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PRICE STATISTICS

International Comparison Programme (ICP)

Report of the Secretary-General

SUMMARY

Substantial progress was achieved in phase V of the International Comparison Programme (with 1985 as reference year). A number of regional comparisons have already been completed, while other regional results, as well as the world results, are expected to be ready in 1989. Unexpected difficulties were encountered in respect of the linking of the regional comparisons, the number of core comparisons carried out being fewer than originally planned (paras. 1-9). Section II of the report gives an account of some methodological developments (paras. 10-16). Plans and prospects for phase VI are described in section III. It is not yet clear whether sufficient resources will be available to permit the launching of a genuine world comparison. If such resources are not available, phase VI comparisons will have to be limited essentially to regional comparisons (paras. 17-23). Points for discussion are presented in section IV (paras. 24-25).

* E/CN.3/1989/1.

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I. COMPLETION OF THE PHASE V COMPARISON

A. Progress of work and difficulties encountered

1. Phase V of the International Comparison Programme (ICP), with 1985 as reference year, is progressing at a somewhat slower pace than had been envisaged. Several regional comparisons have already been completed. In February 1987 results became available for both the comparison conducted by the Organisation for Economic Co-operation and Development (OECD), involving 22 countries, and that conducted among the 12 countries of the European Economic Community (EEC) by the Statistical Office of the European Communities (EUROSTAT). (These 12 countries are also part of the OECD comparison.) Results of the European comparison, covering the European OECD countries plus three Eastern European countries, were issued in December 1987; those for the African comparison (23 countries) become available at the end of 1988. Substantial progress has been achieved in the comparison conducted among countries of the Economic and Social Commission for Asia and the Pacific (ESCAP), which includes nine countries plus Japan (Japan also participated in the OECD comparison); final results, however, cannot be expected before early 1989. Advances have also been made in the Caribbean comparison (seven countries), where the work started only in April 1987; final results are therefore expected only in mid-1989. No regional comparisons were made in the Latin American or Western Asian regions in this phase.

2. In order for the world comparison to be built up from the regional comparisons, links among the regions - in the language of the ICP, core comparisons - are needed. Core comparisons are either bilateral comparisons between two countries belonging to different regions or are the result of a country's participation in two different regional comparisons. Since the mere fact of which countries play the role of core country may have significant influence on the quantity indices between countries belonging to different regions, it is important to have a sufficient number of core comparisons so that this source of error, which may be likened to sampling error, is reduced.

3. One of the greatest difficulties in phase V has been the insufficient number of core comparisons. About 20 core comparisons were envisaged when phase V of the ICP was launched in 1984; one year later, when the actual work began, it became clear that resources would not permit more than about 10. Now, after three more years, with some regional results already available and others expected within the year, it appears that even the remaining core comparisons are not proceeding well. Some have been discontinued (Pakistan-Turkey, the Philippines-the United States); work on others (India-the United States, India-Kenya, Pakistan-Nigeria, the United Kingdom-Kenya, Italy-Tunisia) is moving so slowly that it is not certain when, or even whether, they will be completed. Only the France-Senegal comparison and the two implicit core comparisons (involving Austria and Japan, by virtue of their participation in the work in two regions) are proceeding satisfactorily.

4. There are several reasons the core comparisons have proved so difficult. One important factor is the shortage of financial resources, which restricted the travel of country representatives to meet their counterparts in the partner countries. Another important reason is that the core comparisons constitute a

substantial additional burden to the countries participating in them. This arises because of the limited comparability between countries belonging to different regions. At the same time participation in the core comparison brings little direct benefit to the core countries themselves, since however interesting they may be in the overall comparisons they may not be particularly interested in the results of the specific comparison with their partner country. The entire system of the regionalized world comparison was based on the assumption that, for the sake of the reliability of the world comparison, there would be a willingness on the part of a number of countries to accept the burden of the core comparison work. In practice, however, the extent of co-operation has not been as great as had been anticipated.

5. In spite of the many drop-outs, it appears that the ongoing core comparisons will provide the necessary minimum links among the regions. Thus, the problem is not that we shall not be able to build up the world comparison at all, but that the links will be weak. They will be vulnerable, to a great degree, to incidental distortion factors and their quality and reliability will therefore be subject to question. We do not have the data needed to determine the relative size of the error caused by the fact that quantity indices compiled on the basis of a given pair of countries may differ substantially from those compiled using data from all countries in the two regions; however, based on earlier experiences of the ICP, we might estimate this error to be 15-20 per cent or even more. The error would be substantially reduced by having more than the minimum number of core comparisons.

B. Country experiences

6. Following the request made by the Commission's Working Group on International Statistical Programmes and Co-ordination at its twelfth session in October 1987, the Statistical Office of the United Nations Secretariat sent a questionnaire to the 65 countries participating in phase V of the ICP. 1/ Countries were asked to provide their views on the ICP methodology, on whether their contacts with the ICP organizers were satisfactory and on the confidentiality of the ICP basic data, the benefits from the ICP and the financial conditions of the ICP. After all the replies to this questionnaire have been received, a fuller analysis of the responses will be prepared; however, some general observations can now be made on the basis of returns received from almost half of the participating countries.

7. Only half of the responding countries considered that they had been sufficiently well-informed about the methodology used in the ICP. Several countries expressed a desire that a manual or handbook containing detailed instructions be prepared. Many countries had reservations about specific applications of the methodology, among them, the manner of calculating rents, the "fixity" requirement, the way in which adjustments for quality were made, the calculation of parities for non-traded goods and services and for government salaries, and the apparent uncertainty about whether there is a uniform definition of "characteristicity". Several countries said they had been unable to prepare the ICP data as fully as they would have had additional resources been available to them. Although no country was able to suggest where more resources might be found, two thirds of the responding countries said they would need at least some assistance in order to ensure their participation in phase VI.

8. The majority of countries responding considered that they had been afforded sufficient contacts with the ICP organizers to enable them to identify the work required for participation in the ICP and that they had been provided with enough information at the basic data collection stage. One third stated they would have liked more opportunity for general consultation; over one half said they had not been sufficiently well-informed at the data-processing stage. A number of countries answered the question about contact with the organizers of the ICP with reference to the regional co-ordinators of the comparison in which they were involved rather than in terms of their relationship to the Statistical Office of the United Nations Secretariat. Regardless of the terms of reference, however, all countries responding considered its basic data had been treated with utmost confidentiality. Indeed, a few countries were of the view that standards for the release of ICP data might have been too stringent.

9. From the replies received to date it appears that countries are still evaluating the benefits of participation in the ICP. We asked how the ICP results are being used in each country, both within and outside of statistical offices. Less than 40 per cent of the respondents said their own offices have been able to make use of the ICP results, about a third stated that their countries' economic and social policy makers were using the data and a few mentioned that universities and businesses were. Most developing countries, however, said they had not yet begun to use the results in their own offices. We also asked whether participation in the ICP had contributed to the development of national statistics. Even at this stage, three fourths of the responding countries said they believed they had made significant improvements to their price statistics and national accounting as a result of their participation in the ICP.

II. METHODOLOGICAL DEVELOPMENTS

10. Since the twenty-fourth session of the Statistical Commission, two important developments took place in connection with the methodology of the ICP. In June 1987, representatives of the three organizations most deeply involved in the ICP - the United Nations, OECD and the European Community - met in Geneva to seek agreement on the fixity issue. One year later, in June 1988, the same organizations convened a seminar in Luxembourg to review the methodological experiences of the last two phases of the ICP, with the intention of revising some important elements of the methodology, if necessary.

11. The meeting on fixity was preceded by a consultation with national statistical offices and outstanding experts on the ICP. About 40 replies were received to a questionnaire circulated by the Statistical Office, and the views were largely divided. The main issue on which opinions were sought is the following: should the results (e.g., per capita real product indices between two countries) obtained in a regional comparison remain unchanged in a comparison encompassing a wider number of countries (e.g., in the world comparison) even if this "fixity" requirement can be attained only by sacrificing other useful properties of the ICP method? The Geneva meeting recognized that for regions where ICP results are also used for administrative purposes (as in the European Community) fixity is a justifiable requirement; however, one should avoid paying too high a price for fixity in terms of the other useful properties of the ICP method.

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12. The agreement reached by the respective international organizations was a compromise. Fixity is not considered a general methodological principle of ICP, but it was agreed that if a particular region claims fixity, this should be respected by all comparisons embracing a larger number of countries. In such cases, for example in the world comparison, it is the additivity requirement that will be sacrificed. That is, for a number of countries in the world comparison real product data for subgroups will not add up to the total of real product. It was considered that any other solution to attain fixity would constitute a higher cost in terms of the other requirements of the ICP. It was also decided that even where it is applied, the fixity constraint should be lifted about three years after the first publication (when differing results no longer disturb administrative uses); thus, even after a number of years, for example, for the France/Italy comparison, indices different from those published in the EEC regional comparison could be made available (e.g., indices based on world average prices).

13. The Luxembourg seminar on ICP methodology was attended by 30 participants, among them the most experienced ICP experts from national statistical offices, staff members of international organizations and scholars working on theoretical questions of international comparisons. The seminar reviewed in general the methodological experiences of phases IV and V of the ICP and concentrated on those issues in respect of which the most controversy arose during the past few years. In particular, the following main issues were discussed:

(a) Calculation of purchasing power parities at the lowest (basic heading) level of aggregation, with particular attention to the quality differences;

(b) Methods of aggregation of the basic heading indices;

(c) Extrapolation of parities over time and discrepancies between the extrapolated results of the old bench-mark comparisons and the new bench-mark data.

14. With relation to many of the methodological issues discussed, conclusions were reached which can be implemented in the next phases of the ICP. As a result, incidental differences among the methods applied in the various regional comparisons will diminish; however, some differences will still remain, since conditions are different in different regions with regard to resources, comparability of the basic data and so on.

15. The most controversial issue discussed at the seminar was the method of aggregation to be used. Should the ICP continue with the Geary-Khamis formula 2/ (applied since the beginning of the world comparison), the properties of which turned out to be, after regionalization, less advantageous than originally assumed; or should one shift to one of the other formulae proposed in some of the documents prepared for the seminar? Views were divided on this issue, and it was decided to carry out some sensitivity calculations for the different methods and to continue the consultation with the experts present at the seminar by correspondence. It was proposed that, if resources permit, another consultation should be convened in the first half of 1989.

16. The seminar recognized that there is a gap between the methodology as elaborated by the respective international organizations and as actually applied in the comparisons. Many of the national experts, especially those in developing countries, would need more detailed instruction on how to carry out their basic data collection and matching work. In this connection, the preparation of a handbook on ICP work was urged.

III. CONTINUATION OF THE PROGRAMME: PHASE VI

17. Interest in participating in the ICP continues to grow. At the request of the Commission's Working Group on International Statistical Programmes and Co-ordination at its twelfth session in October 1987, the Statistical Office requested, at the beginning of 1988, that all countries not participating in phase V explain the reason(s) for their absence and indicate their considerations in respect of possible future participation. ^{1/} Answers were received from 25 countries. Four countries (Czechoslovakia, Iraq, Switzerland and the USSR) intend to participate in the next phase without any conditions; four countries would like to participate provided they get some support; another 10 countries will consider participation after they get more information. Only four countries responded definitely that they do not want to participate in the next phase, and for three countries the intention is not clear from the replies. No country that did participate in phase V expressed the intention to discontinue the ICP work, though some of them expressed some uncertainties and/or noted that, in connection with the next participation, greater support would be requested.

18. Phase VI, like the two preceding phases, will be based on regional comparisons. For some of the regional comparisons the conditions are favourable; for others they are less favourable, or at least there are some uncertainties. The prospects for the EEC and OECD comparisons are good, and presumably there would not be major difficulties with the region where Eastern European countries participate (if the World Bank continues to provide its limited assistance as in the preceding phases) and with the African and Caribbean comparisons (provided EUROSTAT continues its support to these regional comparisons). The prospects are less clear for the ESCAP comparison where, as in phase V, there may be one or more sponsors, although no commitment has been made so far. The absence of support did not permit a regional comparison to be carried out for the Latin American region even in phase V. The Inter-American Development Bank indicated its willingness to consider possible support for the phase VI Latin American regional comparison; however, no commitment has been made so far. As for the Western Asian region, even if there were to be sufficient interest to participate in the programme, it is not clear what resources could be offered within the region.

19. While regional comparisons, at least some of them, seem to be secured for the 1990 round of the ICP, the continuation with the world comparison as such remains an unresolved problem. With the experiences of phase V, and as conditions stand now, even the question of whether to continue at all with the world comparison must be addressed. There are two basic conditions that have to be met before the world comparison can be launched:

(a) Ways must be found to allow a sufficient number of core comparisons;

(b) Resources must be identified and committed to ensure that the central co-ordination of the methodology and operations can be achieved and that the global comparisons are completed and the results disseminated in a responsible manner.

20. As to the first condition, resources for core comparisons imply not only funds to finance the travel of experts of developing countries to multilateral meetings and to their partner countries but also sufficient willingness on the part of developed countries to participate in core comparisons. In phase V, severe difficulties were encountered in both respects. Some links among regions can be obtained by participation of some countries in two regional comparisons (like that of Austria and Japan in phase V); however, reliable links among the regions would require a substantially higher number of core comparisons.

21. As to the second condition, the United Nations, owing to its prevailing financial crisis, has insufficient resources from its own budget to permit the travel of its experts to regional or core country meetings. The severe financial constraints, already strongly experienced in phase V, may be aggravated by problems caused by the retirement of senior staff with special expertise in ICP work.

22. If resources do not permit a genuine world comparison in 1990, the alternative would be to proceed with regional comparisons (for regions where resources will be available), and to link the regional results whenever appropriate interregional comparisons can be established. In such a case the emphasis of the ICP work would stay on the regional comparisons; comparisons between countries belonging to different regions would be obtained, if at all, only as supplementary results. To establish links between regions would be the task of the regional organizations involved and not of a central unit. Even in this scenario there would be a need for some central co-ordination to ensure the comparability of the nomenclatures used in the various regions, to maintain and develop methodology and, presumably, to prepare a global report on the comparisons; however, this would require much less resources than in phase V.

23. Independent of what happens with the world comparison, there will be one important change in phase VI, at least for the EEC and OECD comparisons: instead of the traditional five-year bench-mark basis as was the case in the previous phases, where all work concentrated on the data for years ending with 0 and 5, the phase VI comparison in these regions will be carried out on a continuous (rolling) basis. Each year, about one fifth of the expenditure will be compared, and these results will be brought to a common base year by means of national indices (referred to in ICP literature as by means of extrapolation). With this change, more effective use can be made of the ICP staff in national statistical offices. Whether or not similar developments can also take place in developing regions depends on the resources available; with the continuous arrangements, more meetings will presumably be organized, and this would require more travel expenditure than is the case with the present bench-mark arrangements.

IV. POINTS FOR DISCUSSION

24. The Commission may wish to comment on any part of the report and on any other questions connected with the development of the international comparisons. Comments are invited, in particular, on the following:

- (a) Evaluation of the phase V comparison (sect. I);
- (b) Methodological developments (sect. II);
- (c) Phase VI issues:
 - (i) Related to regional comparisons (paras. 17-18);
 - (ii) Related to the world comparison (paras. 19-23);
- (d) Any other matters connected with international comparisons.

25. In addition, the Commission's views are sought on the following issues:

- (a) How can the links between regions (core comparisons) be improved, taking into account the experiences of phase V?
- (b) How can the co-ordination of the programme be strengthened, taking into account the financial limitations of the United Nations Secretariat?
- (c) Given the issues outlined in Section III of the report, should phase VI of the ICP be launched as a world comparison, or should Phase VI be restricted to a number of regional comparisons with or without links among them?

Notes

1/ Report of the Working Group on International Statistical Programmes and Co-ordination on its twelfth session (E/CN.3/1989/20), para. 25.

2/ The Geary-Khamis formula is essentially a quantity index where (weighted) international average prices are used as weights for the aggregation.
