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E DITORIAL

The Member States have various laws on statistical confidentiality, i.e. restrictions on the use of data which have been collected for statistical purposes.

There is now a Council Regulation which lays down the procedures for transmitting individual data from the national statistical institutes to Eurostat and the circumstances in which these procedures are compulsory. A *Manual on the protection of confidential data at Eurostat* has been endorsed by the members of the European statistical system, and the same measures have also been adopted by the EFTA countries.

Eurostat fully satisfies the legitimate trust of those who supply primary data and makes every effort, using the individual data which it receives, to provide users with increasingly detailed and speedy statistics without revealing any information about individuals in the process.

The protection of individual data (regarding natural persons as well as enterprises) inevitably leads to a number of legal aspects affecting staff responsibility and to a variety of technical aspects concerning computer security and how to deal with problems of confidentiality when it comes to dissemination of information, etc.

With the abolition of customs barriers on the immediate horizon, the problem of detailed information in business statistics merits special attention.

The operators in the internal market have an active part to play if they want to make the most of the advantages offered by a Europe which is to become even more open. The information which we provide can help them in this.

Photis Nanopoulos
Director of business statistics

SPEEDIER AND MORE DETAILED STATISTICS

Interview with Mr Yves Franchet

With customs barriers soon to disappear, it will be essential if the single market is going to operate properly for any information of statistical relevance – the navigational charts of the ‘good ship Europe’ – to circulate freely. The confidentiality which applies to certain individual data must not prevent the compiling of speedier and more detailed statistical aggregates, for which there is an increasing demand among operators in the economic area.

Lack of information costs money. At present, the information which is available on entire areas of the internal market is quite inadequate, making it impossible to compare the production or import and export figures for particular products or ranges of products, to say nothing of services.

The technical resources for producing such comparisons nevertheless exist, but their implementation often runs up against the ‘response burden’ which enterprises inevitably plead, as well as the untouchable confidentiality of certain data.

‘If there is no information when it is needed, watch out! It is time to make it clear that information of this kind is not for the sole pleasure of statisticians; it is needed for the proper operation of the market, and those who supply the information have to be able to make use of it. But there is going to be no information feedback if there is nothing coming in the other direction.’¹

PSYCHOLOGICAL FACTORS

The Member States have to be able to decide what they consider confidential. Have any criteria for this been drawn up jointly?

‘There is joint discussion, but the criteria vary.

The Member States must naturally be in a position to protect their data. They have made commitments to firms and to individuals to maintain confidentiality where it is needed in relation to the data “tagged” in this way which they receive. The national statistical institutes are the first to have to cope at this stage with the issue of confidentiality.

If they could not give this commitment, the NSIs would not get any information at all.’¹

A strict regulation

The same happens, albeit in different circumstances, between the NSIs and Eurostat. ‘If the NSIs are ready to give us their confidential data, it is because they are safeguarded by a framework regulation supplemented by special implementing regulations administered by a management committee.’¹

This is how the Member States supply Eurostat with the data which allow the Community to operate.

Market requirements

The operators in the market need more information every day. We are now just a few steps away from the single market and economic union, and the Member States need – quite legitimately – to be able at any time to preserve control of their confidential data and yet to get organized in accordance with the requirements of the European statistical system.

Respect for individual needs

There may be a ‘gut reaction’ to confidentiality in certain countries, since it is a subject which involves psychological factors just as much as genuine factors. This explains the differences in certain criteria which are used. But there is no way that confidentiality should be used as an excuse to maintain barriers to the free exchange of information.

There are statisticians in some countries who would be terribly upset at the idea that a badly drafted Community regulation on confidentiality might be detrimental to their own statistical system. They need to be reassured by being told that the system which is being introduced offers every safeguard.

THE IDEA, AND HOW TO GET IT ACROSS

‘It is up to us to show that we know how to look after these data. It is a message which everyone in

European statistics has to be ready to pass on. The heads of all the NSIs have to foster the good reputation which we have built up together on this aspect of safeguarding confidential data.

Level of trust

It is important for everyone to be convinced that the system operating at Community level is excellent and that, on this basis, he can supply the information which is needed. This trust must be everyone's job.

The staff at Eurostat, in particular, will be bound by very strict rules on handling confidential data.

How about other Commission departments?

Apart from Eurostat, the Commission's departments will have no access to confidential data. As a rule, these departments have no need for information of this type, even for international negotiations. They need detailed and aggregated data, but not confidential information. They need figures for EUR-12 and need to know how the Community is faring in relation to the Americans, the Japanese, and so on.

In exceptional cases, there are some departments of the Commission (especially those dealing with competition policy) which may need confidential data. They have drawn up their own rules, which allow them to collect the information directly from firms. For example, there is a regulation which is accepted by the Member States which gives DG IV access to individual data in firms in very specific circumstances. But that has nothing at all to do with the European statistical system. Eurostat divulges no confidential data to the Member States, the Commission departments, or to anyone else.¹

What is the basis for negotiation?

How can Commission departments involved in international negotiations (GATT, for example) get the information they need?

'There are various systems which come into play. For instance, there is the Starcom system, which is a statistical system for external trade set up for the talks in Geneva. Starcom produces non-confidential data on EUR-12, or in-

dividual countries, for the Commission. This information is supplied to the negotiators, but there is absolutely no problem of confidentiality when it comes to tariff systems or measuring foreign trade. These are negotiating tools of long standing.¹

Daily vigilance

How is the staff at Eurostat going to react to the restrictions which the introduction of the new regulation will involve?

'Everyone is taking a very serious approach. The heads of unit are keeping a close watch on the matter, especially the drafting of the manual on confidentiality. At a practical level, too, locations will be well protected.

The statisticians on the staff have had training with a scientific background and can readily adjust to the restrictions which are always present in the computer field. As for our computer experts, which could describe most of the people at Eurostat, they are well acquainted with strict procedures.

The cost of non-information

With regard to confidentiality, you also have to consider information which is not transmitted, i.e. non-information. The fact is that if they are going to function properly our democracies cannot do without a solid information system. Each one has to be ready to provide the information which they all need.

Just as we have to be up to the mark in protecting confidential information, at the same time we must not be too ready to brandish the excuse of the "response burden". There are a lot of firms which complain about the cost of supplying statistics, but when you take a close look at just how much this cost represents in relation to all the other information they have to supply to national and European or other offices, you have to admit that it is really not very much. At any rate, we are looking into this matter in collaboration with the FEBI.²

The cost of supplying information is often a misleading problem. Almost everything can be computerized or is already generally on computers. The real problem is that a lot of people make poor use of their computer resources. This is where the next big step has to come. As for those who worry

about transmitting "too much" information or having to cope with complicated procedures, they are really just burying their heads in the sand.¹

The role of the CEIES

'The CEIES³ deals regularly with the major topics of economic and social cohesion, economic and monetary union and business statistics. The committee really needs to bring up this last subject on a regular basis. Business statistics must be the result of a proper balance between confidentiality and response burden on the one hand, and information requirements on the other.

It is true that statisticians have perhaps been a little too defensive in recent years in coping with firms which have been reluctant to provide information which they felt was not properly safeguarded. It is up to the CEIES to play an active part in promoting better dialogue in this area.¹

NEW PRODUCTS

What 'new products' can be expected as a result of Eurostat's new opportunities for processing individual data?

'The answer is easy: better detailed information, by branch and sector, for EUR-12. We are getting more and more requests for increasingly specific information about products, branches and sectors. The transmission of confidential data will make it possible to access this information and produce aggregated data, thereby providing non-confidential but essential information for the various operators in the internal market, the Commission departments and, to an increasing extent, governments as well. Professional associations and all those who make use of market studies are greatly interested.¹

Need for accurate estimates

Businesses and professional associations cannot make do with incomplete statistical tables, where there is a large number of gaps as a result of failure to communicate national data. Nor can they make do with figures which are far too old, because of the delays (sometimes years) which some countries are guilty of in supplying certain data. They have therefore got together with Eurostat to set up an

EEIG⁴ with the aim of producing estimates, for cases in which the updating of business statistics is far too slow, on which it will be possible for economic operators to base strategic decisions.

Will branches of industry have access through the EEIG to confidential data entrusted to Eurostat?

'No way! We are involved in the EEIG, which has been set by professional associations, in order to produce up-to-date estimates for various branches of industry.

These federations have access to the individual data of their members but the information they send to us is aggregated. We do not go down to individual level. We supplement the data with some official information, which is non-confidential, supplied by the Member States. Consequently, the final product which emerges within the EEIG does not provide any access to confidential data but it nevertheless contains precise and aggregated data by branch, which are also up-to-date – six months on average – whereas the results of the annual surveys which are conducted at present come out with between two and two and a half years' delay. The people involved in the market cannot work with that kind of information.'¹

REASONABLE BALANCE

There has of course been a survey among the Member States to find out the extent to which confidential data are protected in each one. What we found was that the problem is sometimes poorly dealt with, or even not dealt with at all. On the other hand, there are some countries with advanced systems for safeguarding data, such as Germany, France, Denmark and the Netherlands. 'We are working with them so that the standards we apply are not only equal to but even higher than the best standards at present.'¹

EFTA is keen

Have the EFTA countries gone along with this Regulation on statistical confidentiality? Have they had any reservations?

'This Regulation is part of what we call the *acquis communautaire*, in other words all the regulations which the EFTA countries accepted before joining the European Economic Area. During nego-

tiations we met statisticians who were very well informed on this matter. The Nordic countries, together with Switzerland and Austria, are very well in touch with the issue of data confidentiality. They have a high level of protection and were delighted to learn that we were concerned about this matter. They would have been rather put out to join a statistical system with standards which, in this respect, were inadequate. They were keen to adopt our Regulation without any reservation, and they are working with us in developing methods for the transmission of individual data.'¹

FORTRESS JAPAN

What is the situation with regard to Japan and statistical confidentiality?

'At present, unfortunately, dialogue is at a standstill. For more than two years we have endeavoured to discuss matters with Japan, especially classifications, as part of the transatlantic talks we have been having with Canada and the United States on this matter. We have received a number of visits, but we have realized that the Japanese are extremely touchy when it comes to providing data about branches of their industry. The issue of confidentiality seems to upset them a lot, and there is no real dialogue on the matter at the moment.

In this context, the "fortress" which some people talk about does not refer to Europe. Nevertheless, we are hoping to develop a better dialogue in future as part of our relations within the OECD.

We also hear that some professional associations in Europe are apparently worried by the fact that we intend to publish detailed tables, by branch of industry, without getting similar tables from other countries, Japan for instance (while there is no problem in getting all we want from the other side of the Atlantic).

I don't see where the danger lies. I do not think the fact that Europe publishes enlightened tables, by branch or by product, for EUR-12 with aggregated and anonymous data is in any way a handicap for the proper operation of the single market. The Japanese almost certainly already have this kind of information. Anyone involved in in-

dustrial espionage is not going to consult statistical tables – he's going to look somewhere else for his information! Be that as it may, we shall make every effort to achieve reciprocity in data availability during our talks within the OECD.'¹

The wealth which Europe draws from its differences will continue only if they can be constantly assessed and if Europe can thus enable its economic operators to benefit from all these comparative advantages. If this information is available for others, all the better. It can at the same time prompt incoming investment, which will gravitate to the areas where the best return can be expected, and promote the export of European products from the most competitive sectors.

If it is going to be possible to have the same kind of information throughout world markets, it is the development of world statistical networks which will be responsible. It is up to Europe to open the bidding – and we have one or two trump cards to play!¹

¹ Interview with Mr Yves Franchet, Director-General of Eurostat, 10 June 1992.

² European Federations of Branches of Industry.

³ The European Advisory Committee for Statistical Information in the Economic and Social Spheres (see *Sigma* 3/92, p. 29).

⁴ European Economic Interest Grouping.

CENTRAL AND EASTERN EUROPE: THE GREAT REVIVAL

Interview with Mr Klaus Löning

Practically cut off from the rest of the world for 70 years, statisticians in the countries of central and eastern Europe, which are becoming major users of European statistics, are aware of just how remote their system was from ours. So much so, that the two systems were sometimes based on ideas which were diametrically opposed, especially in the area of confidentiality. A statistician deeply involved in a task which he feels keenly about offers an interesting insight and a down-to-earth interpretation.

A graduate in economics and business studies, Klaus Löning held various posts in a number of German firms before joining Euratom, where he became head of the procurement department of a research centre. After moving to the Statistical Office in 1970, he was involved in adapting the British, Irish, Danish and Greek statistical systems when these countries joined the Community. He subsequently specialized in wages statistics and he is now a kind of 'liaison officer' between Eurostat and the countries of central and eastern Europe. His job is twofold:

- to administer the funds allocated by the Community to these countries in the statistical sphere;
- to see that these countries set up a statistical system compatible with the European system and, as a result, with the world system.

Without relevant figures, nobody within this group of countries in Europe will know what is going on or be able to let anyone outside know what is happening. The transformation of the old Soviet Union into the Community of Independent States (CIS) often means scrapping everything and starting again from scratch. This is especially true in statistical terms where, as far as European integration is concerned, contacts have advanced farthest with Poland, Hungary and Czechoslovakia. There are also contacts with Romania, Bulgaria and the Baltic States, and contacts will shortly be established with the republics of the CIS as well.

ABANDONING THE OLD APPROACH

While everyone seems to be agreed on the idea of abandoning the old economic approach, there are many who have not yet really made the psychological jump to the new order. There is still a long way to go, as far as attitude and behaviour are concerned.

Getting through to the top officials

'Our first job is getting our message through to the very highest levels: the presidents and the officials of the statistical offices and the republics of the former Soviet Union. We are striving to provide them with an advisory service for the organization of a standard statistical service: the legal basis, the essential structure and operational bases and – this is important – the federal or confederal aspect.

Our talks will have to be preceded by proper "intellectual training" designed to get us talking on the same wavelength when we come to discuss such fundamental matters as statistical confidentiality. This is an area where the countries of central and eastern Europe have traditionally been a long way from our position.¹

URGENT NEED FOR A LAW ON STATISTICS

There has to be proper legislation on a series of fundamental ideas which have hitherto been totally ignored or neglected:

- the confidentiality of individual data;
- the rules governing access to collected data;
- the circumstances in which citizens as well as firms can be required to provide certain data;
- the conditions for publishing the collected data;
- etc.

'Until now, figures were published if the prime minister decided to do so. Barely 10% of the available data (perhaps even less) was published!'¹

The major problem of registers

The number of "known" businesses in these countries is very low. Are there really only 30 000 throughout Poland? The first priority is therefore to get a register of all businesses, especially those which have just been set up. This is vital for a proper statistical base. 'Three republics in the CIS have already asked for specific advice on this matter.'¹

The opposite of confidentiality

Under the old system, any official had access to individual data! Any government department could look at such data, but the overall picture was considered a state secret – the exact opposite of practice in the West.

The change involves practically a mental about-turn for statisticians in central and eastern Europe. It is a situation which is completely new to them. 'Until now, they gave orders and saw to it that others carried them out. Their subordinates, within the factories, gave them what they asked for. These

subordinates have now gone. The old order has disappeared. And the new order is not yet in place.¹

GETTING A QUICK PICTURE

In tandem with the work at Eurostat, DG II and the OECD are working on the compilation of short-term indicators. 'In this transitional phase we are going through, the short-term approach from various angles may turn out to be necessary, especially if the various observers can check their work properly. A series of quick pictures will be especially useful if they can be brought together in a coordinated fashion.

Our fundamental role at Eurostat is to help set up in each country a viable statistical system which, four or five years from now, will be able to supply its own short-term data.'

Western-style national accounts

The national accounts are where all statistical information ultimately passes through or ends up in some way. This is a central notion, to which other statistical ideas are easily linked.

Businesses must know how to account as well as to count

The countries in central and eastern Europe have no experience of accounting in our sense of the term. In their case it was more or less restricted to stocktaking: the number of vehicles produced, the number of items manufactured. The costing of production was of no interest to them. The same was true of the value of their facilities. As for price statistics, they usually simply recorded the prices laid down by the State, without considering any market value. Just a list of prices handed down by Moscow.

There is a long way to go in this area.

Tools for the job

Given the scale of the changes to be carried out, a pragmatic approach is the best. Use the best tools for the job, where the job can be done. Trial household surveys are thus being conducted, using laptop computers, as an extension of the Blaise system (developed by the Netherlands statistical service with the support of Eurostat).

This kind of equipment is certainly going to arouse the interest of the families who are visited.

PHARE PROGRAMME

The story so far

The Community has made large sums available to the countries of central and eastern Europe: ECU 500 million in 1990 for only two countries, Poland and Hungary.

In 1991, when the amount went up to ECU 800 million, Czechoslovakia, Yugoslavia, Romania, Bulgaria, Albania and finally the Baltic States came into the programme.

In 1992 it is planned that more than 1 billion ecus will go to the countries of central and eastern Europe (without counting the CIS, which was not originally covered by the Phare programme).

These sums of course cover the whole range of Community actions, in which the statistical sphere represents more or less only one percent, earmarked for:

- statistical training;
- equipping statistical offices with computer resources.

DG I is in charge of the Phare programme and allocates resources on a time basis.

What next?

'These countries have the same desire as we do: to set up a reliable statistical system, based mainly on our system. I feel there is a chance of seeing some satisfactory results in about five years in the case of countries such as Poland, Czechoslovakia, Hungary and Romania. Where the former Soviet Union is concerned, it will probably take a bit longer.'¹

Keeping the faith

Klaus Löning has taken a realistic look at the size of his job: there is a mountain to be moved. Many people would throw in the towel, but not Klaus Löning. He has the kind of obstinate determination which does indeed inspire people to move mountains.

¹ Interview with Mr Klaus Löning, 22 July 1992.

INVESTING IN CONFIDENTIALITY

Interview with Mr Photis Nanopoulos

Investment in this context means investing in effective systems which in future will guarantee the Member States maximum security for the confidential data they forward to Eurostat. There has been much involvement in and encouragement for the development of rapid business statistics at Community level even if, before being able to publish 'definitive' figures, one has to make do with estimates... scientifically produced, of course!

On leaving the Greek Air Force Engineering School, Photis Nanopoulos studied mathematics and physics at the Institute of Mathematics in Strasbourg, and then informatics and statistics at Nancy University. He subsequently went to the United States and obtained a PhD in statistics at Berkeley. On his return to France he obtained a doctorate (number and probability theory) and taught at Strasbourg University, and later at Athens Technical University. He joined Eurostat in 1983 as Director of business statistics.

BINDING LAWS

It used to be a relatively common occurrence for a Member State to refuse to supply data to Eurostat on the grounds that their confidentiality is not guaranteed. In practically every country, national laws prescribe the manner in which the national statistical institutes are to act and in most cases do not grant them the right to forward confidential data to third parties. These laws often predate the Community.

No time-limit

Is a strategic economic value attached to the confidentiality of statistical data? Why do confidential data, on individuals and enterprises, that date from before the Second World War still remain confidential today?

As European policies progressed, it was necessary to work on the basis of disaggregated data. Individual data were needed in order to develop an industrial policy, agricultural policies and commercial policies (the United States and Japan had figures for Europe which the Europeans themselves did not have).

Statistical confidentiality had to ensure that individual data – relating to individual firms, households or persons – could not be identified directly or indirectly and linked to the unit from which they stemmed. In most cases, national laws did not set a time-limit for such confidentiality.

Subtle distinctions

Certain countries make a distinction between two types of statistical confidentiality:

- active confidentiality: the enterprise is informed that the data it forwards will be treated confidentially; such enterprises need take no further steps;
- passive confidentiality: the enterprise itself must state that it wishes certain data that it supplies to remain confidential.

Confidentiality-induced distortion

The negative effects on data reliability of a poor approach to confidentiality:

'Previously, each Member State processed and aggregated in its own way the microdata it was forwarding to us; obviously what we received was a mixture of information that was not comparable. Since each country had amended the data in its own way, we were adding up 12 different items and obtaining a result which was fairly random or varied greatly from one year to another, from one country to another and from one sector to another. We conducted tests on estimated values and found distortions of the order of 20 to 80% for certain headings. The result was indicators that contradicted each other because the concept of confidentiality had not been uniformly applied. This is what I have called "confidentiality-induced distortion" in statistics.'¹

STATISTICS AND COMPETITION

What is confidential for statisticians is not necessarily confidential for enterprises. One just has to think of publicly quoted companies that are required to make available to the public at regular intervals a whole mass of highly detailed information, information that is then widely published.

The paradox

These data, already widely published, become confidential when they reach the hands of the statistician! 'The strict application of confidentiality produces the paradox that data already published by the enterprises themselves are considered confidential! Yet it is this rule and its strict application that form the basis of the trust we must maintain with those responsible for providing statistical information, even if in certain quarters it is felt that this may be contrary

to the policy of transparency of information that would normally be required for healthy competition.¹

Business statistics and marketing

Generally speaking, market analysts are very much in favour of good Community statistics, which are an essential tool of their trade. 'We provide them with a framework which they can use to guide their studies, the raw material to which they add value. There is a clear complementarity.

Disseminating public property

The data which we receive, and a good part of what we produce, stem from the work of the national statistical institutes (NSIs). They are therefore practically public property. That is why we disseminate our 'products' (generally macroeconomic data) free of charge to what we call our 'preferential users': the Commission and other Community institutions (the European Parliament, the Economic and Social Committee, the Council, etc.).

Solely macro-strategic data

The aggregation operations relate to major groups of products. The data serve as a guide and are only a very preliminary basis for market studies, which require much more detailed data.

Much still to be done

Public statistics are public property and much remains to be done in the field of official statistics. Compared with the data available to the Americans or the Canadians, for example, there is sometimes still an enormous gap.

Financial links

Let us take an example. The United States and Canada disseminate quite openly information on financial links between enterprises (groups, percentage shareholdings, level of control, etc.) that, if divulged today in certain European countries, would almost amount to sacrilege.

But if we want to have a good capitalist system, if the man in the street is to be able to choose between investing on the stock exchange rather than in fixed-interest savings, he must be given such information. Information on businesses is crucial in a capitalist market: you must know where the

money you are investing is going, be able to check that a group in which you are placing your trust is sound as a whole and that you are not being drawn into a hornets' nest with the promise of honey.

In Europe information on financial links between enterprises is too jealously guarded; a Europe that wishes to be open and economically strong cannot continue to be satisfied with information on enterprises that is still confined to a small number of privileged groups.¹

A QUESTION OF CONFIDENCE

A climate – almost a contract – of confidence is needed between enterprises and individuals on the one hand and statisticians on the other.

A major change

Eurostat will henceforth be able to receive a mass of microdata that can be used to produce aggregates hitherto impossible. This will mean extra work for the Statistical Office but major benefits for the NSIs, which will no longer have to undertake a good number of onerous tasks.

A Community regulation now authorizes them to forward confidential data to Eurostat. Forwarding is obligatory when stipulated in a Community legal instrument.

A considerable gain

'With the data we receive we will be able to produce more reliable results more quickly.

When, in the past, we had to produce a table from microdata, this involved 12 different operations, one for each Member State. Since we could not produce the final product until receiving the last table from the 12 Member States, we often had to endure long waiting periods.

Today, when Eurostat is asked in the morning to produce a table covering data for the Twelve, it is available in the afternoon.

So much for speed. As regards quality, 80 to 85% of the NACE headings published in the past were incorrect, precisely because confidential data were not handled properly. Each country used a different approach and we were ob-

liged to publish whole pages of footnotes explaining the reasons for discrepancies.

The improvement in quality has been even greater than that in speed of production.¹

... that has to be paid for ...

Implementing the Regulation on statistical confidentiality has been costing Eurostat approximately ECU 500 000 annually for the past three years. A further ECU 500 000 or so is needed to complete the initial work.

In addition to these initial costs, there are fixed costs of the order of two staff per year.

Information is vital!

'Confidence is something that has to be paid for and that pays for itself. Suffice it to say that Eurostat's position *vis-à-vis* the Commission is exactly the same as that of the NSIs *vis-à-vis* their national authorities. It is the same fight for the application of the same basic principles. Eurostat is merely a geographical extension, an embodiment in Luxembourg, of the concepts of confidentiality accepted in the Community statistical system that respect the specific characteristics of each country'.¹

AT LAST, UP-TO-DATE ESTIMATES!

The fact that many business statistics were not up to date was due in part to poor understanding or misapplication of certain concepts or principles of statistical confidentiality. Enterprises found it hard to cope, since they cannot operate with out-of-date information. They therefore made certain efforts which, in conjunction with those of the European statistical system, have now produced effective results.

'In contacts mainly initiated by the FEBIs² and Unice³ we established that enterprises considered completion of the single market and the possibility of measuring its progress so important that they would ultimately agree to lose certain national data in order to obtain more Community data. A reliable picture of the development of the single market is essential for them and there can no longer be any question of waiting for years to obtain figures. If it is im-

possible to obtain "final" figures without waiting for so long that they have lost almost all their strategic value, why not try to obtain reasonable estimates in as scientific a manner as possible?¹

These estimates, produced through the joint efforts of the official statistical systems and major market operators, will be made available free of charge to Eurostat's preferential users, and against payment to others.

The external choice

The 'DEBA' EEIG,⁴ consisting of various European federations which, with Eurostat, will produce the estimates, was created in this way. The data will not be official figures and the latter will not be able to replace the estimates until all the countries have provided the data needed for their calculation.

It is practically an association contract between the Commission and the federations concerned. It is a novel experiment which, if conclusive, will lead to Eurostat ultimately aiming to incorporate the provision of estimates into the official statistical system.

Estimates are not forecasts!

What we are talking about here are estimates, i.e. measuring by means of 'up-to-now casting' what has happened up to a given moment in time. Forecasting is for the future, perhaps a new task for Eurostat at some point hence. The risk of error would then need to be accepted, of course, since forecasting without error would be tantamount to prior knowledge.

A MAJOR OVERALL STEP FORWARD

The implementation of the Regulation on the transmission of confidential statistical data is a major overall step forward. In the case of very many data, the NSIs will no longer have to perform various types of processing prior to submission to Eurostat.

Less retention, more transmission

It will be possible to publish Community information more rapidly and Community totals will no longer be disseminated without knowing exactly what is represented by the figure for each country.

A network of registers

How will the implementation of the Regulation on statistical confidentiality further the debate on a European register of enterprises and affect progress?

'It is not, strictly speaking, a European register of enterprises that is being developed but a network of registers, each of which is kept separately by the NSIs. There is no interconnection. It is sufficient for us to know that the register exists in each country and that it complies with certain standards.

Thus, when we initiate an operation, we will know that everyone will produce data of the same quality, of the same value and in the same time. Subsidiarity must play a full role here.

Our work on the register is without doubt a major factor contributing to harmonization'.¹

An effort that had to be made

Eurostat's efforts in the field of statistical confidentiality include a good number of aspects that the ordinary user will be surprised to discover. One such surprise discovery will be the paradox that the strict application of new but jointly agreed constraints on the transmission of confidential data will speed up the forwarding of statistics on enterprises.

¹ Interview with Photis Nanopoulos, 10 June 1992.

² European federations of branches of industry.

³ Union of Industries of the European Community.

⁴ 'DEBA' European Economic Interest Grouping, established in Brussels on March 17, 1992.

T HE PROBLEM OF DETAIL

Interview with Mr Daniel Byk and Mr Douglas Koszerek

Individuals do not generally see statistics as a means of getting to know more about their neighbours. Enterprises, on the other hand, know what they could learn from statistics and what their competitors (or worse still, the authorities!) could try and learn about them without proper safeguards for the confidentiality of individual data.

After graduating at the ENSAE,¹ Daniel Byk began his career at the INSEE² before joining the Commission in 1974. He was involved in the development of the Cronos database and then, at Eurostat, was responsible for the cooperation sector, and later the analyses and development unit. In 1988 he was appointed head of the industry unit in the business statistics Directorate.

Douglas Koszerek was educated at Cambridge University and the LSE. He was first a civil servant in the United Kingdom, where he was involved in developing energy economy forecasting models at the Department of Energy and later at the Treasury. He joined Eurostat in 1977.

CONFLICTING ATTITUDES

Although anxious to maintain confidentiality for certain information they consider sensitive, enterprises are also constantly searching for more detailed information.

Knowing everything, but saying nothing

'Being fully aware of what is happening elsewhere but saying as little as possible about one's own affairs, that is no exaggerated description of their behaviour. The situation is worse still in the case of products: we were able to see that during the preparation of Prodcom (see Sigma No 1/92). But whereas they are obliged to devote very substantial resources to obtaining information on others, enterprises do not find it easy to obtain a pertinent view of the overall situation from their own association or federation.'³

Dread of inspection

The problem of confidentiality in enterprises is complicated by a permanent haunting fear and dread that the information might be used for administrative or tax inspection purposes.

RIGOROUS BUT CONFIDENT APPROACH

If the problem is to be tackled seriously, it has to be done with a certain confidence, knowing that such attitudes stem from a wide variety of reasons.

Demarcation provides security

The dividing line between statistical data and administrative data is quite clear in the Community, but not so in the countries of Eastern Europe, for example.

Confidentiality unblocks the flow of data

'Demarcation helps to ensure that everyone's rights are respected and imposes a system of access authorizations for data that tax or other authorities will never obtain

through statistics. Statistical confidentiality will serve as an unblocking agent and permit a flow of data that otherwise would not exist. It is very important for confidence that enterprises make a clear distinction between statisticians and supervisory agents.'³

Confidentiality then becomes the means by which statisticians can overcome the reserved and overly rigid attitudes of enterprises towards them.

Retaining the confidence of the NSIs

The NSIs quite rightly see confidentiality as one of the means of maintaining good relations with enterprises. With more confidential data being collected by Eurostat, certain NSIs might fear that the climate of trust between them and enterprises might deteriorate or that their role in the Community statistical process might appear diminished. 'Our very close collaboration with them on the implementation of the Regulation on statistical confidentiality helps us maintain that level of confidence.'³

STRATEGIC AIM

'The strategic aim of the Regulation, and everything that refers to it, is to convey the message that on the question of detail it is at Community level and not at national level that the priority lies. What we want to produce is a more useful and more effective information system.

Enterprises will gain

Enterprises and users of statistical information will benefit. National publications, which by their nature are extremely detailed, must be made more comparable, since there can be no inconsistencies at Community level.

If we do not negotiate the best level of detail, the Member States will find themselves handicapped in their own publications. It is only

by mutual confidence and seeking the optimum solution that we will attain our objectives'.³

Products change

The 'problem of detail' is particularly delicate when it comes to products. While, on the one hand, there is a wish for identification with a maximum number of parameters, the statistician is required to calculate sufficiently broad product aggregates to ensure that classifications remain stable over time and are not automatically affected by the slightest change of detail.

Improved data utilization

'Enterprises also do not always understand why data which in their view need not be confidential (and which they have sometimes widely published) should become confidential in statistics. The European statistical system as a whole is currently taking a critical look at itself and efforts will be made on the basis of a detailed survey to reconcile differing views. However, national procedures all have a very long history and it will not be easy to harmonize them rapidly. In many cases, it is simply a question of improving utilization of the data collected'.⁴

Approach the enterprises themselves?

'In some countries the current study has revealed that in order to get things moving it is possible to approach the enterprises themselves for authorization to publish data'.⁴

NEED TO AVOID COSTLY DUPLICATION

The case of business registers is one that illustrates the penalizing costs of duplication for enterprises.

Register management

Almost all the Member States encounter great difficulties in managing their registers, yet the registers are designed to serve as a basis for facilitating the collection of information from enterprises. 'A good register, which is very expensive to produce and maintain but which is used for no other purpose than statistics, loses some of the means it has for constant quality improvement'.³

Change is essential!

In certain countries business registers supply information for sale by the public authorities; in others, this source of revenue is exploited by private firms. It would appear difficult to change established behaviour patterns. 'But a lot of things will have to change! If they do not, commercial services will be increasingly offered outside the NSIs. Business registers are an area at the centre of many economic interests. Change is needed in the sense of greater openness and improved integration. Here too there is a lot at stake'.³

TO SUM UP

'Thanks to legislation that is being or has already been revised, we hope to be able to attain our objectives, namely to be able to receive as many confidential data as possible in future. We must:

- establish the primacy of detail at Community level;
- draw up common sense rules which, in areas where confidentiality is not really relevant, will make it possible to break out of the current 'vicious circles';
- on the question of registers, find a point of equilibrium and eliminate as far as possible differences and inconsistencies in national approaches.

As originators of the Regulation on the transmission of confidential data, it is therefore our task to design a logical system for processing the data, comprising confidential areas, computers dedicated to the processing of confidential data, encryption techniques, a good procedures manual, etc., in short to produce a set of rules which will provide our partners in the Member States with sufficient guarantees as to the manner in which confidentiality is dealt with by Eurostat'.³

Judging by the way the whole matter is being handled, we can be certain that they will not be disappointed!

¹ Ecole nationale de la statistique et de l'administration économique, Paris.

² Institut national de la statistique et des études économiques, Paris.

³ Interview with Daniel Byk, 22 May 1992.

⁴ Douglas Koszerek, 22 May 1992.

M ISSIONS, VISITS AND MEETINGS

■ DGINS EC-EFTA MEETING

The Conference of the Directors-General of the National Statistical Institutes, held in Athens on 20 to 22 May 1992, provided the EC and EFTA partners with an opportunity for joint deliberations.

The following are the main subjects covered at the meeting:

- legal acts in the implementation of the statistical programme: a task force will continue the examination of this question;
- the time taken to transmit data to Eurostat;
- cooperation with countries with evolving market economies: agreement on the philosophy of the cooperation system adopted by Eurostat;
- transmission of individual data from SMEs: if the few problems cannot be solved through bilateral contacts, a regulation will be drawn up;
- agreement on coordinating surveys of enterprises;
- occupational safety and diseases: agreement, but there was a desire to see better coordination with other international organizations;
- cooperation with European associations of enterprises: the NSIs were criticized by Eurostat for delays in processing data, particularly in the field of industrial production. Eurostat continued its deliberations on its role in the 'DEBA' EEIG;
- panel on the incomes and living conditions of households: progress report;
- migration: agreement to press ahead rapidly with this project.

The next DGINS Conferences will take place on 25 to 27 November 1992 in Luxembourg and 26 to 28 May 1993 in Dublin.

■ DSIS (Distributed statistical information services) STUDY

A specific study is being carried out on setting up distributed statistical information services between the national statistical organizations and Eurostat.

Content and aims

In addition to an estimation of costs, the study, which was launched at the beginning of this year, comprises an analysis of the current situation in Eurostat and in the Member States, proposals for and assessments of various options, recommendations for the option selected, and a risk analysis.

A project framework

This study will lay down a framework for all statistical projects involving telematics.

Eurostat will use it when participating in Community programmes, whether via the Caddia telematics networks (IDA – Interchange of data between administrations), via Trans-European Networks (TEN), via European nervous systems (ENS) or via Tedis (Trade electronic data interchange systems).

Uses

The results of the DSIS study will be used in particular by the Comedi project; discussions are under way on extending the DSIS study to cover the links between economic operators and statistical organizations.

Preliminary report

On 30 June 1992 a meeting was held with the national DSIS correspondents in order to present to them the preliminary report, whose recommendations include the structuring of information systems in production, reference and dissemination environments.

The study singles out organizational cooperation, statistical harmonization and metadata as major risk factors.

The final report of the DSIS study will be presented on 8 October 1992 in Luxembourg. The NSIs of some EFTA countries intend to carry out similar studies to validate and quantify the proposals put forward in their respective countries.

■ COMMITTEE ON STATISTICAL CONFIDENTIALITY

Multi-level coordination

Regulation 1588/90 of 11 June 1990 forms the legal basis for the activities and initiatives undertaken concerning the transmission of confidential data by the Member States to Eurostat.

The committee set up to coordinate the various aspects of introducing this Regulation held its second meeting in Luxembourg at the end of June this year.

At this meeting it approved the second version of the *Manual on the protection of confidential data at Eurostat*, which incorporated the amendments requested by the Member States and set out the details of the organizational arrangements for implementing Regulation 1588/90.

The representatives of the Member States requested a few amendments and explanations and gave their agreement in principle to the proposed content.

It was stressed how important it is for Eurostat to be fully involved in the activities of the other Directorates-General in this matter, particularly DG XIII, whether on data protection or on the confidentiality and security of information in general.

Eurostat's work on statistical confidentiality runs parallel to that of other international organizations: the Council of Europe, the OECD, the UN, etc. The EFTA countries have expressed full approval of the regulations concerned.

Outcome of the meeting

There was wide agreement on the fundamental bases of the organization of statistical confidentiality, in particular the principle of exclusively processing confidential data in a secure area.

The reports of the Member States describing the organizational measures adopted in each country will serve as a basis for subsequent amendments.

The committee was also informed that a seminar would be held in Dublin from 8 to 10 September 1992, to be organized jointly by Eurostat and the ISI.

■ EUROPEAN STATISTICS ON SERVICES

On 18 June 1992 the Council adopted Decision 92/326/EEC, published in OJ L 179 of 1 July 1992, establishing a two-year programme (1992-93) for the development of European statistics on services.

The purpose of this outline Decision, which is the first legal act on this subject, is to step up preparatory work in the various sectors.

The Decision adopted may be summarized as follows:

- definition of the objectives of the action plan (establishment of a European statistical information system for services);
- adoption of a detailed action plan involving the following:
 - analysis of user demand;
 - developing a methodological framework;
 - setting up the components of the information system;
 - carrying out pilot surveys;
 - development of basic statistical tools;
- obligation for the Member States to analyse the needs of national users and to forward the results to the Commission by 31 March 1993;
- transfer of existing non-harmonized statistics;
- obligation for the Commission to submit to the Council a report, in particular on the measures required for the preparation of harmonized statistics.

L

EGALLY SPEAKING

Interview with Christian Engelage

The implementation of the Regulation on the transmission of individual data to Eurostat involves a number of legal aspects, which are all the more important since there is no question of encroaching on the rights of the Member States to decide what they consider must be protected by confidentiality – ideas and statements which give food for thought.

A doctor of law (University of Frankfurt), Christian Engelage was for 12 years the head of the legal and data protection department of the Statistisches Bundesamt in Wiesbaden. He was involved at a very early stage with the problems of individual data protection and statistical confidentiality. He also had a close-up view of the laying of the legal foundations for Federal statistics in Germany. He has been working for Eurostat for the last two years.

CONFIDENCE IN PEOPLE IS THE FIRST REQUIREMENT!

Article 5 of Council Regulation (Euratom/EEC) No 1588/90 of 11 June 1990 on the transmission of data subject to statistical confidentiality to Eurostat¹ stipulates that the Director-General of Eurostat must ensure the protection of data transmitted to Eurostat by the national authorities. Article 4¹ states that all the necessary regulatory, administrative, technical and organizational measures must be taken to ensure this confidentiality. These measures, which are laid down in the *Manual on the protection of confidential data at Eurostat*, are compulsory for all Eurostat staff.

They are, of course, only effective if the staff implement them scrupulously. But what about the official's – particularly the European official's – liability?

In criminal law

The powers of the Community institutions do not extend to criminal law. The threat of punishment is, however, one of the basic guarantors of statistical confidentiality.

Since the Community has no powers in this field, any penalties must in any case be imposed by the Member States.

Although no such case is on record, it remains that, if there were a 'breach of confidentiality', legal proceedings would have to be instituted in the country where it occurred.

'The Member States have checked these provisions and noted that existing legal instruments are adequate. As a general rule, penalties range from fines to imprisonment.'²

The disciplinary aspect

This is covered by the Staff Regulations of the Communities. One of the obligations enshrined in these Regulations is to maintain professional secrecy in the widest

sense. Anyone who infringes this rule lays himself open to disciplinary measures ranging from a cut in salary to outright dismissal, with intermediate penalties such as demotion, etc.

The obligation to comply with these rules extends even beyond retirement age.

What court would have jurisdiction in the event of a dispute? 'If the matter comes under criminal law and concerns a member of Eurostat's staff, the Luxembourg courts would have jurisdiction, since Eurostat is based in Luxembourg. If disciplinary measures are involved, it is a matter for the Commission's internal procedure, although the official concerned would obviously have the right to take the matter to law. As a general rule, whatever the country or the incident involved, any legal proceedings would have to be instituted in the country concerned.

It is worth mentioning that, in a survey carried out about two years ago, no Member State reported that there had ever been a court case involving a breach of statistical confidentiality.

You cannot, however, be certain that such an incident will never occur. We have done everything reasonably possible to ensure that the essential climate of confidence exists and is maintained.'²

NOTHING REALLY NEW...

The 'straitjacket of confidentiality' is certainly nothing new in the ESS³, and it is not because there are new Europe-wide developments today in the transmission of confidential data that the basic concepts change.

The 'statistical confidentiality' Regulation will have to be implemented against a background of the widely distributed informatics (and information) which will be a feature of the architecture of the ESS now being set up.

The possible uses of confidential information should be better defined

'Statistical confidentiality as such is not defined at Community level, but it is up to the Member States individually to decide what type of information they regard as confidential and consequently what they can send to Eurostat. Here we have the obligation to receive and process such data strictly according to the national laws of their country of origin.

However, while the concepts which identify and define confidential statistical areas are very much the same in all the Member States, matters are much more complicated when it comes to knowing how such confidential information can and may be used. In order to ensure that we are complying perfectly with the national laws, we sometimes have to overcome tricky obstacles...²

The example of dominance

The concept of dominance is associated with the fact that individual data can never be published by statistical bodies, which are allowed to produce only aggregated data, i.e. data referring to at least three units.

'If one of these units is "significantly" dominant and alone accounts for a very large part of the aggregate, publication is not allowed. The problem here is that this level of dominance varies among the Twelve: 85% in some countries, 75% or even 60% in others... This means that there are aggregates which, since they are the outcome of different statutory provisions, provide results whose exact contents no one can be sure about...'²

Eurostat is simply a new site

In the context of the new ESS architecture, Eurostat should simply be regarded as one more place where it is permitted to produce statistics from individual data.

'For the rest, I am convinced that the definitions will be harmonized at Community level: it is ridiculous that statistics should be processed at supranational level with dominance criteria fixed at 60% in one place and at 75 or 80% in another! Nor would there be any point in wanting to achieve common statistical definitions and methods for obtaining comparable

results if the various members continued to use these results in different ways.'²

Confidentiality has already had considerable effect

Even before people started talking about the protection of confidential data, confidentiality was a significant factor in the minds of suppliers. Neither firms nor individuals would have supplied detailed information about themselves if they had not had the guarantee that such information would be processed for statistical purposes only. And it is obviously in the interest of the NSIs to keep it that way.

'Conflicts of interest could emerge if users wanted to obtain more information than we claim we can supply them with. It is very difficult to draw the dividing line here: what level of information can be supplied without violating the secrecy of that part of it which is confidential?'²

Towards better national regulations

'I am convinced that there will be progress in the harmonization of concepts, since the Member States themselves need to make things simpler in order to be able to fend off any accusation from outside the statistical system, from users who do not understand why we are acting in this way. The trend will necessarily be towards better national regulations.'²

...BUT THERE WILL HAVE TO BE CLOSER CONSULTATION

Would it be possible in practice for Eurostat to obtain directly from firms in their own country permission to publish data which these firms had, in good faith, confidentially entrusted to their NSI?

'Certainly not! Take the example of a national statistical publication: it is the result of a large number of individual data being aggregated, processed according to the laws of the country and published according to those same laws, involving, where necessary, the masking methods necessary to prevent any individual information being subsequently extracted. Imagine that you have such individual information and wish to publish it. You go and ask its "author" to give you his permission and, if you obtain

it, you might, by publishing the information, seriously undermine the national publication, since the information you have published might, because of its dominance in its aggregate, give away the identity of the other components...'²

There must therefore be consultation between the ESS partners right down to the level of each and every publication.

The right of refusal

'Before we can publish, we must obtain the agreement of the Member States concerned. This is a "chain" process, since the Member States must do the same with their regions, which in turn must do the same with their subregions, etc.'¹

THE PROBLEM OF IMPLEMENTATION

There is therefore reasonable optimism as regards the harmonization of definitions, notions and concepts.

Defining is not too hard...

Listing all the administrative and technical regulations and anything else governing the matter, combining it all into a coherent whole, and obtaining a consensus of the Member States at this level are the different aspects which make up the current task of the Eurostat team responsible for implementing the Regulation. What this means at the moment is making the necessary changes in working methods and procedures, creating protected environments, etc. 'It is impossible to separate the technical, organizational and legal aspects, which is why we are working on all the various fronts simultaneously, while making very sure that the demands in each sector are reasonable and practicable.

...but putting things into practice...

Implementation obviously involves certain drawbacks, changes of habit, and sometimes new deadlines. But it must not be forgotten that our colleagues in the production departments also have their deadlines to meet! Together, we have to find the best ways of achieving the best possible security in the knowledge that perfec-

tion is an impossible ideal... We try to find reasonable compromises which must always achieve better quality than our most efficient partners.

The application of the Regulation must be flexible and cannot be the same for all types of statistics: we

must define an acceptable frame of reference in each case. And, as the experience of each country has shown, there will be no problems where the necessary action has been taken to prevent them arising... As a lawyer and statistician, I give you my word for it!²

¹ OJ L 151, 15. 6. 1990, p. 1.

² Interview with Mr Christian Engelage, 10 June 1992.

³ European statistical system.

S SECURITY FIRST

But not at any price
Interview with Mr Jean Heller

Security is another very important aspect of the implementation of the rules and principles of 'statistical confidentiality' in Eurostat and the various NSIs. Because there is no such thing as total security, there has to be a constant drive for the best quality/price ratio, bearing in mind that security always depends on the motivation of the people who have to put it into practice.

A graduate in IT engineering from the Institut informatique d'entreprise, Paris, Jean Heller worked for many years in the French civil service, particularly in the Caisse de dépôts et consignations where, in group insurance, the confidentiality of contracts – and above all, claims – is naturally a sensitive area. Since joining the Commission 10 years ago and Eurostat five years ago, he has stayed in the computer area, where he is now working on developing sectoral applications. He is also the local informatics security officer (LISO), which involves numerous functional and operational responsibilities and various user-liaison tasks:

- advice
- liaison with other computer security bodies
- investigation of security failures, etc.

STATISTICAL RISK MANAGEMENT

Jean Heller speaks readily of risk management, comparing the risk of the 'disaster' of losing confidential information to the risks which operators of nuclear power stations have to bear. 'The damage would be enormous: a Member State telling us "We will not provide you with any more individual data because you are not capable of managing them properly" would cause an explosion! Although the loss of individual statistics would still concern only a fairly small population, we need to weigh up our techniques for assessing that risk'.¹

What dangers?

Information may be lost, or find its way into the press, etc. Classic espionage, staff indiscretions? It is very difficult to guard against this type of fraud. The first move is to focus on means of denying unauthorized personnel access to machines.

Know who you are up against

'What economic/professional associations or pressure groups would be interested in obtaining our individual data to use for their own purposes? Who are we to protect ourselves against? The Member States ask us to guarantee confidentiality in the face of any "enemy". Wherever the missile is coming in from, we have to intercept it'.¹

COUNTER-MEASURES

Without (of course) being able to say too much, Jean Heller cites some 'frontline' measures.

Check-lists are always effective

Whatever the security problem, a check-list enables the risk factors to be weighed up and an assessment made of the degree of security which can be applied to any

subject, starting with buildings, access to computer rooms, then the network, data transport, etc.

By combining several factors, it is possible to manage the consecutive links in the processing chain so as to isolate the weakest and act on it.

Keep staff on the alert

Why fit an armour-plated door with electronic access control if it is left open all the time? 'From that point of view, we have made a major effort for over two years now to make staff aware of security methods and to make sure that instructions are applied.

For the central and departmental computers, we rely on the traditional market standards (US Department of Defence (DOD) standards) for data encryption and security software'.¹

ARRAYS OF SOLUTIONS

Over and above these 'essential' security measures, a whole array of solutions, in various combinations, can contribute to maintaining a reasonable level of security.

'Any aggregated data going out from Eurostat, or in the databases and accessible from outside Eurostat, have undergone processing which guarantees that they no longer contain confidential information, using traditional methods (e.g. predominance, or other techniques requiring at least "n" occurrences of individual information to create an aggregate cell, etc.). If these constraints are not sufficient, further methods are used: extending aggregation classes, data masking, etc. All these traditional rules mean that, in principle, only authorized persons can access protected data'.¹

Eurostat the same as a Member State

Eurostat is thus placed on the same footing as a Member State, as a collector of individual data,

and is therefore obliged to implement a much stricter policy on confidentiality.

Once Eurostat acquires microdata from the Twelve, it has the capacity for a huge number of previously impossible aggregations over a much vaster range of operations.

Tackling the very biggest jobs

The next few years will open up huge areas for statistical work with computers. The implementation of the new ESS architecture requires action planned over the next five to 10 years.

'Our objective is to be able to guarantee security at a realistic cost.

- First, we will have to guarantee security within a closed computer network. During this first stage, estimated at five years, we are going to isolate the machines on which confidential data are to be stored. They will not be linked to any network and anyone working on these data will do so on protected sites.
- Subsequently, when we have mastered a number of other techniques (as already achieved in certain professions, e.g. the Swift network for banks), we will then be in a position, with the agreement of the working party responsible for monitoring the implementation of the "statistical confidentiality" project, to move towards something which is just as secure, but a little more open. For the first five years, however, we want to stay with our protected sites, and only subsequently open up some of our computers, solely where public data are concerned.¹

THE BROAD PRECEPTS

An internal committee of representatives from all the Eurostat directorates periodically checks that all the points of view taken into account when the *Manual on the protection of confidential data at Eurostat* was drawn up are observed. The manual has been circulated among the Member States and revised, particularly during the meeting of the working party of representatives of the Member States held at the end of June this year.

'This produced a number of broad precepts:

1. Member States have to decide what, in their view, is confidential and what is not.
2. Confidential data are accessible only by Eurostat staff when authorized.
3. Appropriate disclosure avoidance methods for confidential data will be devised by statisticians with the support of IT staff and experts. These methods will enable the public to be provided with data which have not lost any information value.
4. Confidential data may be handled only by duly authorized Eurostat staff, using Eurostat computer tools and in line with Eurostat security policy.
5. The various units handling confidential data will be provided with appropriate security measures. These will guarantee a very high level of security, certainly better than the NSIs'. They will include specialized secure environments, appropriate resources and equipment, access control and data protection by encryption. The security aspects of both stored data and transfer data will be covered.²

A deliberate split

The networks will therefore be clearly split to separate public information from confidential data. Some cross-communication will be provided. In the secure rooms, for example, the computers will still be connected to PCs, but the PC operators will no longer be able to extract data by downloading them on to any kind of medium.

'Confidentiality will thus be guaranteed as a first step, and we will then commit ourselves to a more open system once we have ironed out security problems at network level. We are still moving towards distributed data processing, of course, but with non-confidential data.

No exceptions

The Regulation on statistical confidentiality is the legal basis for the supply of information and individual data between the Member States and Eurostat, and it specifies that Eurostat staff are party to such information for statistical purposes only. There can there-

fore be no question of Eurostat supplying individual data to other departments of the Commission, whether for legal purposes or international negotiations, much less for tax purposes. These data are provided for statistical purposes, are restricted to Eurostat staff and are only to be used in that context.¹

The various Commission departments will therefore have to put their questions to Eurostat, which will use the individual data in its possession to reply to them, through a 'confidentiality filter' which will guarantee that no individual data are provided.

SECURITY IN PRACTICE

Several levels

The accent will be very much on data collection, inasmuch as Eurostat becomes a link in the Community chain for providing statistics in the European statistical area, which has now grown to 19 countries with the inclusion of the EFTA countries.

- Electronic data transfer will take the form of EDI, so the security component will have to be fairly well managed in future, with encryption algorithms, sender identification methods, key algorithm methods, etc. Everything has to run smoothly at that level;
- where computer operating systems within Eurostat are concerned, access security will have to be improved by laying down ever more exacting constraints for suppliers and insisting on security software, with the aim of obtaining a degree of security at least equivalent to what is now provided on the central computers;
- again for data transfer, we are looking for specialized carriers, using methods which will perform better and cost less.

These are three broad lines of action for the next few years. At the same time, it must not be forgotten that staff have to be made constantly aware of security measures so that they never become mere routine: keeping staff motivated is just as important as keeping up with the technology.

Tried and tested techniques

'We are using the same techniques as the large worldwide

commercial networks, which apply all the security measures cited above in normal commercial operations. We are obviously not going to go as far as using security procedures which would apply in times of war. What matters to us is to know who is using a line, whether the right person sent a message, etc. A whole series of automatic recall procedures and electronic keys already afford good protection against traditional intrusion. The techniques we are using are tried and tested.

The biggest problem which we are likely to encounter is the sheer number of parties to be dealt with.¹

THE RIGHT PRICE

Computer security is very costly. 'We know that we cannot ask for maximum sophistication: for purely budgetary reasons, we cannot aim for the *nec plus ultra*. We therefore have to settle for a set of resources and simple, yet strict, principles. At this stage, it seems rather more reasonable to isolate a set of data physically than to try to protect a whole network of computers at an exorbitant cost.'¹

EVERYBODY'S BUSINESS

Security is everybody's business, not just a concern for a few specialists working in a more or less closed circle. It really is a matter for the entire staff, and they have to be trained and made aware of the various techniques applied.

That will be followed by systematic organization of the monitoring of and compliance with the standards established.

'Once they are up and running, projects or applications can present difficulties, malfunctions or simply unusual or suspect reactions. At that point, the LISO will intervene to provide a consistent methodological approach in research and investigation work, liaising with other departments of the Commission if necessary. These incidents will be studied to determine what changes need to be made to the tools, procedures or rules to avoid their recurrence. It will be one of the LISO's tasks to prepare these updates.'³

There is plenty to be going on with here!

¹ Interview with Mr Jean Heller on 22 May 1992.

² 'The implementation of the statistical confidentiality Regulation', Eurostat/A1/C5/131, 14 May 1992.

³ 'The tasks of the LISO', Eurostat/A1, 14 May 1992.

T ECHNICALLY: A FAIRLY CLASSIC PROBLEM...

Interview with Mr Alain Delos

From a purely technical point of view, there is a solution to any problem if the political will is there. Since this is apparently so in the area which concerns us, who cares about the difficulties!...

After taking a degree in informatics at the University of Paris and further study at the Graduate School of Business (University of Stanford, Palo Alto), Alain Delos taught at the Federal University of Brazil before going on to develop a European reservation system for a French company. In 1974, he played an active role in setting up Swift and, as a member of the executive committee, was responsible for the whole network system. From 1987 to 1991, he was deputy managing director of Tel-info, a major Belgian telecommunications and computer group.

When the need emerged to draw up new procedures for implementing the Regulation on statistical confidentiality, questions arose: who was going to check what? Who would be responsible for managing access to such information? Who would keep a record of such access?

A team of specialists was set up to cover all the legal, technical and security aspects.

WHY THIS TEAM?

The need to set up a 'statistical confidentiality' team soon became obvious: with the task of putting together the documentation and writing the procedures and principles for implementation, it was to discuss these and to have them approved by the appropriate bodies. All this was to be achieved while respecting the autonomy of the Directorates concerned and maintaining sufficient distance from the implementation process to guarantee the necessary objectivity.

The 'statistical confidentiality' team therefore proposes the principles, has them approved, passes them on for implementation and, to some extent, plays an audit role: it then becomes the overseer who checks how things have been implemented and suggests what amendments or improvements should be made.

NO MAGIC TRICKS

There is no great mystery to all this: a number of simple principles and rules have to apply, as in any application which is broadly dependent on informatics.

Chains

A chain will always break at the weakest link. In any information exchange system, the 'skill' lies in ensuring that the weakest link is on someone else's patch, not one's own.

Two heads are better than one

Always avoid a single responsibility or group of responsibilities of the same type falling to a single person or too tight a hierarchical line. Sensitive files should never be exclusively accessible by a single official. Always put at least two people on confidential business, etc.

Link partners

Organizational links: 'For example, it is important to encrypt any information which will be used by a particular directorate: it will be necessary to decide to use a certain type of algorithm, to determine who will manage the keys, who will program the various tools, who will be responsible for implementing them and who will control the use of these keys. Responsibilities should be spread, so that some people know the keys, others know the algorithms, and others can check this. Nothing should be done without the whole team being involved.'¹

CLASSIC DIFFICULTIES

These are the ones found in setting up anything resembling a matrix-based organization: everyone marks out their ground, wants to know who is responsible for what and where each party's responsibility runs to. And of course, for each of the Eurostat directorates concerned, the store set on security, now more than ever, may seem like a new and occasionally onerous constraint.

Time is tight

'Negotiations with the Member States on a certain set of agricultural statistics had been concluded and the confidentiality aspect already sketched out when along comes a new Council Regulation requiring a single solution to the whole question of statistical confidentiality. This does not necessarily square with what the agriculture statisticians had

planned. Discussions have to be held, therefore, with the aim of future convergence. But time is tight.¹

Shaking up old habits

For some, the implementation of the Regulation on confidentiality comes as yet another complication at a time of great upheavals in exchanges between Member States, NSIs and Eurostat. Until recently, many of these exchanges were something of a cottage industry, with magnetic tapes being passed from hand to hand and relatively few telematic links.

Now, everything is changing: EDI is going to become the rule, exchanges between partners in the ESS are to be rapidly computerized to the highest possible degree. In the midst of all these convulsions, the advent of new rules governing the transmission by new means of highly sensitive confidential individual data obliges all concerned to shake the dust off some parts of their organizations.

SPECIFIC MEASURES

A single point of entry

Let us take an example of a new constraint: from now on, all data received by Eurostat will have to go through a single point of entry, where they will be recorded, labelled, entered on an inventory, etc. That is the only way to keep a clear, accurate picture of what the Office is handling.

The same secure area

The Member States insist that confidential data should be confined, now and forever, to the 'secure area' which now encompasses the NSIs and Eurostat, to the exclusion of the other parts of the Commission, Community institutions or others. 'Within this secure area, we want to have the best possible protection.'¹

What of the Computer Centre?

This has its advantages and disadvantages. As an integral part of the Commission, Eurostat previously had the use of all the tools available to the Commission, especially the Computer Centre, and that is still so. Since the Centre is not part of Eurostat, it can no longer process confidential data. This was not foreseen. In spite of

a whole series of procedures intended to protect confidentiality, it is nonetheless true that, strictly speaking, the Computer Centre is not part of Eurostat.

Who will do the sorting?

Any information reaching Eurostat will be sorted on arrival. What is not confidential can be sent on immediately to the directorate concerned. Confidential data will be sent to a 'bunker', a fully protected confidential area, where incoming information will be scrupulously checked before being suitably processed to make it non-confidential, if necessary.

Thereafter, it can only leave this area in this 'doctored' form.¹

LOOK OUT FOR DISSEMINATION!

The decision to publish will depend on whether or not information is confidential. 'But that will have to be monitored in every Member State. Uncontrolled, anarchic dissemination can make it possible to reconstitute confidential elements by cross-matching data from different sources. It is sometimes possible to square the circle. The sectoral committees will have a decisive role to play.'¹

Information value and statistical value

Is there not a risk that strict application of the rules on confidentiality means that the data released to the public could suffer from some sort of 'information shortfall'?

'Their value as information may possibly be reduced, although without affecting their statistical value, because percentages, growth rates and the overall volume stay the same. All users do not attach the same importance to the difference between something's value as information and its statistical value. For our part, we have to stick to the strict rule that any information entrusted to Eurostat and marked "confidential" has to be kept confidential, within Eurostat. There is no exception to that rule.

It was a joint decision that confidential information should be sent to Eurostat. The Office has to be allowed to enrich its aggregated data and thus improve the quality of the non-confidential stat-

istics which it puts out. It is not a matter of having confidential data just for the sake of it; it is so that we can see to it that the non-confidential information drawn from those data is improved. That is what the users are looking for.'¹

Two sides to the story

'Thanks to the Regulation, we can now say to the Member States, 'You can now send us confidential information whenever you wish; on the other hand, whenever a regulation obliges you to provide statistical information, you will no longer be able to cite confidentiality as a pretext for not sending it to us.'¹

AN ALMOST MILITARY OPERATION

With its legal, technical and security aspects, the implementation of the Regulation comes close to being a military operation.

The psychology of security

Security is a much-maligned constraint; the thinking behind it is not always properly appreciated.

'By imposing stringent constraints, you make security more visible. If security goes unnoticed because it is too discreet, I would say that it is missing part of its goal and not being as effective as it should be, because there would be the risk of letting people drop their guard.'¹

Effective committees

Finally, regardless of whatever technical and operational organization is set up, both parties' problems and concerns have to be mutually understood. That is the role of the committees, which bring together the representatives of the Member States and the heads of the various Eurostat directorates. Their concerted efforts will go towards ensuring that the implementation of statistical confidentiality is no secret but is done as openly as possible. 'This is a subject for the very widest discussion and we will make sure that the debate is very open.'¹

ON THE AGENDA: DUBLIN, 8 TO 10 SEPTEMBER 1992

This seminar (see detailed information on page of this edition) aims to examine the whole issue

of confidentiality in statistics by tackling questions of logistics and implementation, as well as the legal, scientific, mathematical and other aspects. It will provide a forum for dealing with all these problems and the first opportunity for the whole international statistics community and its users to chart the phenomenon and evaluate the pertinence of the measures which we are implementing.¹

A date for your diary...

¹ Interview with Mr Alain Delos on 10 June 1992.

M ONETARY AND FINANCIAL INSTRUMENTS IN ECUS – STATISTICAL ASPECTS

Publication of the proceedings of the international seminar organized by Eurostat in Luxembourg on 23 and 24 September 1991

Some 280 participants, from institutions (central banks, statistical offices, various government departments), the private sector (banks, consultants, large corporations) and various associations in 34 countries and several international organizations contributed to the success of the first seminar organized by the Commission on this subject and in this way.

OBJECTIVES

It was the first time that the Commission, through Eurostat, set out to make as exhaustive an inventory as possible of the information available on the ecu.

The Statistical Office's considerable work in the field of current uses of the ecu was intended to cast light on the economic and political context for market operators.

The conference also provided an opportunity to observe the particularly marked contrasts between how the 'financial' ecu and the 'commercial' ecu had developed.

QUANTITATIVE, QUALITATIVE AND TECHNICAL DATABANKS

Eurostat regularly processes all the numerical information (data on exchange rates, interest rates, inflation rates; on international and national bond issues, forward contracts and clearing systems; statistical monitoring of the secondary market for securities in ecus, assets and liabilities in ecus of the banking sector, etc.) necessary for economic analysis, particularly for Commission departments involved in defining and implementing Community policies relating to the ecu.

Information is also systematically collected on the technical nature

of the various monetary and financial instruments in ecus and on the operation of the markets.

The international working party on ecu statistics set up by Eurostat is responsible for examining the potential for development and harmonization of these statistics. It puts forward proposals for setting up a real statistical system for the ecu.

Constant monitoring

As we shall have occasion to say again in these columns, Eurostat carries out its work in a very broad context, using all available data, sources and processing methods to monitor information in the field of ecu statistics. This work is regularly reported in Eurostat's various publications.

TO ORDER

The published document contains very useful information not only for operators on financial markets, but also for most political and economic decision-makers.

The proceedings (Catalogue No CA-74-92-120-EN-C) are available at a price of ECU 20 (exclusive of VAT) from the sales offices of the Office for Official Publications of the European Communities, the addresses of which are given on the inside back cover.

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