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STATISTICS OF INDIVIDUAL INDUSTRIES
(Memorandum prepared by the Secretary-General)

1. The potential scope of action by the Statistical Commission in respect of industrial statistics is defined by the International Standard Industrial Classification of all Economic Activities, approved by the Commission in May 1948 and subsequently published by the Secretariat, under the title above, in Statistical Papers, Series M, No. 4.
2. The classification system recommended in this study is applicable to all sectors of industry and all phases of the industrial process - production, distribution and consumption. So far as particular phases are concerned, however, the attention of the Commission to date has been focussed primarily on various aspects of production.
3. Index numbers of industrial production were the subject of recommendations by the Commission at its Fifth Session, and a technical study on this subject (Studies in Methods, Series F, No.1) was subsequently prepared by the Statistical Office. The Commission's recommendations at later sessions led to special reports by the Statistical Office on International Standards in Basic Industrial Statistics (Statistical Papers, Series M, No. 17), and Industrial Censuses and Related Enquiries (Statistical Papers, Series F, No. 4).
4. Another phase of industry was covered by the Commission, at least incidentally, in its recommendations concerning statistics on international trade. These recommendations were subsequently embodied in Secretariat papers on Standard International Trade Classification (Statistical Papers, Series M, No. 10).

5. On a number of occasions the Commission has referred to stocks and consumption, two phases of industry on which current statistics are especially inadequate. Statistics on these subjects may be regarded either as general series, relating to industry as a whole, or subordinate series relating to particular branches of industry. It is therefore possible for the Commission, in considering the question of statistical standards in these fields, to handle stocks and consumption as independent subjects, like production or trade statistics, or in relation to particular branches of industry, such as iron and steel.

6. The second approach has certain advantages that the Commission may wish to consider. The data that are required on stock changes and consumption cover the whole range of industry; they thus vary widely and do not lend themselves readily to the over-all approach followed by the Commission in connexion with other phases of industry. These data are useful in any form, but they attain their greatest usefulness when integrated with data on production and international trade in related commodities. The process of integration can be applied to any commodity or sector of industry to produce a comprehensive balance sheet for the commodity or sector of industry with which it deals. It thus provides the statistical matrix needed in studying interrelationships of production, processing, trade and utilization.

7. Such a sector by sector approach to industry has been employed by the Statistical Office in connexion with certain studies of the fuel and power industries, the results of which appear in the Monthly Bulletin of Statistics (February 1952, November 1953, and March 1954), World Energy Supplies in Selected Years, 1929-1951 (Statistical Papers, Series J, No. 1), and (annually) in the Statistical Yearbook. In making these studies the Statistical Office found it possible to prepare, for each country, a number of annual balance sheets similar to the one for Australia shown in Annex 1.^{1/}

^{1/} The tables constructed for other countries were in somewhat less final form, however.

8. It will be noted that columns in this sheet represent steps or stages in the production and distribution sequence, and correspond more or less with ISIC categories of economic activity. Columns 3-5, 8 and 9, 12, and 14-18 call for data from sources, while the remaining columns must usually be calculated.

Lines in the table are, in effect, simple accounts for particular sources of energy. Most of the lines deal with commodities as reported in national statistics, and follow the SITC system. The remaining lines represent standard equivalents or aggregates of these commodities, calculated by use of the conversion factors shown in column 2.

9. A similar procedure of investigation was employed by the Statistical Office in a study of the Iron and Steel sector of industry, the results of which were published in the May 1953 issue of the Monthly Bulletin of Statistics. The balance sheets used in connexion with this study were similar to the U.K. sheet shown in Annex 2, although not filled out as completely. The similarity of this sheet to the fuel and power sheet will be noted: columns represent activities associated with the production and distribution of iron and steel, while lines represent accounts for particular commodities. Columns 5-7 and 12-22 in this case are compiled from sources, the remainder calculated. For purposes of comparison and aggregation, certain lines have been provided for calculation of crude steel or crude metal equivalents of intermediate and end products of tin industry.

10. The Statistical Office has thus far confined its investigations of particular sectors of industry to fuel and power and iron and steel. Other agencies and organizations, however, have successfully applied similar procedures to other sectors of industry. FAO, for example, has prepared food balance sheets which are similar in concept and form to the balance sheets described above, even though they deal with quite different commodities.

11. The Statistical Office has not attempted any systematic survey of the extent to which similar balance sheets have been prepared for other sectors of industry. The existence of consumption estimates for cotton, wool and other textile fibres, tobacco, lumber, paper, tin, and a wide variety of other products indicates that beginnings at least have been made on such presentations for most sectors of industry. Further examination of the work already done on particular sectors of industry should reveal the possibilities of extending this type of investigation, sector by sector, until all industry is covered.

12. The desirability of obtaining such coverage for all industry is indicated by the experience of the Statistical Office with its studies of fuel and power and iron and steel, which show that balance sheets of the sort appended, besides providing essential data on consumption, are useful.

- (a) in showing relationships between complementary or competitive commodities, in each phase of production and distribution;
- (b) in showing relationships between production, trade, stocks and utilization of particular commodities or groups of commodities;
- (c) in verifying or correcting published data (incidentally to obtaining the necessary balances of materials);
- (d) in locating gaps in the data available, and in some cases filling these gaps by calculations based on technical relationships;
- (e) in assuring comparability of data, from year to year and from country to country.

13. The Statistical Office has also found that this approach to studies of particular industries is of considerable value in determining the proper classification of items covered by the SITC and ISIC, and in fitting the two systems together in a single, compatible scheme for given industries.

14. The Commission will wish to consider whether this approach is suitable for study with a view to subsequent development as a standard method of presentation of basic industrial statistics for individual industries.

