission is also proposing the creation of Community codes for tariff arrangements (including the end-use arrangement). They would apply from 1 January 1994 and would be used in the Taric interface system, the national tariffs and the SAD.[3] The proposal has also been made for export refunds to be included in this approach. Furthermore, since some countries may enjoy various different types of preference (e.g. GSP[4] and Lomé), it may be necessary to specify the type of preferential arrangement involved.'

Open up Taric

How satisfied are users of Taric? 'A few improvements would be welcome. The new phase (Taric 2) which is being drawn up takes them into account and attempts to include all the different arrangements and possibilities which do not appear in the current version.

The aim is to make most of the data contained in the system available to businesses – to open up Taric so that it can be used not only by governments but also by the various types of businesses. Ideally, the system should make it possible to pinpoint the really important areas in the statistical subheadings, without, however, overwhelming businesses with additional burdens.'

THE STATISTICS USED

What are the main ways in which DG XXI uses Eurostat statistics at the moment (in particular, balance of payments and external trade statistics)?

'Let us concentrate on external trade statistics (balance of payments statistics are used mainly by the Task Force dealing with matters relating to taxes and social security contributions):

- these statistics are used to study applications for exemptions to the rules on origin laid

down by the Lomé IV Convention and Council Decision 91/482/EEC on OCTs,[5] in order to assess the damage which exemptions could cause Community businesses;

- they are also used for the granting of automatic exemptions, when the annual volume of imports planned does not exceed a certain proportion in monetary terms of the average level of Community imports of the same products in the last three years. It should be noted that for exemptions the reaction time available to our departments is very short: if there is no reaction within 60 working days, the exemption is granted automatically. This is one of the reasons why it is essential for us to obtain the statistics we need very quickly;

- the statistics are also used in connection with the agreements of association between the Community and the Republic of Cyprus and the Republic of Malta, so that the functioning of these agreements can be assessed for the purposes of future amendments;

- a further use is for calculating the effects of the suspension of customs duties (tariff suspensions, tariff quotas and preferential arrangements). They are also used to examine the validity of applications for use of the GSP safeguard clause. (In the case of the latter, we also use special trade statistics);

- finally, external trade statistics are also used to monitor the application of economic arrangements (inward and outward processing) to ensure sound management.

The problem of tariff ceilings

DG XXI, which is in daily contact with the Member States' authorities and the business world, is concerned about the speed with which customs duties are re-established within the tariff ceilings. All of the preferential arrangements comprising tariff ceilings are involved, i.e. the GSP (the most important) and the arrangements with Central and East European countries and the former Yugoslavia.

The first stage in the management of these ceilings is the collection of data by the Member States. These then have to be sent to the Commission very rapidly![6] However, some Member States forward their statistics very late – in some cases even several months late! Efficient monitoring of what is actually going on in such cases is difficult...

Monitoring of cooperation agreements

The use of statistics is not, of course, restricted to tariff matters (application of suspension measures, preferences, etc.). DG XXI also uses Eurostat statistics to draw up a list of the EC's main trading partners as part of its remit to negotiate customs cooperation agreements.

The large-scale operation aimed at establishing as many customs cooperation agreements as possible requires – for the fixing of priorities – a considerable amount of statistical information on all trade.

Fraud detection

We use Comext statistics and, to a lesser extent, the special GSP statistics in our customs fraud enquiries. For instance, if the Commission hears allegations that a particular country is enjoying Community import tariff preferences on exports of a product that it does not produce or a quantity which exceeds its production capacities, the first (and perhaps the most important) means of checking whether an irregularity has occurred in the application of the tariff preferences is always to examine the statistics on imports of the product declared as originating in the country concerned.'

What role do statistics play today in the Commission's surveillance (e.g. textiles, steel, etc.) and protection activities? Is it really their role?

'Import statistics, of course, provide the necessary data. They are in a very structured form – by category, exporting country, month and year.

Quantitative limits

These elements enable us, for example, to impose the quantitative limits on textile products, when the "basket exit threshold" has been reached.[7]

During the textile agreement consultations, statistics are frequently used to compare Member States' imports with third countries' exports. Furthermore, it should be noted that the sales or export statistics of the supplying countries quite frequently fail to tally with Community import statistics. Statistics are therefore essential for us to be able to check that the textile arrangement as a whole is operating properly.

Implementation of agreements

Inward and outward processing data are also very important for monitoring the correct implementation of agreements.

The monitoring of certain preferential tariff arrangements (GSP and agreements with Mediterranean countries) depends on preferential import statistics. These statistics are used to justify the implementation of the safeguard clause, for example by showing that a tariff ceiling has been reached. The use of statistics is essential for this purpose. They enable us to form a picture of the situation as it really is.

Surveillance and protection

The origin of goods is of prime importance when it comes to preferential treatment. The detection of sudden changes of origin for certain products often leads to the discovery of the passage of products previously covered by the general system into a particularly favourable arrangement. In some disputes over the application of tariffs, goods have been found to have suddenly moved from one tariff heading to another. Statistics are fundamental in such enquiries.

Surveillance and protection go hand-in-hand. Statistics are very often the starting point for a whole investigation involving other elements. They are far from the only element taken into consideration, but they do in themselves enable a large number of anomalies to be detected.'

What role do statistics have to play as regards agricultural levies and refunds?

'As regards agricultural policy, statistics enable the development of trade between the Community and non-member countries to be monitored, in terms of both quantity and quality, with the help of specific tools, namely the Taric nomenclature, the refund nomenclature and the levy nomenclature.

These nomenclatures enable products to be precisely identified and

also include the intended purposes (e.g. in the case of differentiated refunds).

Statistics are therefore a tool used by the Commission (particularly DG VI) in the management of common market arrangements.'

REQUIREMENTS AND IMPROVEMENTS

What statistical requirements of DG XXI are not (adequately) met? What improvements should be made?

Heading by heading

'In order to form an even more accurate assessment of the effects of numerous applications for the suspension of tariffs, it would be useful for Eurostat to provide us with external trade statistics at the level of Taric headings. This would, of course, mean that the statistical nomenclature and the Taric nomenclature would have to match perfectly.

Even faster...

Another improvement would be in the speed with which statistics are made available, so that we are able to respond much faster to any commercial difficulty. "Fraudulent" trade is very well organized and can be countered in time only if the "warning bells" ring as soon as possible.'

Statistics for competition rules

The origin of goods determines whether commercial operations qualify to be insured (usually by the State) against political risks and non-commercial risks in general. Does or would the observation of the origin and movement of goods make it possible to pinpoint which are the most 'enterprising' countries in relation to such and such a region of the world and thus encourage Community businesses to make better use of the most profitable channels?

'As from the start of this year there is just one Community customs territory. The customs system is based on the application of common rules everywhere. DG XXI is concerned, if not with standardizing procedures, at least with ensuring that the opening up of the market has an equivalent effect everywhere, despite the differ-

ences in mentality between countries which can lead to a lack of uniformity in local procedures.

As far as we are concerned, the internal market must respect the fundamental principle of equal opportunities: all businesses must receive the same treatment throughout the Community customs territory. They must have the same opportunities: it must be up to them to choose the best location for their type of trade and to decide where it is most advantageous for them to export to or import from, etc. If this were not the case there would, of course, be deflections of trade.'

Would monitoring at borders make it possible to detect any tendency to leave the Community via a particular country? Are the competition departments investigating this?

'One of the intentions behind the creation of the single market was that businesses should be given every opportunity to benefit from the system of a single customs area. The single market has, of course, brought the points of entry and departure into competition and some businesses will prove efficient, others less so. However, their efficiency will not necessarily depend on the application of customs procedures. A lot of other factors are also involved, such as ease of loading and unloading, communications networks, means of transport, etc. Some Community territories are better prepared than others for the disappearance of internal borders and, with the new possibilities this creates, competition will swiftly develop. Although statistics enables the development of parameters such as the political risk and non-commercial risks in general to be monitored, this can only ever be done after the event, which is too late for business needs.'

This is no doubt true of short-term operations. Distinctions should, perhaps, be made for long-term operations and investments. However, that would eventually make it possible to determine which countries (and these are not necessarily those with the best infrastructures or best means of communication) are the most enterprising as regards a particular region of the world. The Berne Union would certainly draw valuable information from these statistics.[8]

GLOBALIZATION AND 'INTERNALIZATION'

What is the effect of the globalization of the world economy on the meaning of external trade?

Economic units

'The time of pure bilateralism in trade relations is now over. At international level the economic units are no longer States. The time of big collective units has arrived (e.g. the EC, the EEA, Nafta, Mercosur, etc.). Although it is true that within GATT, with the exception of the EC, negotiations are still based on trading partner States, if things continue the way they are going the situation will be totally different in future multilateral trade negotiations after those of the Uruguay Round.

Trade will be intensified within each new "economic commercial unit". The phenomenon could be described as the "internalization of trade" within each new "unit". This is the source of the changes in trading patterns to be expected in the coming years.

However, this "internalization" will not necessarily involve a reduction in international trade with the world outside the "unit" in the medium term. The process of internalization should bring with it greater wealth, following the intensification of trade and the opening of the markets within the "unit". In the medium term this intensification and opening-up will have favourable repercussions for "inter-unit" trade and for international trade in general.'

Towards simplified procedures

'One of our units is working on improving the customs procedures in certain specific areas. We are moving towards simplified procedures, reducing the number of physical checks, which are to be replaced, wherever possible, by audit controls.

This development, which requires the creation of uniform standards, should enable economies of scale to be made.

Our approach consists of bringing our practices more into line with those of business, whilst working on as scientific a basis as possible. As far as possible we are modelling the work of customs on the working methods of the most effi-

cient companies. It is a new vision – to adapt customs to modern forms of commercial activity.

Meeting business needs!

The development of office automation means that totally computerized customs procedures are foreseeable. The possibility of exchanging information even before the arrival of the goods should be investigated so that any controls can be better targeted. Businesses are very receptive to these ideas and some have even spontaneously offered their cooperation in setting up pilot tests and studies.

In just a few years' time the work currently in progress will result in customs really being able to serve the needs of business and the Community economy as a whole. We are trying to anticipate the great changes that this will imply.'[9]

[1] See Article 20(4) of the Customs Code (Regulation EEC No 2912/92, OJ L 302).

[2] The SAD provides for indication that a preferential arrangement (box 36) or a (tariff) quota (box 39) is to be applied. The use of these two boxes is, at the moment, optional.

[3] Single Administrative Document.

[4] Generalized System of Preferences.

[5] Overseas countries and territories.

[6] At the latest on the 15th day following the end of the monthly reference period for the Central and East European countries and by the 11th day for the GSP, bearing in mind that in the latter case if a ceiling is exceeded by 75% a 10-day surveillance period may be required, in which case the deadline is reduced to 5 days.

[7] In accordance with the provisions of Article 11(2) and Article 12(2) of Regulation (EEC) No 4136/86.

[8] Set up in 1934, the Berne Union comprises most of the world's 'public' credit insurers and certain private insurers covering credit risks and political risks. Meetings of the Union provide the opportunity to exchange experience and to ensure that members' conduct is kept in line. This is intended to prevent any serious discrepancies in the way they handle cases, which could be prejudicial to a particular country. They also aim to maintain the general conditions needed for healthy competition.

[9] Interview with Mr Carlos Muñoz Betemps, 5 March 1993.

11

MAINTAINING CONSISTENCY

The liberalization of world trade: a challenge for statistics
Interview with Mr Frank Schönborn

The statistical information provided by customs systems will have to be found elsewhere when these systems disappear. But what of all the traffic that crosses borders unnoticed? The globalization of the world economy is making statisticians' work very complex.

After graduating in economic sciences from the University of Saarbrücken, Frank Schönborn spent a further three years there as a graduate student of international monetary and balance of payments issues. He joined the Commission (DG II) in 1975, working on short-term analysis, monetary policy, EMS analysis and then balance of payments adjustment problems. He also monitored the economic aspect of the common agricultural policy. After four years with Eurostat, he has taken over the 'Balance of payments and analysis of international and intra-Community transactions' unit.

BORDERS AND CONSISTENCY

Since the Community has abolished its internal borders, statisticians are faced with the need to set up a new collection infrastructure capable of replacing the now dismantled customs. The Intrastat system developed to this end is a world first: nothing like it exists anywhere else. But if the liberalization of trade continues to accelerate so that further physical borders disappear outside the Community, we will be facing the same challenge again. What sources of information are to be used for statistics to remain consistent?

Different aims

'Foreign trade statistics do not pursue the same aims as balance of payments statistics: the former aim for detailed information on all cross-border movements of goods, with particular regard to products; in balance of payments statistics, sales and purchases of goods are only of interest as a whole, as one aggregate among many items taken to reconstruct all the international transactions of a country in a macroeconomic financial context.

These different aims mean that the information obtained in foreign trade statistics has to be adjusted or corrected before it is used in balance of payments statistics.

Adjustments and corrections

If they are to be used in the balance of payments context, foreign trade data have to be looked at again from various angles:

- imports are valued in different terms: cif value in foreign trade, fob value (excluding transport and insurance from the exporter's border) in the balance of payments;

- foreign trade statistics include all movements, whether involving any change of ownership or not, while only transactions entailing a change of ownership should be taken into consideration for balance of payments statistics;

- in warehousing movements, certain transactions are taken into consideration in foreign trade statistics but disregarded in balance of payments statistics;

- the territorial boundaries do not necessarily correspond: for example, France, Spain and Portugal do not include their "overseas territories" in foreign trade, but include them in their balance of payments.

It is hard to guarantee consistency if the borders are not the same for everyone.

THE COMPLEXITY OF SERVICES

Balance of payments statistics are the main source for drawing up statistics on international trade in services. This a relatively new domain, where statistics are still somewhat rudimentary and face conceptual and practical problems.

Conceptual problems

Developing the nomenclature

Nomenclatures and classifications have to be developed in cooperation with the OECD and the IMF. 'This exercise is relatively well advanced: as things stand, we can consider it practically complete.

Defining the content

But, within this classification, it is now important to define the content clearly, and it is at this level that some problems still have to be solved: services exist today which did not exist five years ago, while some will probably be re-

placed by others five years from now. The phenomenon of services being produced outside the enterprise rather than inside it will continue to give rise to new products which will constantly have to be taken into consideration.

Mixed transactions

A number of services are considered as a whole because those who provide them are reluctant, or unable, to separate out those of their components which, conceptually, would belong to several different categories. Clearly separating out "services related to traded goods", such as transport, insurance, technical assistance, training, installation, etc., poses practical problems for operators, who could be expected to be able to provide statistical information correctly.'

Practical problems

It is therefore not enough to define things clearly. The information has to be forthcoming on time and in the desired form.

Gross or net terms

'We receive net information on certain transactions, whereas we should receive gross figures. Thus, for example, rail, telephone and postal services analyse their operations in net terms and declare these balances to us. Unfortunately, they thus prevent us establishing the quantity of services provided. There is a serious problem of systematic undervaluation. On other occasions, we should have the net figure and in fact receive the gross (e.g. in insurance).

The major problem of tourism

One of the major flows in the balance of payments, tourism, has a very bad statistical image. This is due to the number of different methods used: some countries take the volume of banknotes coming back from abroad, as if each tourist met all his expenses in cash using banknotes bought before leaving home. Furthermore, this method entails the risk of being obliged to include in tourism statistics capital remittances by immigrants to their countries of origin, investment flows which pri-

vate individuals pay in cash in "discreet" real estate transactions abroad, etc.

Other sources to mine

There is, therefore, a need to develop other sources of statistics to fill the existing gaps. As regards tourism, the British model, based on surveys of international passengers, seems a good method. But it would be awkward to operate on the Continent, because the number of entry/exit points is not limited as it is in the United Kingdom. That leaves a survey of households to be developed, which will prove absolutely necessary.'

DIRECT INVESTMENT

How do statistics ascertain direct investment abroad or from abroad? What are the broad 'consolidation' principles applied?

A simple definition...

'In essence, the definition is simple: direct investment is effected when an investor, in addition to requiring a measure of profitability from his investment, seeks to exert some influence on a company abroad. The OECD took the trouble to establish this reference definition some years ago in the hope that the methodology would develop harmoniously.

...but how it is applied is complex

In fact, however, the countries have applied the definition in very different ways. What part of the authorized capital has to be held to meet the "influence" criterion: 10, 20, 50%?

By the time the initial reference definition had been applied for several years, it was observed that the figures produced by the various countries were neither consistent or comparable. We have now entered a second stage where, with the OECD and the IMF, we are looking for more harmonized procedures. Applying the revised definition in the context of the new IMF manual will nevertheless still be extremely complex.

Smokescreens

This complexity is particularly bound up with the fact that the economic relations between a parent company and a subsidiary or vice versa, which were fairly simple and visible in the still recent past, are becoming increasingly blurred by the phenomenon of the globalization of enterprises and formation of conglomerates, so that it has become difficult to establish where the investor is and where the enterprise invested in is. These unclear or labyrinthine relations are very widespread in the financial world. Financial and banking institutions receive funds used to create companies or investment funds which do not "invest" directly for the purposes of production but often to create other funds in another country from where, for tax reasons, they will be invested for a better return in a third. In an attempt to cut through these smokescreens, statistics can do no more than make rough corrections for certain flows: we know, for example, that flows to the Bahamas are not intended to produce cars or computers; these are financial transactions.

We are therefore faced with a visible economic and financial phenomenon in direct investment statistics.

In our consolidation principles, we make every effort not only to pin down all intra-Community flows but also to identify purely financial transactions. But the fact that a large number of transactions managed by European financial institutions are pooled in a fund before being redistributed no longer allows users of direct investment statistics to see where the money is coming from, where it is going or in which sector it is to be used.

Analysing asymmetries is another way of trying to get through to the real picture. This is always our final quality test; when the flows of two counterparts which ought in principle to be identical show differences, there is a problem. In direct investment, the signs on the flows are sometimes the opposite of what they should be.

Nevertheless fundamental statistics

Yet direct investment statistics are fundamental for the development of other statistics for dealing with certain aspects of the internation-

alization of economic life. Given that there is more to this process than investment flows, is the point not also to know what the consequences are?

Direct investment in fact gives a first indication of cases of internationalization which should be better highlighted by other data.'

MONITORING TASKS

Deregulation (abolishing exchange controls etc.) has occasionally brought about a deterioration in balance of payments statistics. During the stages of transition to EMU, however, there will more than ever be a need to monitor these balances. How can this usefully be done?

Errors and omissions

'We can in fact confirm that the situation has become more difficult and the quality of statistics has declined. "Errors and omissions" entries are multiplying.

In those countries where this is observed, explanations are sought, more by deduction than by applying rigorous statistical methods. Thus, when Germany introduced taxation of investment interest at source, some DM 100 billion was in all probability moved abroad last year; those transactions were not recorded by the German balance of payments system but by other sources, which points to the assumption that they had to be capital flows.

It also appears that the political authorities can live with such a situation, although it is not at all satisfactory from the statistical point of view. Will the political will exist, in the future, to preserve the quality of these statistics? They will cost more and more and we may see requirements being realigned, or a switch to other sources of information.

Monitoring convergence

In control terms (monitoring the convergence conditions set out in Maastricht), balance of payments statistics are certainly an important source of information, but not the only one. Surveillance does not only concern financial transactions: it is also, and especially, aimed at the public sector and its behaviour in terms of indebtedness and deficit management. But what has to be monitored to keep up with capital flows: what flows? What transactions and with what partners? Where intra-Community transactions are concerned, this is proving to be a very difficult task.

Capital account measures

Let us mention three kinds of measures concerning the capital account. A number of initiatives have been launched to compensate for the weaknesses observed in the "classical balance of payments tool" where capital flows are concerned.

Direct investment

As we have seen, better definitions and more practical procedures are being sought for the sake of greater harmonization and more detail in our information.

Banking statistics

Where the banking sector is concerned and where it is no longer possible to record transactions one by one, we are making every effort to apply "stocks statistics" to the banks: comparing the stocks of assets held by the banks, broken down by items and geographical partners, and comparing them from period to period can show up any movements which must have taken place. If these statistics are well harmonized and the information from the sectors is compared well, it should be possible at the very least to determine what net transactions must have taken place between the banks in the various countries for their various positions.

International investment position

Analysing changes in investment positions also enables the flows between various countries to be determined. It is planned to develop this tool, for example for portfolio investments (securities). The Americans have therefore taken the initiative of launching a survey of bodies which manage these portfolios; they would like to see this type of survey develop at international level in order to be able to exchange data.

Such surveys are already carried out in almost every industrialized country, but they are not as yet harmonized to the point where information can be exchanged at the required level. We are encouraging our Member States to develop this kind of survey.

The deterioration of statistical information on capital accounts is a world-wide phenomenon. The IMF is paying close attention to this problem, and we are playing an active role in the working party which has concluded that other sources of information ought to be developed and put to better use in this context. This particularly explains the pressure to develop banking statistics and international investment position statistics so as to allow much more consistent information to be obtained in future, not only at Community level but also at world level.'[1]

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[1] Interview with Mr Frank Schönborn, 29 January 1993.

FOCUS ON REALITY

Interview with Mr Jean-Claude Roman

The various instruments for measuring external trade make use of information systems which are not always compatible. The systems for collecting balance of payments statistics will need to undergo fairly radical changes in order to produce good-quality information within the context of economic and monetary union.

Having obtained a diploma in advanced economics, a diploma in advanced mathematics (statistical option) and a degree in sociology, Jean-Claude Roman began his career with the Commission in 1976. He dealt first with statistics on developing countries, then moved on to national accounts and, for the past six years, has been dealing with balance of payments statistics.

CURRENT WORK

Over the past five years, a large number of Eurostat publications have been revamped, partly because the Member States have provided more data, and partly because the Community now has a system for making estimates which aims to fill some of the gaps left when incomplete data arrive at the Statistical Office.

Publications

'We have transformed our publications, which now contain EUR 12 aggregates based on harmonized nomenclatures. They include *International trade in services EUR 12 from 1980 to 1989,*[1] *Geographical breakdown of the current account EUR 12 1980-89* and *European Community direct investment 1984-89.* These publications meet the information requirements of various Commission departments, particularly DG I, for which statistics on international trade in services are of paramount importance for the Uruguay Round negotiations, which will also cover services.

It would not, however, have been possible to produce these publications if methods of correcting and estimating the data had not been developed.

Joint estimates

The estimates which we are required to make are the result of a joint effort.

When we see that the data that we have received are of poor quality, or when we have enough information to show that the flows are over- or underestimated, we make a series of corrections, which we first of all discuss with the various working parties concerned so as to obtain an adequate consensus from the Member States before publishing. We work on the basic principle of not making changes without agreement – a principle we intend to adhere to.'

Methodological work

The demand for good-quality balance of payments information is growing rapidly, not just because of the Uruguay Round, but particularly because of the progress being made towards EMU. However, the data collection systems used by the Member States differ considerably, and the information derived from them is far from consistent in all cases.

'In the short term, the methods for making corrections and estimates which we have developed are reasonably satisfactory.

Nevertheless, in order to make more fundamental improvements in the future, we have set up a think-tank on balance of payments statistics. The question is whether there should be a single system of collecting data to achieve optimum harmonization of the statistics, or whether we can get by with making the differing systems of most of the Member States compatible. For the moment, this issue is still unresolved.

Four task forces have been at work over the last year or so. Their job is to come up with answers to these questions some time before the end of 1994, and their respective remits are:

- general aspects;
- current account balance;
- capital balance;
- UN-Edifact messages.

Their task is a very difficult one, as the balance of payments statistics are linked to data collection systems which, in spite of having a number of points in common, differ from one Member State to another. The main source is not standard and, what is more, balance of payments statisticians use a large number of "related" data in very different ways, such as statistics on foreign trade, transport, tourism, and business statistics, which generally are not harmonized.

Although it is premature to draw conclusions from the work of these groups, it seems that there

would have to be some fairly major changes in the Member States' data-collection systems for it to be possible to set up a "compatible" data-collection system at Community level.'

DIFFERENT FORMS OF EXPRESSION

The value of goods in customs statistics is different from that used in the balance of payments. What problems does this difference cause in the field of statistics?

'There are many differences. For example, the balance of payments statistics use fob-fob values, whereas external trade statistics use cif-fob values, which are not sufficient for us to make our estimates. We have to use the settlements or transport statistics. Must we collect transport price statistics? This is a possibility, but not necessarily the option we will choose. It is clear that we must re-think the use of related statistics in order to further improve our estimation methods and harmonize them as much as possible at minimum cost.

In addition, some transactions (such as financial or operational leasing) are processed together as goods statistics, whereas they have to be processed in a very different way as balance of payments statistics. Another example is all international gift transactions, which have to be accorded special treatment in the balance of payments statistics. In these cases the work of the task force concerned has enabled us to obtain extra information on the nature of the transaction, so that we can make the conversion.

Some Member States use settlements statistics, as well as external trade statistics, to make estimates of goods. Will they still need these settlements statistics? If we compare these statistics with the goods statistics, we find a great number of inconsistencies.

The "current account balance" task force will have to make proposals on converting external trade data to balance of payments data.'

INTERNATIONAL TRADE IN SERVICES

How does statistics currently measure international trade in services? Is this measurement satisfactory?

'Services have to be viewed together with all their special characteristics.

Some are extremely concentrated. In air transport, the number of companies is much lower than in land transport, where the operators are legion. In other services, such as tourism, the statistics are collected by very different means. Business services are mainly supplied by enterprises which form more or less integrated networks, from which it is far from simple to collect data. A final example is that of construction services, which are on the borderline of direct investment transactions.

Examples of common difficulties

- in sea transport, Greece does not appear to have any means of obtaining the required information easily;
- in air transport, some countries, such as Germany, seem to have difficulty in obtaining information on foreign companies operating in the country;
- in tourism, the cross-checking of information from different Member States reveals major inconsistencies in the use of data concerning the methods of payment used by travellers;
- in telecommunications services, the information obtained is sometimes a net figure based on compensations, whereas we need gross data.

This all goes to show that services do not form a consistent whole, which makes it particularly difficult to come to grips with international trade in services.'

Unavoidable compensations

In a growing number of services transactions, settlements can only be made of the net figure of their compensation. How can statistics avoid underestimating a large number of these flows?

'We have to look beyond the current practice of "netting" the amounts, as there can be compensation of two services between each other. All the Member States'

data-collection systems clearly state that it is the gross flows which must be declared. But the question is to what extent the central banks really obtain the gross data. We do not have the complete picture on this, but can only note a number of anomalies, such as those mentioned above with regard to sea transport.

Our aim should be to set up a system whereby the central banks themselves can make all the required checks on the declaring parties, in accordance with the principle of subsidiarity. It should not be our job at Community level to check the declarations made by enterprises. Perhaps we should move towards collection systems based directly on company accounts, which would produce information to be sent monthly to the central bank. If the enterprise has made the effort to send information correctly recorded in its accounts, the problem of spotting cases of compensation, which could otherwise increase in number, might gradually disappear.

Possible remedies

Publishing our work already gives us the chance to make a fair number of corrections. Apart from this, we are basically trying to identify and list the problems, so that once a single collection system has been set up, it can take account of anomalies which have already been detected.

However, given that services are completely intangible and are often provided via networks, it is always much more difficult to process statistics on international trade in services than international trade in goods.' Fiscal and financial engineering delights in legal services and advertising services, in which the unavoidable practice of transfer pricing would never be a happy hunting ground for statistics.

INTERNATIONAL CLASSIFICATION OF SERVICES

What are the main difficulties in drawing up an international classification of services?

'The propensity of enterprises to set up subsidiary companies or branches abroad or to create networks is much greater when they carry out international trade in

services than when they trade in goods. A major factor nowadays is the development of establishment trade. A large number of international bodies, such as the Commission, are demanding a statistical explanation of this new form of marketing.'

Establishment trade

'We cannot restrict ourselves to looking at the provision of services on a strictly cross-border basis, but must look at the networks and the establishments through which they are provided. For example, we must compare the turnover, number of employees and value-added of foreign subsidiaries and branches operating in the country with those of all enterprises in the country.

A certain amount of this information could possibly be derived from direct investment statistics or be associated with these. Business statistics should also yield some information. By differentiating between foreign-owned enterprises and those which are not, we could obtain some interesting pointers.

This work is useful not only for services, but also for goods. It is useful to know how many Japanese cars are imported into Europe, but it is equally important to know how much Japanese companies have invested in Europe, and the amount of their turnover in Europe.

This new approach is still in its infancy, but it is going to progress rapidly, as trade through establishment trade will probably figure in a forthcoming agreement under the Uruguay Round.

Joint projects

The classification for international trade in services is being developed jointly with the OECD. We wanted a nomenclature which was consistent with existing nomenclatures, in particular with the CPC. In addition, we have drawn up a joint Eurostat-OECD questionnaire on direct investment.

We must not lose sight of the fact that statistics on international trade in services are fundamentally different from services statistics at national level, especially because some types of services, such as health or education serv-

ices, are virtually never traded internationally. On the other hand, other types of services, such as transport, feature prominently in the balance of payments. Even if we do have a nomenclature which is consistent with the CPC, we shall not be able to avoid coming across the odd very detailed heading, while others will have very little detail or may even be completely obscure.'

INVESTMENT FLOWS

Statistics on the Community's direct investment are far from harmonized, as international trade flows are recorded quite differently from one Member State to another. How are the different concepts currently in use to be reconciled?

'Our publications and methodological work have revealed a number of differences or discrepancies. For example:

- in some countries, there is no information available on profits which are ploughed back;

- short-term credits are handled differently from one country to another in the direct investment statistics;

- investment in real estate is handled very differently from one country to another;

- the very concept of direct investment, as opposed to portfolio investment, is not always understood in the same way.

Another example is the 10% threshold, beyond which a shareholder in an enterprise is deemed to have a voice in the management. This is open to too many possible interpretations. The problem becomes no easier when we look at reciprocal shareholdings lying behind business strategies which current statistical practice cannot account for. Even very large-scale operations, which we can identify, are by no means recorded in the same way in all countries.

Investment statistics will continue to be extremely complex, and even if we have the best possible definitions, they will probably never manage to reflect the reality of the transactions in their entirety and in all their different dimensions.'[2,3]

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[1] *International trade in services EUR 12 1980–89*, Cat. No CA-76-92-124-FR-C.

[2] The second edition of our publication *European Community direct investment 1984–89*, Cat. No CA-75-92-679-EN-C, contains some major updates.

[3] Interview with Mr Jean-Claude Roman, 8 February 1993.

17

Missions, visits and meetings

■ HYPOSEMIOLOGY

A new scientific discipline, hyposemiology, was created at a seminar[1] on meta-information which was held in Luxembourg on 2 and 3 February 1993 in connection with the Doses programme.

Considerable progress has been made in this area in recent years. Meta-information is increasingly considered not only as a documentation aspect of statistical information but also as a form of information which can be used to guide and direct various applications within data processing systems. The use of meta-information enables systems themselves to determine what they can or cannot do with the data they receive.

The seminar was attended by around 120 people, who witnessed the launching of a new scientific discipline: hyposemiology, or the 'science of the meanings (semiology) of what is "below" (hypo)'. This is, in other words, the science of the interpretation, classification and codification of footnotes!

An association and a newspaper have been set up. The discipline clearly has a bright future, and not only in the world of statisticians.

■ 27TH SESSION OF THE UNITED NATIONS STATISTICAL COMMISSION

The session was held in New York from 22 to 26 February 1993.

The heavy agenda included two items of great importance for the future world statistical system, namely:

- international statistical cooperation;
- the approval of the new system of national accounts.

STATISTICAL COORDINATION AT WORLD LEVEL

Europe

The need for statistical coordination in the EC and now in the European Economic Area, together with the political upheavals in East European countries have led to the search for efficient forms of cooperation between Eurostat, the OECD and the ECE in Geneva. The following measures have been taken:

- The strengthening of the role of the Bureau of the Conference of European statisticians, which is made up as follows:
    - chairmanship: Switzerland;
    - member countries: Canada, Switzerland, Hungary, Russia, Denmark and Turkey;
    - permanent observers: OECD and Eurostat.
    - The Bureau fixes the agendas of the Annual Conference of European Statisticians and monitors cooperation between the European statistical institutes. It is assisted by the Statistical Division of the United Nations ECE in Geneva.
- The OECD has reorganized its statistical activities by creating the post of Chief Statistician and drawing up an annual statistical programme.

- Eurostat/OECD/ECE-Geneva publish their work programme annually in a single format and aim to eliminate any duplication of activity by holding a large number of joint meetings and creating intersecretariats which also include other bodies working in specific areas.

At world level

A Working Group has just completed a study on improving the efficiency of the system. The proposals which emerged involve to some extent transposing the model which has developed in Europe to world level. In particular, it proposes:

- giving the Working Group (Chairmanship: The Netherlands – members: 25 countries – Eurostat an observer) the role of the Bureau of the Conference of European Statisticians;
- confining the discussions of the Statistical Commission to subjects of statistical policy;
- transferring the discussions on technical subjects to task forces, which themselves report their conclusions to the Working Group.

Six task forces have been set up and for each of them one body will act as convener. Eurostat is the convener for the prices task force (including the CPI) and takes part in the Intersecretariat Group which is convener for national accounts (OECD, IMF, WB, UN and Eurostat). The other task forces are:

- statistics on industry and construction (convener: OECD);
- international trade (convener: GATT);
- finance (convener: IMF);
- environment (convener: UNSTAT).

The republics of the former Soviet Union (FSU)

A steering group coordinates the activities of international bodies providing technical assistance to FSU countries. To coordinate the activities the idea of a 'focal point' was created. An organization

which acts as the focal point in a given area is responsible for coordinating and planning the activities of all the bodies working in that area.

Eurostat is the focal point in the fields of external trade, business registers, producer prices and enterprise statistics and is very active in many other areas.

Central and East European countries

For three years Eurostat has been coordinating technical assistance activities for these countries on behalf of the G-24 countries in conjunction with a UN, World Bank, IMF and OECD Intersecretariat. The activities form part of multiannual programmes and Eurostat has developed and updated a databank covering these activities for all the multi- and bilateral partners.

Transatlantic cooperation

Eurostat is also involved in active transatlantic cooperation with the USA and Canada. A top-level meeting, which takes place at least once a year, makes it possible to coordinate the positions of the three partners within the international bodies on questions of statistical policy, such as the strengthening of the world statistical system, or statistical methods.

This cooperation acts as an important catalyst for the improvement of international statistical coordination.

Traditional ACP-Eurostat cooperation

As part of traditional ACP-Eurostat cooperation, Eurostat recently took on responsibility for coordinating the technical assistance activities within an ECA/World Bank/Eurostat/UNDP Intersecretariat for African countries. It has also undertaken to work on improving the organization of statistical systems.

APPROVAL OF THE NEW SYSTEM OF NATIONAL ACCOUNTS

After 10 years' preparation, with the help of international experts, the Intersecretariat created to draw up the new SNA and in which Eurostat was represented proposed the new text to the Statistical Commission. It was approved.

The new SNA is the basis on which Eurostat is currently preparing the new ESA, which will enter into force, if the NSIs accept our proposal, in 1995.

■ STATISTICAL INFORMATION SYSTEMS IN A MARKET ECONOMY

The seminar, organized by Eurostat and the United States Bureau of Labor Statistics, was held in Luxembourg from 8 to 10 March 1993. It was aimed particularly at the heads of the statistical offices of the former Soviet Union republics.

A number of European countries, the United States, Canada and various international organizations took part in the seminar. The objectives were:

- to explore the role of statistical information in market economies and to provide information on the organization of Western statistical offices;
- to allow Western statistical offices to find out about the current working conditions and needs of the statistical offices in the FSU republics.

At the end of the seminar the heads of the FSU statistical offices split into three groups and visited the French, German and Dutch statistical offices on 11 and 12 March.

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[1] See the article entitled 'Statistical meta-information systems workshop' on pages 22 to 24 of this issue.

PORTRAIT OF THE REGIONS

A unique and substantial achievement
Interview with Mr Hubert Charlier and Mr Joachim Recktenwald

This publication is the first to present all the regions of Europe one by one via maps, diagrams, statistical tables and textual commentaries on their area, regional strengths and weaknesses, population patterns and trends, employment, the economic fabric and the environment.

Hubert Charlier

An agricultural expert and economics graduate of the University of Louvain, he joined Eurostat in 1975. After five years working on agricultural statistics, he has been involved with regional statistics since 1980. He is currently head of the 'Regional Statistics and Accounts' unit.

Joachim Recktenwald

Having gained a doctorate in economics from the University of Saarbrücken, he joined the Commission in 1987 and has since then been working on regional economic accounts. He has been actively involved in producing the Portrait of the Regions since the end of 1990.

THE CHALLENGE OF THE REGIONS

The approximately 180 highly diverse regions which currently make up the Community need to know and understand each other better so that they can coexist and cooperate more closely within a frontier-free Europe and can evolve within a union pledged to strengthening economic and social cohesion.

Pressing needs

With the advent of the internal market, the need to be able to compare all the regions of Europe in the same way, using the same criteria, emerged quite clearly.

A need for synthesis

'The demand for uniform regional profiles accompanied by systematic summaries persuaded us to present the regions in a very different way from our previous publications.

The Community's programme of economic and social cohesion is basically implemented through its regional policy – one of the main pillars of Community policy. Although the Commission will always need to refer to indicators which are updated more regularly than those contained in this publication in order to implement this policy, the analyses, commentaries and structural descriptions are of direct relevance to the regional policy and will remain fresh for a number of years to come.

There seemed to us to be a very strong demand for an official publication using a uniform approach to present the regions of Europe, which came not just from the various Commission departments but also from a substantial number of national, regional and local politicians, schools and universities, economic, geographic, demographic and sociological research institutes, chambers of commerce

and industry and individuals wanting to know more about Europe and its regions.'[1]

All the regions viewed from the same angle

'This is the first time that such a large-scale project has been carried out systematically throughout the Community, right to the very heart of the regions and with their close cooperation. The fact that we are able to provide readers with this volume of information in three languages and covering all the regions is also a first!'[2]

In this way, systematic coverage is given to all the regions of the Community, from those which have been part of the Community from its earliest days through to the five German *Länder* incorporated as a result of German unification, from major metropolitan regions such as the Île-de-France, Greater London, the Autonomous Community of Madrid or Attica through to sparsely populated rural regions such as Epirus, the Alentejo or parts of Ireland, from the regions at the geographical heart of Europe through to those at its outermost edges, such as the Canary Islands, the Azores or the French overseas departments.

A high motivation factor

Closer contact produces better results

'Eurostat's stock of regional statistics was just waiting to be fully exploited and attractively presented. In order to make full use of figures which were often overly abstract, we had to get closer to the actual situation in the regions by seeking the cooperation of those closest to the area being studied'.

An interesting challenge

'A market study carried out at our request showed us what the scale of this project could and should be, and the sheer size of it aroused a more enthusiastic response than may have greeted a more modest assignment.

All those involved worked with the same level of commitment, and the translators found it a more attractive proposition than their day-to-day work. For many of the regional services, this was in fact their first experience of close contact with the Community, giving some substance to the often very distant concept of EC membership.

FROM IDEA TO FINISHED ARTICLE

Timetable and resources

By the end of 1990 the idea had taken shape and the funding had been secured. At the start of 1991, the first editorial committee approved the proposed layout, the text was to arrive by June 1991 and the data by September. It then took over a year to collect some of the missing data, translate the text, re-read certain sections and complete all the stages of the production process. The total budget was around ECU 1 million, mainly provided through the European Regional Development Fund, around 25% of which went to the NSIs (for collecting the data and compiling the texts), with the remaining 75% being spent on all the cartographic and graphic work, translations, printing, etc.

100 or so authors!

Eurostat has rarely been able to call on such a wide range of contributors in all the Member States: the editorial committee for the *Portrait of the Regions* was made up of one representative from each Member State but they often sought help from their regional statistical services or other ministries. The texts really do come from the heart of the regions, as we enjoyed close cooperation with around 100 authors out in the field.'[1]

OBJECTIVITY

How does one assess the strengths and weaknesses of a region on the basis of sufficiently objective criteria?

'A series of statistical criteria were selected on the basis of their relevance in measuring the state of a region's development. However, these purely statistical criteria did not fully illustrate the actual situation in the regions.

That is why the first paragraph on each of the regions is always accompanied by a diagram illustrating how this region fares *vis-à-vis* the Community average with respect to the 12 or 13 fairly standard statistical criteria selected by us.

Immediately below this diagram comes a section of text based on an analysis by the authors where they could deliver an assessment which was not so strictly limited to the statistical criteria and where the regions recognized their own strengths and weaknesses.

The objectivity of the indicators presented, along with the systematic nature of the analytical approach adopted, made it possible to avoid the pitfall of subjectivity. Many of the authors also sought to take account of historical trends to explain demographic developments, employment patterns, the impact of the reduction of agricultural activity on the different sectors of the economy, etc. This approach very often showed that the same phenomena quite clearly did not cause the same reactions in different parts of the Community!'[2]

THE LESSONS LEARNT

A wealth of contrasts

'The main lesson we have drawn from these comparisons is an appreciation of the great diversity which exists among the regions of Europe.

In many cases, some regions seem to be similar when they are seen in the light of just one or two criteria, but viewed from a different angle they are in fact completely different. One table systematically shows regions which are very similar in population density or surface area side by side with others whose level of economic development is completely different. There are, at the end of the day, very few regions which are really comparable, and our work has clearly illustrated the wealth of our diversity.

An exemplary model of cooperation

This publication is the fruit of a truly exemplary combined effort by different Commission departments (Eurostat, DG XVI, the Office for Official Publications and the Translation Service) and the Member States (all of which obviously provided their contributions in the native language of their authors). The principle of subsidiarity was a major motivating factor in this work.'

THE FUTURE

Some sections of the *Portrait of the Regions* will be disseminated on CD-ROM.

We also intend to produce a portrait of the islands in the Community which will describe the island regions of the Community using the same method of presentation as the *Portrait of the Regions*[3].

The statistical yearbook entitled *Regions* will, as before, appear annually. The *Periodic report by the Commission on the situation and socio-economic development of the regions*, which is written from a more political angle, will complete the range of publications on the regions of the Community.

[1] Interview with Mr Hubert Charlier, 29 January 1993.

[2] Interview with Mr Joachim Recktenwald, 29 January 1993.

[3] The *Portrait of the Regions* can be obtained either in the form of single volumes (catalogue No CA-74-91-001-EN-C to CA-74-91-003-EN-C) at the price of ECU 100 (excluding VAT) for each volume or in the form of a package including all three volumes (catalogue No CA-74-91-000-EN-C) at the price of ECU 250 (excuding VAT) from the sales offices of the Office for Official Publications of the European Communities, the addresses of which are listed on the inside of the back cover.

STATISTICAL META INFORMATION SYSTEMS WORKSHOP

Luxembourg, 2 to 4 February 1992
An interview with Mr Daniel Defays

Eurostat was host to an international seminar which provided a meeting place for institutions, individuals and research groups involved in the production, use and publication of metadata and meta information in general.

Daniel Defays gained his doctorate in mathematics and statistics at the University of Liège. He has a particular interest in the psychology and quantitative methods applicable in this domain. After research and lecturing at the Faculty of Psychology and Education Sciences at the University of Liège, where he still teaches, he joined the European Commission in 1979. In 1986 he spent 12 months at an artificial intelligence research laboratory in the United States. He is head of the 'Research, development and statistical methods' unit, which since December 1992 has formed part of the Business Statistics Directorate.

Eurostat's Doses programme (Development of statistical expert systems) includes the promotion of a number of projects on metadata.

'After a while we realized that quite a few international teams developing languages, formal representations, interfaces and so on had been working on similar topics without there being any real communication between them.

Meanwhile, the United Nations was taking an interest in the formalization of metadata in its Metis (Meta information systems) project at the Economic Commission for Europe in Geneva, and work was also under way in certain NSIs in the Member States and elsewhere – Sweden, the United States and Canada. This led us to propose, jointly with a specialist consultancy, a meeting of everybody concerned, aimed at trying to identify what results had already been achieved, and what might be achieved in the future.'

WHAT IS MEANT BY METADATA?

A number, just by itself, conveys nothing. If it is to have meaning, it must be accompanied by a commentary. But the fact is that statisticians usually concentrate on numerical data, and take less interest in the matter which, if those data are to be interpreted and understood, must accompany them.

Number crunching

'There are at least two explanations for this phenomenon. The first is purely historical. In their early days, computers were used as number crunchers – machines to digest and manipulate numerical data, which were easy to encode. Statistical computing was one such application, handling prodigious quantities of numerical

data, and it has excelled in the production of countless tables and charts.

The second explanation is that statistics is very much a closed society. Data are exchanged between people who are such specialists in their field that there is no point in them spelling things out to each other.

Modern technology has changed all that. Data are beginning to be disseminated, and the link between the producer and the user of the data is becoming increasingly tenuous. In fact, there can now be no link between them at all: data are loaded onto a network, the user has no idea how they were produced, or by whom. This remoteness of producer and user adds vastly to the importance of the metadata – everything surrounding the data proper.

In other words, everything accompanying data which was previously implicit must now increasingly be made explicit. The user of the data is not nowadays necessarily going to share your expertise, nor is he necessarily going to interpret the data in the same way as you would. He may be a total innocent, utterly ignorant as far as statistics is concerned. And the most ignorant user of all is the one we meet face to face every day: the computer we use all the time to process our data.

In order to prevent the machine from doing what it likes with our data, we have to give it a whole set of instructions which we would never dream of giving to a human operator who knew his job – don't bother to compute the average of identification numbers, don't average averages without first weighting them, and so on.

Descriptive to operative

One of the most substantial areas of progress has been the conceptual step from descriptive to operative metadata. Originally,

metadata were seen as no more than documentation on the data in question. Since then the concept has been extended to embrace the idea not only of informing the user, but also of guiding and driving a number of applications within the machine; metadata must be usable by the system, must enable it to understand what it can and cannot do with the data themselves.

It seems to me that this is one of the points where we have made most progress: knowing what is needed to automate data processing and ensure that it is used meaningfully, i.e. formalizing the metadata.'

DOUBLY DISADVANTAGED

Are there areas where statistics, and especially Eurostat, are ahead of the field?

Strengths and weaknesses

'We have a clear advantage as far as access to multilingual databases is concerned – our experience is far greater than that of most countries, which – except for Switzerland and Canada – rarely have to tackle such problems.

On the other hand, there are areas such as automated questionnaire management, or automatic validation and encoding, where we face fairly new challenges, and where certain NSIs have already made very substantial progress in seeking solutions and implementing them.

We have noted that metadata can often be defined at the point at which a task must be described:

- when a questionnaire is being designed, one needs a number of data about the aims of the survey;
- when a questionnaire is being decoded, one needs to know what it was attempting to measure;
- when a validity check is being run, one needs to know the relationship between the different questions;
- when data are being interpreted, one needs to know about the nature of the variables, so that one can judge which processing will be meaningful and which will not;

- when data are being released to the user, one must say what is being handed over.

The risk

The danger is that the people doing these different jobs will themselves develop their own sets of metadata. What we are trying to do is to collate all the metadata which accumulate along the statistical line from the early design of the survey to delivery of the data to the end user and encode them once and for all, so as to ensure that nobody attempts to re-encode them – with the inevitable discrepancies – each time a need is perceived.

On home territory, the Member States control virtually the full length of that line: as a rule there is no great distance between the production and dissemination departments, and there is a general concern to ensure that there is no reinvention of the same metadata by other parties. This widespread concern for integration and logical connection between the links in the statistical chain has resulted in the general formulation of a system of metadata such as is used, for example, by Statistics Sweden and in Canada.

At Eurostat, on the other hand, we are not in control of the whole cycle: we receive data from the Member States, which we must analyse and make available to countries or to the end-user. What we receive originates in different methodological cultures. In a country where employment has been measured in exactly the same way since records were first kept, statisticians are unlikely to regard documenting "employment" as a priority task. But for us, the first questions when we receive the 12 sets of data on employment ought to be "are they comparable?" and "can we aggregate them?"

In a multicultural environment

The fact of working in a multicultural environment, where we receive data from different sources, makes metadata essential. We would be failing in our jobs if we omitted to point out to the user the risks inherent in aggregating data compiled from differing definitions. We have a duty to set out the conditions under which aggregation can be regarded as meaningful.

But we are at a double disadvantage. Not only do we receive prod-

ucts which, despite theoretically having the same characteristcs and conforming to the same rules, are differently packaged and differently labelled: we cannot even be sure that the wording on the labels will be interpreted uniformly by all users.

This "labelling" problem in effect draws attention to the need for a common European standard. Rather than compare anything from two to twelve different standards, if we refer to a single standard we reduce in spectacular proportions the number of interfaces and comparisons needed.

This issue has often returned to the centre of our discussions – it is one of the fundamental problems of distributed systems: various parts of the system must be able to communicate with one another, and if there is no common interface, the number of gateways required becomes astronomical.'

GREATER NEED

What, then, is the importance of metadata in the distributed statistical information system which will gradually be built up in Europe?

'At the heart of the system there will have to be a metadata server.

Think of the user who is thoroughly familiar with his local system and who dials into a network giving him access to various databases with which he is totally unfamiliar. His first need will be to acquire a general understanding of the system. Imagine that he has dialled in to find out what registers of business statistics are available. The system should be able to tell him "In base x you will find statistics of industry; in base y you will find statistics of large businesses; in base z you will find data on such-and-such a sector in such-and-such a country", and so on. The user needs data to navigate in the base. He needs to know what's where.

Now even if this information is not explicit, it should be available within the system so that, the day the user needs it, he knows exactly where to look for the pieces of his jigsaw puzzle.

Distributing knowledge

Distributing knowledge correctly, so that the user can rapidly gain a

general understanding of the whole, is a problem specific to distributed systems.

Another problem is transcoding. If different sets of data are stored in different databases, it should be possible to bring them together at any moment. Transcoding should permit the user to paste his jigsaw pieces together.

Finally there's the problem of a minimum common vocabulary. "Employment" has to mean the same thing for every one of the databases in the system, and for every country. Having a distributed system at all adds to the need for metadata in statistical information systems.

Circulating the case-law

The cornerstone of the documentation of a statistical information system is without question the classification. For its contents to be properly available, system messages must be prepared in which the classification can be encapsulated and conveyed simply.

If the classifications and their metadata are managed and documented centrally, they should be free to circulate anywhere within the system. In this way, it is generally known and accepted that whenever and wherever the same problem arises, the same answer will be applied.

European classifications are a form of general framework; they should enable everybody to benefit from the refinements used in Member States. The sum of those refinements forms a corpus of what may almost be regarded as case-law: it is priceless, and it must be there for all users.

User guarantee

Documenting statistical data is a gargantuan task. Data producers are eager enough to launch their data onto the network; they are far less quick to document them. They do not see metadata as essential: their own implicit knowledge of the data hides this from them. How can we persuade them to supply the metadata?

One answer is to ensure that the applications software cannot use the data proper unless the metadata have also been supplied. When the presence of the metadata is the key to the availability of the main data, we can be sure that they will be properly used.

We have a real problem in the sound management of metadata. We have to develop systems capable of generating as much metadata as possible, spontaneously and automatically. In that way the producers of data do not have to repeat the same information every time they introduce a new component.

This is the sort of constraint which will oblige everyone, in Eurostat and the Member States alike, to supply a large quantity of information for a certain period of time. They will have to show more transparency. It will mean deploying resources which may not be simultaneously available in sufficient quantities in every location. But we cannot see any other answer.'[1]

HYPOSEMIOLOGY

The seminar also led to the identification of a new science: hyposemiology, the science of the learned footnote. Applied metadata, so to speak... .[2]

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[1] Interview with Mr Daniel Defays on 8 February 1993.

[2] This event was marked by the creation of the Hyposemiological Association, which will be publishing an international journal addressed to its members. The journal will be edited by Professor David Hand, of the Department of Statistics at the Open University.

RETAILING IN THE EUROPEAN SINGLE MARKET

A new Eurostat survey

The results of a new survey carried out by Eurostat reveal a world at the height of expansion – that of retail trade. Despite continuing regional differences, retailers have to adapt their products to respond to new trends.

BEHAVIOUR PATTERNS

In spite of the general attraction, in particular for the upper strata of society, of certain products such as cars, cosmetics and other luxury goods, household consumption remains very diversified.

For instance, the standardization of foodstuffs, clothing and footwear at Community level is still limited.

Businesses have for a long time lacked comparable, comprehensive information on the distribution sector: the survey aims to fill this gap.

VITAL INFORMATION

The survey particularly emphasizes that an efficient, modern distribution network is vital for the achievement of any significant degree of integration in this sector at European level.

In an effort to provide reliable, up-to-date information which will enable the possibilities offered by the enlarged single market to be fully exploited, Eurostat focused on the following areas:

- the changes in the density of sales outlets and their regional distribution;
- the level of part-time work and female employment;
- turnover by size, class and type of retail trade;
- cooperation and concentration in retail trade;
- 'internalization' and diversification strategies.

A FEW FIGURES

The survey reveals certain essential points:

- the Community's distributive trade sector (wholesale and retail) employs 19 million men and women (14% of the working population of 133 million) and has 4.2 million businesses;
- retail trade alone accounts for approximately 10% of employment in the Community (13 million people) and 26% of all businesses;
- employment in the distribution sector is unevenly divided. Four countries (Germany, France, Italy and the UK) alone employ 14.4 million people, or 74% of the Community total;
- the distributive trades account for over 30% of the 12.6 million businesses in the Community. The percentage varies considerably from one country to another, ranging from around 20% in Denmark and Belgium to 40% in Portugal and Greece;
- the value-added of this sector corresponds to some 13% of Community GDP (10% for retail trade alone).

SHOPPING IN EASTERN EUROPE?

It is interesting to see how private businesses are gradually replacing State-owned companies. For instance, in Hungary the number of private sales outlets (belonging to a single owner) rose from 29 300 in 1989 to 65 600 in 1991!

An enormous growth potential

In Central and Eastern Europe there are only 30 retail sales out-

lets per 10 000 inhabitants, whereas in the Community there are 107 per 10 000. In Russia there are even fewer: 20 per 10 000!

This survey is a must for any business of whatever kind involved in retail trade that wishes to become more integrated in the enlarged European market.[1]

[1] The publication *Retailing in the European single market 1993* (catalogue No CA-75-92-687-EN-C) can be obtained at the price of ECU 40 (excluding VAT) from the sales offices of the Office for Official Publications of the European Communities, the addresses of which are listed on the inside of the back cover.

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