

ISI Occasional Papers and Studies #7

**THE FUTURE OF
INTERNATIONAL STATISTICS:
COMMENTS**

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Introduction

Please read these lines taking into account the fact that I have been divorced from active participation in the field of statistics for almost twenty years, and that my comments may therefore be out of step. Thus, I ignore most of the developments which occurred in the international field of statistics since the early 80's, as for example the details of the ICP project. However, I did operate for some thirty years in the international field of statistical collection and dissemination, and I have the impression that many of the problems I encountered are still not entirely solved. If they are, or at least some of them are, then all the better; it should be a great satisfaction to those who have contributed to their solution to recall their work and its success. If some of the problems are not yet entirely solved, then maybe recalling them could be useful and possibly some of the suggestions I make hereafter may be of some use, especially about a future International Statistical Organization.

1) Some Initial Remarks

First, I believe that the ISI Conference about the long term future of international statistics was very useful and that the contributions were all very interesting; I particularly appreciated the contributions by Barbara A. Bailar and Zoltan Kenessey ¹⁾.

Any analysis concerning the future of statistics must first take into account the fact that we are living in an extremely rapidly changing world; the differences between the world to come, today's world and the world as it was twenty years ago are enormous on all counts, because for instance of the demographic explosion, the development of nationalism and religion, the formidable transformations in the technical field, etc: it is most likely, therefore, that many solutions of the past to problems raised by international organisation and standardisation of statistics are obsolete and will have to be replaced by new and maybe somewhat revolutionary solutions.

The formidable possibilities offered by the development of technical facilities, (computers, multimedia, transmission and storage of data) have changed many aspects of problems of international collection and comparison of data: for example, the difficulties of converting data collected and classified at the national level into international categories have been considerably reduced, even if such work may involve many more detailed and numerous breakdowns than the country would normally wish to make. But the problems raised by the basic meaning or philosophy of each classification, its purpose and expected uses remain. Here is an example of this type of difficulty: several would-be users of the International Classification of Occupations (ISCO) complained bitterly that it did not permit to classify individuals according to their skill: such a concept, assuming that it could be developed and used to collect actual data, would have had very little relation to ISCO; but such unhappy users of ISCO did not accept this view and therefore rejected ISCO.

1. The references in these comments are to the contributions in the ISI publication "The Future of Statistics: An International Perspective", ed Z. Kenessey, ISI, Editions Voorburg, 1995. (Relevant page numbers of the book are given in brackets.)

Professor Nanopoulos indicates (page 216) the possibilities offered by new collection techniques for the production of useful statistics on international trade despite the disappearance of certain sources of information (customs offices). It should be possible to apply some similar methods of collection as he suggests to migration statistics.

A note concerning migration statistics: at some time (in the 1960's) I managed, through a large amount of administrative paperwork, to transfer the responsibility for the collection, publication and improvement of migration statistics at the international level from the ILO to the UN; this was done to nobody's satisfaction, neither the ILO statistical staff, nor the ILO directorate (indifferent) nor the UN (which showed no sympathy to being officially entrusted with a responsibility which it always considered as being their own but for the lack of progress of which they were happy to blame the ILO): unless I am uninformed, no more progress was made than before in this area, which in my mind is a good example of a subject for imagination in the framework of an "independent" international organisation.

Mrs. Bailar notes (page 229) the concerns raised by record systems. I believe that the collection of any data may raise concerns of a kind; a study on asbestos workers raises concern from the producers of asbestos or the workers of an asbestos factory as to the future of the enterprise and the workers jobs; records on AIDS raise hostility from patients, doctors, helpers, helping organisations, administrations, politicians, governments, etc. The statistician should do his job regardless, but as honestly (objectively) as possible. Also, despite technical developments, many data will still have to be collected by "classical means", such as "paper and pencil interviews", as for example data collected from individuals on medical or educational subjects, and there will always remain problems of definitions, comparability, presentation and interpretation of the data collected.

The world trend towards "deregulation" may conduct in the near future to "destatisticalisation" or at least to a tendency to refuse the constraints of the collection of statistical data and of the implications of their meaning. Is it not possible, that at least theoretically, in a perfectly liberal or wild capitalistic system, the ideal would be "no data at all"? The last paragraph on page 92 of Mr. de Vries' intervention is an excellent illustration of the problems involved, their consequences and their difficulties in the field of customs statistics.

I have a definite feeling that, for many valid or less valid reasons, economic statistics are still the essential basis of national and international statistical work. Most of the papers and discussions emphasize the importance of economic statistics, their impact and the fact that resources are more easily available for their promotion and development than for any other type of data. Thus, Mr. Zalm emphasizes in particular the need "for a broader view of the social processes in order to understand economic developments". Mr. Nanopoulos seems to consider (page 220) that *the coming world will be purely market-oriented*: while this view does appear to be most likely the prevailing view in the immediate future, should not some thought be given to the possibility that it will not necessarily be a long-term prevailing view? Mr. Keuning considers that a main challenge (for statisticians) is to incorporate environment and social data into the SNA; but, in my opinion, while SNA has certainly been the fundamental basis of considerable advance in the economic analysis of countries' economies and a good basis for

international comparisons, it has at the same time given exaggerated importance to economic data versus non-monetary data. Also, the fact that the Statistical Office of the UN was placed in the Department of Economic Affairs may at least partly explain the importance given to economic statistics versus other data at the international level.

These positions tend to disregard the importance of social, demographic, medical, environment, etc. statistics, even if (and maybe because) obtaining funds for the production of such data is generally more difficult than for economic statistics; for instance, employers will more readily supply funds and information for the production of economic data, which may possibly become of assistance to them in their activities, than for data on environment which are more likely to eventually hamper their business.

I agree with Mr. Nzemen (page 76) when he notes that "the elaboration of international statistics regarding the environment, social services, human rights, integration of the woman in the development process, sport, etc. will pose important problems of methodology" and will involve a lot of innovation.

I am also in full agreement with Dr. Jarque (page 292) when he notes very rightly that "the final objective of economic policy is not to increase output per se", nor is it "the maximization of trade, nor the increase of productivity to record levels ... It is ..., or should be, the attainment of the welfare of individuals and of nations": these considerations should be more taken into account than they have been heretofore in international statistical work.

2) Statisticians, Their Credibility and Their Independence.

I would like to believe (contribution by Z. Kenessey, page 119) that "all major categories of users of statistical data are aware of the necessity to use internationally comparable concepts and data for their own country", but I am not too sure ...

Mr. David notes (page 151) that "users [of statistics] put availability [of data] above accuracy while statisticians have it backwards". The fundamental problem is how to persuade users of data that "no data" is preferable to "definitely wrong data". For example, I discovered at a certain time that the ILO Yearbook of Labour Statistics (for which I was responsible) contained data on minimum wages in several countries of Africa that had little or no relation with reality, either because the request for such data had been entirely misunderstood, or because the data corresponding more or less to legal decisions were completely divorced from actual wages. When a new edition of the Yearbook appeared without the false data, ILO economists complained bitterly that they could not continue their studies of African economies because of the disappearance of these (false) data. Another example: a non-statistically-trained politician representing his country in the ILO Governing Body was convinced that the data presented in the ILO Yearbook were highly unsatisfactory (out of date) because he had found in a non-statistical important non-statistical review completely up to date and perfectly "comparable" data; furious at my derogatory remarks as to the validity of the data he had found, he took a very negative and destructive position in the Governing Body when the discussion came on the budget of the Statistical Bureau.

I also note that politicians, and often the public at large, have a strong tendency to question or even to scoff at the results of sample surveys when their results are negative from their point of view, but to believe and use them when the results are favourable.

I fully agree with Barbara A. Bailar's position (page 231) that statisticians are not to "fight" to remain relevant. It is my strong belief that statistics are useful in the most noble sense, and statisticians should do their best to demonstrate the usefulness of their work: but they are not to "fight", the idea being that if they cannot convince, maybe they are not as right as they think, and in any way must respect the attitude of the non-believers, even if they are convinced of the correctness of their thinking.

I believe that there is a formidable need for promotion of (or propaganda for) the collection and dissemination of statistics. Surely, the mockery to which statistics and statisticians were subjected for many years (Disraeli!) has receded in many circles, but is still going strong, as is the mockery of weather forecasts.

The need to convince politicians, governments, administrators, journalists and people at large is therefore still a major necessity if useful and impartial data are to be produced in sufficient quantity and quality to help a changing world to find its bearings. (But what is "usefulness"? Successful research on curing colds would bring considerable relief to humanity: it would be much more useful than many other "useful" researches from any particular point of view, and much less from other points of view).

Mr. Nanopoulos describes adequately (page 220, second paragraph) the characteristics that statisticians of the future should have, and while his considerations seem to apply particularly to national statisticians, they apply maybe even more so to international statisticians.

Because statisticians are human beings, with their beliefs, their national and personal convictions and interests, their "parochialism" (Mr. Duncan's contribution, page 40), etc., I found in my time little (if any) "international spirit" in national statistical organisations, and even regional organisations tend to develop a certain "nationalism" of their own; the problem was often worse in international organisations. Has the international feeling in the world evolved much, and do national representatives at international meetings nowadays really believe in the objectivity and independence of international officials? I doubt so.

The problems created by the uncoordinated nature of country participation (delegates) in the numerous international governing bodies and "the relative importance given by diplomats and career civil servants" and by "a larger staff mainly geared to policy, program and administrative issues..." to statistical issues are considerable (description by Kenessey, pages 140 and 141). But is it not quite the same at inter-ministry meetings at the national level?

The maintenance of "professional independence" of a statistician is far from easy; in most democratic countries, there is little pressure on a statistician's work, although (as only one example) it may be suggested that it is inopportune (for the good of the nation) to publish a particular result at a particular time; but one may think of the difficulties of the position of a

national statistician participating in an international meeting, who agrees (from a technical point of view) with a delegate or the meeting in general, but who has a mandate to defend a position contrary to his personal belief. It has happened more than once that a delegate had no clear instructions, or no "statistical" instructions, or no instructions at all, and strongly defended views ignored from his national organisation or even contrary to that organisation's (unknown) position.

3) Organisation of International Statistical Activities.

International work in the field of statistics comprises the collection, analysis, publication and comparison of national or regional statistics and the promotion of valid international standards. The problems involved are monumental and have consumed in the past century a lot of energy and resources and will request in the future considerable imagination and energy of many to make reasonable progress in this field in "the not too distant future".

The collection of data is normally the role of local or national bodies, with the possible exception of inter-national data such as migration or customs data or data for direct international comparisons (prices, wages). A major advance in the international field would be to entrust an international body with the responsibility for the direct collection of statistics concerning more than one country, such as migration statistics, data on international trade, etc, as well as the collection of data from multinational enterprises: this latter task would of course involve difficulties illustrative of the problems emerging from a changing world, the economic and political power of extra-large economic entities, and the advantages of privacy or rather secrecy in the supply of information.

I believe that an international body should attempt to maintain a permanent record (an annual census?) of all statistical data collected in any country by official or private units, in order to help ensuring extended knowledge of existing data by all persons or groups interested. Combined with an objective analysis of the technical value of the data, it would then be possible to suggest what should or could be done about such data: deletion, improvement, publication, etc. This could help to avoid what I witnessed more than once: an official body setting up the collection of data already collected elsewhere, in complete ignorance of the existing data. The same international body should set up various lists of necessary, useful or interesting statistics which should or could be produced by countries, depending on their level of (statistical) development.

The detailed analysis of the validity and usefulness of data should be one of the major tasks of an independent international body. Such a body should be entitled to produce not only technical judgments on the validity or correctness of data produced by national or regional bodies but also on the meaning and non-meaning of data: what main conclusions the data show, and (maybe more important) what they DO NOT show. How far can an international organisation be authorised to go to refuse to publish "bad" data? I met with this type of problem and the decisions were taken one by one without referring to any basic principle nor to any supervisory decision.

Another major role of international bodies is the elaboration of valid standards and the obtention of comparable national data. Such bodies should also be enabled to determine the amount of comparability of national statistics and assist in the improvement of such comparability: among the difficulties involved in this task is the correct definition of the concept and scope of comparability. In international work, what is important is not common classifications or identical definitions, but comparable data: the distinction may often be subtle, but is essential; much thought should be given to "comparable" versus "identical" data.

By whom should these tasks be done?

Reading the note 4 of Kenessey on page 145, I recall suggesting to Patrick Loftus²⁾, after a committee meeting on ILO premises, sometime around 1964 or 1965, the setting up of an International Statistical Organisation regrouping all international statistical offices; he appeared to be in sympathy with the idea, but I certainly did not have the approval of my organisation, not any more than the UN would have approved of such a proposal, much more for purely "corporatist" reasons than for reasons relating to persons, even if these reasons could come into account.

At the present time, international work in the field of statistics is basically done by the ISI and the statistical offices of the international organisations and regional bodies; there is no real International Statistical Organisation.

I do not believe, contrary to Mr. Nordbotten's statement (page 157) that entrusting the production of internationally comparable statistics to national offices, whatever the coordination, would give the type of results really expected. Nor do I believe that the present organisation ("The decentralized nature of international statistics, and the proliferation of world and regional bodies interested and involved in statistics", contribution by Kenessey page 119) is the right solution.

It is also clear in my mind that if those tasks were to be all entrusted to a single statistical body attached to one of the current international organisation (such as UNSTAT is) this body would continue to encounter insuperable difficulties in obtaining valid and objective cooperation from statistical units attached to other organisations.

Noting the problems of varying possibilities of statistical development depending on centralised or decentralised systems, as Kenessey mentions (page 135) I am convinced that the best organisation would be a sort of dual system: an independent International Statistical Organisation regrouping most if not all of the responsibilities of existing statistical offices in the various international organisations, assisted by a network of statistical antenna in each international organisation.

2). Director of the UN Statistical Office in the 1960's and early 1970's.

These antennae, headed by an experienced statistician assisted by a reduced staff would: a) supply all statistical information available to the International Statistical Organisation to the various users in the organisation where it would be located; b) help this latter organisation to define its statistical needs in convincing terms for statisticians so that the International Statistical Organisation could take these needs correctly and fully into account in the general programming of work at the international level.

Of course, the administrative problems involved in such an organisation at the international level are manifold: should the antenna be headed by statisticians detached from the staff of the International Statistical Organisation, or should they be full members of the staff of the organisation they are to serve, or should they not have a dual status? (One should not insist on the personal (or personnel) advantages of one or another system: the aim of a valid organisation should not be the possible carrier of individual statisticians, even if this factor should not be neglected)

As far as setting standards is concerned, the International Statistical Congresses (1853-1876) tried to arrive at internationally binding statistical procedures on the basis of majority decisions of the participating countries: this attempt had little chance of success because the right or wrong technique for the production of valuable data is not a matter of majority; for example, in another field, one cannot decide validly that the earth is flat or round on the basis of a majority vote, or if so, the decision will have no real value nor future. It would seem worth while, would it only be to avoid the recurrence of the same difficulties, to analyze in detail (see contribution by Kenessey, page 115) the reasons for which "an influential minority of countries" opposed active cooperation with ISI, or why the cooperation between ISI and ILO was mildly successful.

It is true that the European Union establishes legal provisions of a binding nature for the collection of data by its member countries; if this method can actually be implemented, maybe (presumably in a rather distant future), the method could be applied to other regional groups and later at the international level. This assumes that countries would accept a certain type of supranational decisions: are we there yet?

I have personally arrived at the conclusion that international conventions or recommendations requiring formal ratification by countries (with its rigamarole of paperwork by ministries of foreign affairs and others) are not the right method to use in order to develop valid national and international statistics, nor to produce internationally comparable data. (comments by Kenessey on page 116 re the International Convention on Economic Statistics go along the same line). I was impressed more than once by the lack of usefulness of many international or regional conferences, where in many (most?) cases the delegates, even when they were trained statisticians (or particularly when they were) mainly defended what they thought or had been told to think was their country's interests.

ISI is an International Academy of Statistics, and its role in the development and improvement of statistics cannot be denied; but it has no power per se on national or regional producers of

statistics, let alone on financing bodies (except through the personal influence of ISI members, which influence is however often considerable).

Many problems will remain if such an organisation of work at the international level as I suggest should ever see the light of day: while the collection, analysis and publication of data would clearly be the task of the International Statistical Organisation, maybe the setting up of international standards should be entrusted to the ISI, where one could possibly find a wider and more objective view of needs and possibilities for the setting up of valid techniques and standards?

And then there is the problem of funding.

The collection, analysis and publication of any type of statistic always involves a cost, and the funding of the production of national, regional or international statistics is a complex problem with which I am not familiar (I was never a good "seller" of the need for funds to produce the data which I thought was useful). However, I have the feeling that it is first necessary to determine what data should be collected (making a difference between data "needed" and data "demanded"), what are the costs of production and who is most likely to accept to bear the expense.

However, the problem of obtaining resources for statistical work, while important, should not be over-emphasized: similar problems occur in all activities whose practical results are not immediately perceptible, such for example as spatial activities: yet, funds (much larger than those devoted to statistics) are found. What is needed is to determine which data are essential, needed or useful, regardless (at least at first instance) of the means of obtaining the resources needed to collect and process such data. (Mrs. Bailar indicates page 230 various possible solutions to the problem of obtaining data through remuneration: the data-related compensation seems to be a good solution).

4) A Few Other Uncoordinated Remarks.

A problem in international comparisons is due to the fact that data are produced for national entities, and are often presented only by "countries", with the result that data are presented for the United States as a whole as well as for Trinidad as a whole. A serious effort should be made to obtain and publish data according to geographical breakdowns designed by the economic, social or specific importance of a geographical entity, regardless of the political or legal organisation of which it is a part.

Also, should comparable data be assembled for all countries on the same basis, or should there be different standards or different levels of standards depending for instance on the level of development (statistical or not) of the entity concerned?

The training of statisticians must take into account the formidable differences in culture, means available and organisation of economy, social life and administration from one country to another: thus, while in Denmark the completion of a survey of enterprises can be done by

phone, wherever the location of an enterprise in the country, in some countries of Africa the problems of communication can completely prevent the collection of information.

Similarly, technical assistance to governments (or rather to administrative units not necessarily sufficiently controlled) in the field of statistics (but maybe in many other fields) is a vast problem: the decisions of receiving governments to request such assistance, the use made by the government of the expert or experts supplied, the conflicts between experts from different organisations, the difficulties due to the modifications of interest of the various administrations of the demanding government between the time the demand is formulated and the arrival of the required experts, the control or lack of control of the experts and their work, etc, could be the subject of a big book, and the analysis of this problem would produce a good illustration of the difficulties encountered and to be encountered in the development of statistics at the national and international level.

I have found no reference in the contributions presented to the Voorburg conference to the important problem of language. Despite its importance, this problem is practically hushed in all circles, or on the contrary brandished as a national cause for the defense of a culture or country.

The techniques available to interpreters or translators, and the experience acquired by many statisticians and their helpers in the field of language are now of great help. But the costs involved in presenting data and texts in a number of languages, especially for an international organisation, are considerable and the results are often unsatisfactory to the organisation or to the contributor, or to both.

From my personal experience, I have concluded that statisticians (but these considerations could most likely be applied to other fields) should accept that publications of an international organisation be presented in only one basic language, but that any written contribution to an international meeting or organisation should also be made available in the language of the author, either by himself, or by his country, or by other means. This presentation of any contribution simultaneously in an "international" language and the language of the author will be all the more important as well as difficult that the ideas to be communicated will be complex, new, in contradiction with usually accepted ideas, etc., but is essential to ensure that the conceptual views elaborated in any given language are not partially lost or modified by their translation into another language.

It is of great importance, and will be all the more important in the coming world, to transmit data to those who can or should use it: it is not sufficient to produce valuable data, it is imperative to put it at the disposal of the right users-to-be, without being excessively bound by costs of dissemination; for instance, it is highly insufficient to inform a handful of non-directly-interested public that a given statistic is available and one can wonder whether the present system (following a historical procedure) of international Statistical Yearbooks is not definitely obsolete in view of the development of informatics, to which the great majority of potential users have access.

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