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BASES FOR A NATIONAL PROGRAMME IN INDUSTRIAL STATISTICS

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## Introduction

1. The importance of industrial statistics and the part they play in industrial programming and economic planning in general are too well-known for further explanation. In other papers submitted to the Seminar, and no doubt in the discussions that will be based on them, stress has been laid on the need for basic industrial censuses and inquiries, the usefulness of annual and more frequent inquiries and the importance of preparing derived data, such as production indexes. Furthermore, it has been recognized that, in some of the Latin American countries, industrial statistics have serious shortcomings and are therefore unable to meet the demands made upon them.
2. The stage of development reached by industrial statistics in a particular country is not unnaturally a reflection of the general state of statistics there, and their failings and limitations are consequently repeated throughout the whole body of statistical information, because of the low priority assigned to this branch of activity. This does not detract, however, from the need to draw attention, as will undoubtedly be done at the Seminar, to some measures that the countries might take to improve their industrial statistics.
3. This paper, which summarizes some of the proposals presented for the consideration of the participants at the Seminar in relation to the different topics of discussion, contains a synopsis of the measures that could be used as a basis for a national programme in industrial statistics. However, it should be made clear, first, that the paper, while dealing with several important issues, does not cover all the questions that have been discussed in the other Seminar papers, and, secondly, that it is not intended to replace the account of proceedings and conclusions, which will appear in the final report of the Seminar.
4. Because of the nature of this summary, there may be some repetition of ideas, experiences or suggestions already discussed in other documents, but, for the sake of systematic presentation and discussion and in order to underline certain aspects, it has been thought preferable to raise these points again.

/Present situation

Present situation

5. In recent years (1959-65) twelve countries have taken industrial censuses; of these six have issued provisional data and only two have published the final results.
6. The information published varies considerably from one country to another, but is usually no more than a fraction of the whole body of data requested in the censuses.
7. As regards current industrial statistics, seventeen countries carry out one or more annual or more frequent inquiries. These inquiries can be divided according to frequency into the following groups: annual in thirteen countries, half-yearly in one, quarterly in six and monthly in five.
8. The coverage of the annual inquiries varies from country to country; two cover all establishments, three compile information on establishments engaging five persons or more, one on those engaging seven or more and two on those with at least ten persons, while one country limits its inquiries to establishments with twenty or more persons and another investigates certain establishments in certain industrial sectors only.
9. If the number of countries publishing statistical data is compared with the number of those requesting data on specific topics in the various current inquiries the following result is obtained in percentage terms:

	<u>Percentage</u>
Production (certain items of data)	100
Employment	93
Wages and salaries	87
Raw materials, fuels and other materials	57
Man-days or man-hours worked	50
Fixed assets	20
Stocks	8

10. Apart from current statistical series, twelve countries also prepare industrial production indexes with a variable coverage, in three of them on a monthly basis, in two quarterly and in the others yearly. In most cases, however, the lapse of time between the reference period of the index and the date of publication is too long.

11. As pointed out in the other papers submitted to the Seminar, the present state of industrial statistics leaves much to be desired. Too much time is allowed to pass between the taking of a census and the publication of its results; the disparity between the quantity of data that can actually be used and the information requested in the basic censuses or inquiries and the current inquiries increases the cost of the work and delays publication of the results; while lack of knowledge of the statistical universe and differences in coverage pose serious problems of comparability. Moreover, it is not always possible to determine whether the variations that can be seen in the data are due to changes in activity or in coverage.

Objectives of a programme of industrial statistics

12. Before a programme of action is drawn up in the field of industrial statistics, it would seem advisable to make a brief recapitulation of the purposes of such a programme. Perhaps the clearest way of doing so would be to name the uses to which industrial statistics can be put.<sup>1/</sup>

13. In the developing countries, comprehensive data on the structure of industry are used, first and foremost, to single out the industrial sectors and types of establishment that should act as a focus for general development efforts and to which promotional measures should be applied. A knowledge of the distribution of the labour force engaged or value added by size of establishment and by activity is useful for determining the branches of industries that are of most value to the economy, and the institutional structure needed for industrial development. The capacity of the power equipment installed serves to indicate the degree of mechanization achieved, and thus pinpoints the areas where efforts to increase capital equipment should be concentrated.

14. These data on structure are used, together with figures on production of industrial goods and inputs of raw and other materials, and certain indicators of relative rates of return, to determine the industrial activities

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<sup>1/</sup> Statistical series for the use of less-developed countries in programmes of economic and social development, Statistical Papers, Series M, N° 31 (United Nations publication, Sales N°: 59.XVII.10).

that should be expanded, and to frame the foreign trade and tariff policies that would help them to develop, and thereby do away with the bottlenecks caused by limitations of supply or demand.

15. Although this does not pretend to be an exhaustive list, a few of the other uses of data on industrial structure can be mentioned. First, they serve to indicate which industries prospered or declined during the execution of the development plans and what effect their evolution had on other sectors, as, for example, on the structure of foreign trade; secondly, they are helpful for ascertaining changes in productivity, in the distribution of activities by size and type of establishment, in the concentration of such activities, etc.

16. Current industrial statistics, whether annual, quarterly or monthly, are needed to keep abreast of growth trends and short-term changes. Indexes of industrial production are the most reliable yardsticks for judging the results of efforts to increase production and determining the sectors of activity in which the incentives or targets of the development plan should be modified. The annual data on value added are used to calculate the contribution of industry to the gross domestic product, and, in combination with data on man-hours worked and wages and salaries paid, serve as a basis for estimating changes in productivity and profitability.

17. Annual data on net increases in fixed assets can be used to compare the actual situation with the targets set for the expansion of capital equipment in industrial establishments. As regards the production of capital goods and construction of buildings, highways, etc. the data can be used, in conjunction with import and export figures, to estimate gross capital formation in the different economic sectors.

#### An integrated system of industrial statistics

18. The task of meeting these requirements is, of course, so vast that it should be tackled on a nation-wide basis. The first step is to establish precise targets for a minimum programme designed to obtain data on industrial structure and activities; the programme itself should be the product of a joint assessment of requirements by all the Government

/offices concerned

offices concerned with production and the use of such data, which, in its turn, means that proper co-ordination machinery must be set up or strengthened. If this machinery is to work well, it will have to be gradually extended to the private sector through extensive contact with respondents. In view of the shortage of statistical experts and other resources, it may not, of course, be either necessary or practicable at the early stages to draw up a programme in which all the agencies concerned would participate. Instead, it might be best for the statistical service to begin with a modest programme to cover the most essential data, which will be discussed during the Seminar.

19. Once the programme has taken shape, the next step is to see what resources are available for carrying it out. It is precisely at this point that the importance of creating an integrated system of industrial statistics, on the lines laid down in other Seminar papers, can be best appreciated.

20. Although, in the Latin American countries, it is usually the national departments of statistics that are required, by law at least, to undertake all the work connected with the collection and publication of statistical data, in practice they lack the necessary resources to do all that is expected of them and have to tailor their work programme to the budget possibilities. When establishing an order of priority for the work, it may even happen that they are misled by ignorance of the real requirements to waste the meagre funds at their disposal on traditional statistical programmes of doubtful practical value.

21. An integrated system of industrial statistics, conceived as a body of basic and frequent inquiries in which all the public sector offices that produce and analyse industrial statistics would take part, and in which the national statistical office, in the triple role of executing agency, permanent secretariat and co-ordinating office would be the axis of the system, is undoubtedly the most satisfactory method of tackling the work of framing an action programme, assessing the resources available and determining the tasks or responsibilities incumbent on each member of the system as part of the over-all work programme.

Co-ordination of statistical activities

22. In the proposed scheme, the co-ordination of statistical activities will clearly make for the efficient use of the resources available (in terms of manpower, equipment, material and funds) and the adoption of uniform methods and procedures, facilitate manpower training and do away with duplication of effort while lightening the work of the respondents.

23. The keystone of the whole system is the co-ordination of all the government offices that are directly concerned with the preparation or use of industrial statistics.

24. In analysing the factors that have affected the development of statistics in the Latin American countries, the IV Inter-American Statistical Conference endorsed the views expressed in the document prepared by the IASI secretariat on that subject, in which a detailed account is given of (a) factors affecting the structure and operation of the national statistical services; (b) factors affecting the production of national statistics; (c) factors affecting the participation of national services in international statistical activities; and (d) factors affecting international statistical co-ordination and reflecting on the activities of the national statistical services. On the same occasion, during the discussion of the whole problem and of the measures proposed for its solution, stress was laid on the importance of co-ordination, both in each country and among the international statistical organizations with respect to their work in the different countries.

25. In pursuit of the same train of ideas which have been discussed at one meeting after another for the last five or six years at least, a new and practical step was taken by the Inter-American Committee on the Alliance for Progress (ICAP) when it included the improvement of statistics among the items for discussions at the fourth annual meeting of the Inter-American Economic and Social Council (IA-ECOSOC), held early in 1966. In the paper prepared for the meeting,<sup>2/</sup> the factors that influence statistical development

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2/ Statistics in the Latin American countries: factors affecting their development and measures suggested for their improvement, IA-ECOSOC/866, 2 March 1966.



are noted, the bases for future action laid down, and a description given of short and long-term programmes, which are likely to mark an important step towards co-ordination among the international and inter-American agencies in their efforts to improve statistics in the Latin American countries. In fact, the first point on the short-term programme recommends ICAP to promote the creation of a multi-agency programme with the co-operation of the agencies that take part in the annual review of country studies, with a view to bringing about, as rapidly as possible, the production of uniform, better quality and more up-to-date statistical information, through the formulation of an over-all body of economic, social and other essential statistical series for the analysis of development programmes, and what is the most novel aspect of this programme, to combine the efforts and resources of the agencies in question so as to provide the member states with the technical and other assistance they may need for the production of the statistical series mentioned above.

Points to be considered in drawing up a programme of future activities

26. Although, as explained above, the situation of industrial statistics varies from country to country, and their problems have to be considered in relation to the problems of statistics as a whole some points should be brought out which, adapted to the prevailing conditions in each country, could be used as a basis for a national programme of action:

- (a) Recognition of the importance of and need for industrial statistics and for a national policy in this field;
- (b) Examination of the situation and requirements in respect of industrial statistics in the light of the personnel and financial resources available;
- (c) The creation or improvement of an integrated system of industrial statistics:
  - (i) Legal basis;
  - (ii) Structure;
  - (iii) Formulation of work programmes:
    - 1. Short-term
    - 2. Medium and long-term;

/(iv) Availabilities

- (iv) Availabilities of personnel, materials and equipment;
- (v) Definition of responsibilities and conclusion of agreements between the national statistical service and the other members of the system;
- (d) Research and studies on industrial statistic programmes in relation to basic censuses or inquiries, current inquiries and special inquiries. Use of sampling;
- (e) Training courses and information campaigns.

27. The task of achieving the objectives set forth in point (a) should be initiated by the national statistical services acting in co-operation with the national institutions that prepare or make use of industrial statistics; the task outlined in point (b), on the other hand, should be the product of joint action by the statistical service, planning office, Ministry of Industry, Central Bank, industrial development institution and associations of industrialists.

28. When enough information has been gathered on the situation and requirements of industrial statistics, an explanation can be made of the need for and possibilities of setting up or improving an integrated system, whose structure and advantages have been described elsewhere in this paper and, more particularly, in other Seminar documents.

29. It should be realized, however, that the successful operation of the system will depend largely on the statistical office. It is impossible to have a sound system of integrated statistics and a weak statistical office, since the activities of the members of the system can only assist and complement the work of the office but never replace it.

30. This means that the countries must make an even greater effort in future to provide the statistical services with sufficient funds to enable them to carry out their tasks.

/Conclusions

### Conclusions

31. It is neither necessary nor feasible to allocate the respective roles that the statistical office and other participants in the integrated industrial statistics system would be called upon to play in a programme of future activities in this field. No generalizations can be made on the subject, since their roles will depend on the conditions prevailing in each country. It is, however, advisable to review a few points that are essential for the success of any programme intended to improve industrial statistics. They include the following:

- (a) It is vitally important to have trained and experienced staff for the work of planning the industrial inquiries, carrying out the field work and processing the resulting data;
- (b) The maintenance of a comprehensive and up-to-date directory of the larger industrial establishments, engaging, say, five or more persons, is a continuous activity and forms the basis of any inquiry;
- (c) When a programme of inquiries is started, its objectives should be fairly modest, but as both the respondents and the office in charge of the programme become more experienced, the coverage of the inquiries and the items of data requested can be gradually increased;
- (d) The methods and procedures to be used for the industrial inquiries should be tested on a small scale beforehand in order to improve them as much as possible and ensure that they will be suitable for the kind of records kept by the respondents.

32. Lastly, the participants in the Seminar may consider it necessary to set up a National Committee on Industrial Statistics in those countries that do not yet have one, as the first step towards the improvement of this type of statistics. The Committee, whose officers and secretariat would be provided by the statistical office, should consist of representatives from the institutions concerned and would be responsible for carrying out the background studies needed for the operation of an integrated system of industrial statistics.

