

Indian Census Economic Classification And Standard Industrial Classification

By Statistician

IN 1948 the Economic and Social Council of the United Nations recommended to the Member Governments for ratification the International Standard Industrial Classification (ISIC) of All Economic Activities developed by the Statistical Commission, United Nations, and published in Statistical Papers-Series M, No 4. The main purpose of developing the ISIC was to secure international comparability of data collected by Member Governments. As the name implies, ISIC is a classification by industries, not by occupations or commodities. No single principle such as technique of work done, the nature of raw materials consumed or products manufactured was used. The classification was developed on the basis of the structure of industries obtaining in various countries as revealed by the smallest units or economic entities engaged in the production of goods and/or services.

Of all the concepts such as 'enterprise', 'establishment', 'technical unit' and 'operational unit' the 'establishment' has been found to be the most suitable elementary unit for classifying a wide variety of statistics and this unit is, in the majority of cases, clearly assignable to one particular branch of economic activity. The 'establishment', which may be a factory, workshop, mine, farm, store, commercial office, or power station, is suitable from the operational standpoint as well, since the essential statistics such as fixed and working capital investment; labour employed; raw materials and fuels consumed; value of products, by-products and subsidiary products manufactured and sold; value of stocks of raw materials, fuels and finished products and by-products; number of days worked; etc are easily available for an 'establishment'. This is the only elementary unit which satisfies the various criteria of industrial classification.

'Enterprise' which may be a corporation, a cooperative society, a firm, a trust, or an individual is more suitable for classifying certain types of data such as financial statistics, which cannot be assigned to any one establishment except in

cases where there is one to one identity between an establishment and an enterprise. An 'enterprise' may own, control and manage a number of establishments (factories, mines, stores, etc) which may be engaged in different branches of economic activity and classification of an enterprise under one industry group would not reveal the relative importance of various branches of economic activity in the economy. Similarly 'technical unit' and 'operational unit' are not satisfactory elementary units for classifying economic activities, 'Technical unit' has been defined as that unit the operations of which contribute directly to a particular product or service or group of products and services. By definition it excludes ancillary services. 'Technical unit' is not a suitable unit for classifying the general or administrative staff, the cost of the materials or fuels used, or other overhead expenses.

Unit of Classification

'Operational unit' is based on the nature of work done and not on particular products or services produced as in the case of 'technical unit'. Under this type of classification any work which is ancillary to the main activity of the establishment is treated as a separate operational unit. For example, the power plant of a factory would be classified under 'electric light and power' instead of under the industry of the establishment. It will thus be seen that neither technical nor operational concepts are suitable for the purpose of industrial classification. The only concept which is suitable from the conceptual as well as operational standpoint is an 'establishment' as this is the only irreducible unit which can be clearly assigned to any of the economic activities and for which all kinds of statistical data (with the exception of financial statistics) are easily available.

Under ISIC all the economic activities have been divided into 9 main Divisions. Each Division has been assigned one digit (permanent number) from 0—9 except Manufacturing which has been assigned two digits (2 and 3). Each Di-

vision has been divided into 10 or less Major Groups and these are denoted by 2-digit numbers. Each Major Group has been subdivided into 10 or less Groups and these are denoted by 3-digit numbers. These Groups can be further subdivided into 10 or less sub-Groups which can be denoted by small letters or Roman numerals. Such further subdivision depends on the structure of industry, the details and breakdowns required and other related factors. In this three digit classification the first digit shows the Division, the first two indicate the Major Group and the complete three digit number identifies the Group. The Group is the ultimate category with reference to which the economic activity of an establishment is determined.

Use of ISIC

ISIC has been so developed and arranged that it can be put to wide variety of uses. These were briefly stated by the Statistical Commission of the U N in the following words:

"The classification set out in this document can be used as whole in connection with censuses of population or other enquiries covering all branches of economic activity, while the relevant sections may be used in more limited surveys obtaining their data from either organisations or individuals, for example, censuses of manufacturing, mining, agriculture, distribution, etc as well as surveys of employment, unemployment, industrial accidents and similar subjects". (International Standard Industrial Classification of All Economic Activities, Statistical Commission, U N, Statistical Papers Series M, No 4, p 3.)

The Population Commission of the U N which examined ISIC with a view to using it in population censuses endorsed the recommendations of the Statistical Commission. The Population Commission recommended that the economically active population be classified by industries as given in ISIC and that the 'persons seeking work who have not previously been employed' should be covered by subdividing Division

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9 of ISIC into the following two categories:

- (a) Gainfully employed persons who fail to provide sufficient information about their industrial application to enable them to be classified.
- (b) Persons who are seeking work but have not previously been employed.

The Population Commission made many other important recommendations and suggestions for classifying earning dependents, dependents, helpers, etc. The most important recommendation which the Population Commission made was with regard to the determination of the industry of the economically active population including those previously employed, but unemployed on the date of enquiry. The Commission recommended that economically active persons should be grouped by the types of activities of establishments where they work, and not, as in an occupational classification, by the types of work they do. In other words the industry to which the individual is assigned has to be determined on the basis of the economic activity carried on in the establishment in which he works. This is an important recommendation and its importance will be examined below.

Indian CENSUS ECONOMIC Clarification

The ISIC developed by the Statistical Commission and recommended by the Economic and Social Council, and Population Commission of the U N was examined in India by a Working Party consisting of representatives of the Central Statistical Organisation, and National Sample Survey, Cabinet Secretarial Indian Statistical Institute, Calcutta; Ministries of Finance and Labour and Employment, Government of India, and the Banning Commission. The following two classifications were evolved.

- (1) Indian Census Economic Classification (ICEC), and
- (2) Standard Industrial Classification (SIC).

The Indian Census Economic Classification is currently being used for classifying the economically active population enumerated in socio-economic and employment surveys and the unemployment statistics compiled by the Director of Employment Exchanges, Ministry of Labour and Employment, Government of India. It is proposed

to use this classification in the forthcoming 1981 Census of Population.

The Standard Industrial Classification which conforms to the ISIC is being used for classifying establishments registered and licensed under the Factories Act, 1948 and employment in these licensed establishments. It is useful to examine how far the Indian Classifications conform to the international standards and in what respects they differ. The ICEC corresponds to the ISIC only in the main Divisions into which all economic activities have been divided. As provided in ISIC, there are nine comparable Divisions in ICEC. The Major Groups and Groups have been developed on principles other than the principles followed in ISIC and hence there is no one to one identity between ISIC and ICEC classifications as far as these breakdowns are concerned.

The ICEC has been evolved to determine the industry of the economically active population and hence by definition it excludes persons with employment status N L F (not in labour force). The conceptual differences between ISIC and ICEC can be explained in the following words:

"Under the ISIC scheme the unit of classification is the organised 'Establishment'. The criterion set for classifying the establishment is the commodities or services produced as a result of the work performed in the establishment. Under the ICEC scheme the unit of classification is the individual. All persons irrespective of the nature of their economic and industrial status are classified by the scheme with reference to the commodity or services produced by them individually. Under the present classification each gainfully occupied person is classified by the sector of economic activity where the person is engaged, the sector being composed of both organised 'establishment' and individual as they exist in real life. The sectors of economic activities are classified in this scheme according to goods and services produced. This mixed unit is considered to be the most suitable unit for the country where highly developed industries exist side by side with cottage industries run in some cases even by single individuals". (Classification of Industry and Occupa-

tion, Indian Statistical Institute, Calcutta, p 2.)

Classification of Individuals

According to the above principles and criteria developed for classifying the economically active population, an industry of a person is determined on the basis of the economic activity in which he is personally engaged and not on the basis of the industry of the establishment. The U N Statistical Commission as well as the Population Commission, while recommending the ISIC in its application to population censuses, clearly stated that the industry of the economically active person should be determined on the basis of the industry of the establishment, the industry of the establishment being determined on the basis of the principal products or services and their value. In other words according to the recommendations of the Statistical Commission, first the industry of the establishment has to be determined and the persons working in the establishment are to be classified under that industry in which the establishment falls.

For example, according to ISIC a person employed in an establishment which is engaged in both rice milling and vegetable oil extraction and processing would be classified under rice milling if the principal industry of the establishment is rice milling, even if he is wholly engaged in the manufacture of vegetable oils. If the principal industry is vegetable oil extraction, a person wholly engaged in rice milling would be classified under vegetable oil extraction and processing. The administrative, technical, and supervisory personnel (managers, accountants, auditors, engineers, certain skilled operators, etc) would also be classified according to the industry of the establishment. Under ICEC the industry of a person is determined on the basis of the economic activity in which he is personally engaged. Taking the above example, a person employed in an establishment engaged in rice milling and vegetable oils extraction, would be assigned to one or the other industry according to the product which he individually manufactures. If he is wholly or for a considerable part engaged in the manufacture of vegetable oils, his industry will be vegetable oils, irrespective of the industry of the

establishment which may be rice-milling or vegetable oil extraction and processing. Under ICEC the industry of an establishment has no relevance. However, the administrative, technical and supervisory personnel which cannot be assigned exclusively to any one of the economic activities because the services that they render are diffused and relate to all the economic activities carried on in the establishment will be classified in the same manner as provided under ISIC, i.e., on the basis of the industry of the establishment.

It will thus be seen that the industry of an economically active person under ICEC is determined on the basis of:

- (i) degree of predominance of the economic activity of the person judged by the value of respective goods and services produced;
- (ii) major proportion of his total earnings; or
- (iii) major proportion of his capital invested.

Any of the above criteria either singly or in combination with any other will be applied to determine the industry of an economically active person except in case of those persons (administrative, technical and supervisory) who cannot be assigned to any single economic activity. Because of these differences in basic approaches the data collected according to ISIC and ICEC Classifications will not be comparable.

Group Differences

The Major Groups and Groups in ICEC differ from ISIC as a sequel to the above basic differences. There are not only inter-Division differences, but Intra-Divisions and intra-Major Groups and Groups differences. Under ISIC establishments engaged in producing wood, bamboo, cane, reeds, thatching grass, etc have been classified under 'Major Group 02-Forestry and Logging', while under ICEC, they are shown under '00-Field produce and Plantation crops'. Production of ice has been shown under 'Major Group 21-Beverages' in ICEC while it has been listed under 'Major Group 399-Manufacturing industries not elsewhere classified' under ISIC. Examples can be multiplied to show that there are wide differences in classifying the same product, commodity

or service under the Major Groups and Groups in the same Division.

Intra-Division differences in classifications refer to the transfer of an economic activity from one Division to another Division. For example, under ISIC, cotton, jute and wool ginning and pressing activities have been classified under 'Division O-Agriculture, Forestry, Hunting and Fishing' while under ICEC, it has been listed under 'Division 2-Manufacturing' under 'Major Group 23-Textiles'. Since the nine Divisions which are the broad classificatory units under ISIC were adopted under ICEC, it follows by implication that the underlying principles developed for delineating these Divisions should also be accepted for ICEC. In these circumstances, it is not clear how cotton, jute and wool ginning and pressing activities which are classified under 'Division-O' have been shown under 'Division 2-Manufacturing'. In addition to these differences, many other changes have been introduced in ICEC by either combining two or more Major Groups and Groups or by splitting the Major Groups and Groups. It is not possible to mention all these changes within the limits of this discussion but a few illustrations can be given. Under ICEC, two Major Groups '30-Manufacture of Rubber Products' and '32-Manufacture of Products of Petroleum and Coal' have been combined to form one Major-Group '32-Rubber, Petroleum and Coal Products'. Similarly Major Group '21-Beverages' and a part of the Group '209-Manufacture of miscellaneous Food Preparations*' under ISIC have been combined to form one Major Group '21-Beverages'.

How far these changes in detailed classification of economic activities have been warranted by the existing conditions obtaining in India is not known. It has been claimed that the ICEC is based on 'the conditions prevailing in the country as regards economic activity' but unfortunately there is no independent evidence to support the claim that the ICEC reflects these conditions of economic activity and structure of industry. No comprehensive and detailed investigations have so far been undertaken which can throw light on the degree of integration that obtains in various branches of economic activity. In these circumstances, the claim that ICEC reflects the existing distinctions in econo-

mic activities is open to question. Moreover, the principles laid down for determining the Industry of an economically active person under ICEC are at variance with the recommendations of International organisations like the U N Statistical Commission and Population Commission. Because of these basic differences the data collected according to ICEC cannot be compared with similar data collected by other countries according to international standards.

Standard Industrial Classification

Standard Industrial Classification (SIC) which is being used for factory statistics by the Ministry of Labour and Employment conforms to the ISIC in all respects—Divisions, Major Groups and Groups—and there is one to one identity between SIC and ISIC except in one minor respect. Under SIC, cold storage establishments have been classified under Group '20-Manufacture of miscellaneous food preparations' instead of under Group '720-Storage and Warehousing'. This minor inaccuracy needs to be corrected in the interest of international comparability.

It would be interesting to know how far the co-existence of these two systems of classifications have affected official statistics in India. Employment statistics of establishments licensed under the Factories Act, 1948, are compiled according to SIC, while unemployment statistics of the Employment Market Information Scheme are compiled according to ICEC. Establishments registered and licensed under the Factories Act, 1948, are classified according to SIC while establishments of employers notifying vacancies to Employment Exchanges and establishments furnishing information under the Employment Market Information Scheme are classified according to ICEC. It will thus be seen that in one field of statistics

employment and unemployment—under the same Ministry, two classifications are employed for classifying the same type of data. This hardly needs any comment. The Central Statistical Organisation, Cabinet Secretariat, which has been assigned the function of standardisation should take up this matter so that there may be uniformity in classifying the same type of data collected by different agencies. The problem needs immediate attention and thought.