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BASIC INDUSTRIAL STATISTICS - A PROGRESS REPORT

(a Memorandum by the Secretary-General)

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## BASIC INDUSTRIAL STATISTICS - A PROGRESS REPORT

### I. INTRODUCTION

1. At its ninth session, the Statistical Commission requested the Secretary-General "to consult with Member States, through regional meetings and other means with regard to the revisions that are required in the recommendations of the Statistical Commission concerning basic industrial statistics and with regard to a world-wide industrial census programme".<sup>1/</sup> It is the purpose of this paper to summarize the work that has been undertaken to comply with the Commission's request and to suggest a programme of future action in the field of basic industrial statistics.

### II. REVISION OF THE INTERNATIONAL STANDARDS IN BASIC INDUSTRIAL STATISTICS

2. Since the ninth session of the Commission, the previously adopted standards in basic industrial statistics<sup>2/</sup> were reviewed in the light of developing country practices and experience. On the basis of the review, a working paper<sup>3/</sup> was prepared setting out a revised set of standards in basic industrial statistics. Comments were obtained regarding these proposed revisions from approximately twenty Governments and from the International Labour Office, to whom, among all Member Governments and international bodies, the working paper was distributed. In addition, these revisions were a subject of discussion at the seminar on industrial statistics held in Athens, Greece, in May 1957 under the auspices of the Technical Assistance Administration, the United Nations Statistical Office and the Conference of European Statisticians. As a result of the comments from countries, the proposals of the working paper have been revised and clarified at

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1/ See E/2876, Report of the Ninth Session, Resolution 8, para. 2, p. 9.

2/ See Statistical Papers, Series M, No. 17, International Standards in Basic Industrial Statistics.

3/ E/CN.3/L.40, Draft Revisions to the International Standards in Basic Industrial Statistics.

E/CN.3/L.40/Add.1, Recent Basic Industrial Inquiries.

E/CN.3/L.40/Add.2, Methods of Obtaining Industrial Statistics.

a number of points. These newly revised proposals, together with some explanatory comments, are presented in the addendum to this paper.<sup>4/</sup>

3. It should be noted that in the limited time available, detailed comments and suggestions have not been received from a number of countries. Further, a number of countries are now developing plans for industrial inquiries for the period 1958-1959 out of which much valuable information may be expected in terms of testing some of the changes proposed in the international standards. In addition, the twin problems of enterprise statistics and the interrelations between enterprise-based and establishment-based inquiries are under study, and the direction in which this study develops will have a bearing on some of the proposals in basic industrial statistics. Moreover, standards have not yet been proposed concerning the tabulation of industrial data and an examination of tabulation requirements may influence the choice and definition of the items of data. For these reasons it seems desirable to delay the adoption of revised standards in basic industrial statistics.

4. The addendum to this paper containing the draft revised standards is being presented to the Commission with a view to obtaining its comments and reactions. In the light of these, the proposals will be reviewed and recirculated together with draft proposals regarding standards for the tabulation of industrial data for the comments of Member Governments.

### III. WORLD-WIDE INDUSTRIAL CENSUS PROGRAMME

5. In connexion with the circulation of the Draft Revisions to the International Standards in Basic Industrial Statistics, Governments were asked to indicate whether 1962 would be, from their point of view, a convenient or feasible year for a world-wide industrial census. Such a programme, if carried out in all or a large number of countries on a basis that permitted international comparison of the final data, would greatly facilitate international economic analysis as well as provide each country with a yardstick against which to measure its own industrial progress.<sup>5/</sup>

<sup>4/</sup> E/CN.3/242/Add.1, Draft Revisions to the International Standards in Basic Industrial Statistics.

<sup>5/</sup> See also: E/CN.3/L.40/Add.1, Recent Basic Industrial Inquiries, para. 2-3.

6. Although a few countries felt that such a census could not, for one or another reason, be undertaken in 1962 or a proximate year and some others stated that their plans for future censuses were yet too indefinite to give a final answer, nearly all countries responding to the query indicated a strong desire to co-operate in a world industrial census programme, if it were at all possible. There is, however, reason to believe, based both on specific replies and on examination of the usual cycle of the various national industrial inquiries, that 1963 would be a better choice than 1962 for the conduct of the world census of industry.

7. Set out in the attached Annex is a list of countries for which information is available regarding their industrial statistics programme. Of the seventy-one countries there listed, forty-eight are indicated as having plans for a basic industrial inquiry relating to the year 1963. This information is based both on direct replies to the recent canvass or a knowledge of the usual cycle of annual and infrequent industrial inquiries in each country. In this connexion it is of interest that the Committee on the Improvement of National Statistics (COINS) of the Inter-American Statistical Institute (IASI) has recommended to their member Governments that economic censuses be taken in or around years ending in three and eight. A programme for the censuses to be taken in or around 1963 will be discussed at the 1959 meeting of COINS.

#### IV. CONCLUSION

8. In view of the fact that consultation with Governments indicates that it is both desirable and feasible to have a world-wide industrial census programme, the Statistical Commission may wish:

1. To recommend to the Economic and Social Council that the attention of Member Governments be drawn to the desirability of collecting and compiling comprehensive data relating to mining, manufacturing, construction, and the production of electricity, gas and steam for the year 1963 or for a year as close to 1963 as practicable.
2. To indicate the direction in which further revisions to the International Standards in Basic Industrial Statistics are required.

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3. To request the Secretary-General to continue consultation with countries, through regional meetings and other means with regard to the further revision of the standards in basic industrial statistics and with regard to standards that might be adopted for the tabulation of the recommended items of data.

ANNEX

YEAR CLOSEST TO 1963 FOR WHICH A BASIC INQUIRY MAY BE TAKEN

The year closest to 1963 indicated in this table is based on information provided by countries or derived from the usual cycle of industrial inquiries. The year was omitted when such information was not available.

Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year	Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year
AFRICA			
Egypt Establishment Enumeration Triennial, 1954	1963	Libya Census of Employment and Production in Urban Areas, First, 1956	
Census of Industrial Production Biennial, 1954	1962	Mozambique Industrial Statistics, Annual, 1954	1963
Ethiopia Industrial Census, Annual, 1952	1963	Southern Rhodesia Census of Industrial Production, Annual, 1953	1963
Ghana Enterprise Survey, Annual, 1955	1963	Union of South Africa Industrial Census, Annual, 1954/1955	1963/64
Kenya; Tanganyika Census of Industry, First, 1954	1963		
AMERICA, NORTH			
Canada Mining Statistics, Annual, 195-	1963	Costa Rica Commercial and Industrial Census, Quinquennial, 1958 <u>2/</u>	1963
Manufacturing Industries Survey of Production, Annual, 1954	1963	Dominican Republic National Industrial and Commercial Census, First, 1955 <u>2/</u>	
Central Electric Stations, Annual Survey, 1954	1963	El Salvador Industrial and Commercial Census, Quinquennial, 1956	1961
Capital Expenditure Survey, Annual, 1954	1963		/...

Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year	Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year
AMERICA, NORTH (continued)			
Guatemala Industrial Census, Quinquennial, 1953	1963	Panama Industrial Survey, First, 1955	1960
Honduras Industrial Census, Annual, 1954 and 1955	1963	Trinidad and Tobago, Industrial Census, First, 1953 <u>2/</u>	
Jamaica, B.W.I. Business Establishment Survey for 1953	1958	United States Census of Mineral Industries, Quinquennial, 1954	1963
Mexico Industrial and Commercial Census, Quinquennial, 1955	1965	Census of Manufacturing, Quinquennial, 1954	1963
Nicaragua Commercial and Industrial Census, First, 1953		Mineral Industries, Annual Survey, 195-	1962 <u>3/</u>
		Survey of Manufactures, Annual 1957	1962 <u>3/</u>
AMERICA, SOUTH			
Argentina Census of Mining, Industry and Business, Biennial, 1953	1963	Colombia Industrial Census, Quinquennial, 1953	1963
Brazil Industrial Census, Decennial, 1949	1959	Sample Survey of Manufactures, First, 1955	
Industrial Production Statistics, Annual, 1955	1963	Ecuador Industrial Census, First, 1955	
Chile Industrial Census, Infrequent 1957 <u>2/</u>		Paraguay Industrial Census, First, 1955	1962
Industrial Statistics, Annual, 1955	1963	Peru Industrial Inquiry, Annual, 1955	1963
		Venezuela Industrial and Commercial Census, First, 1953	1963

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Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year	Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year
ASIA			
Afghanistan Census of Manufactures, First, 1954/55		Japan Establishment Census, Triennial, 1957	1963
Burma Industrial Census, First, 1952	1961	Census of Manufactures, Annual, 1955	1963
Survey of Manufactures, Annual, 1955-1956	1963	Construction Survey, Annual, 1955	1963
Survey of Cottage Industry, 1957	1963	Jordan Census of Mining and Manufacturing, First, 1954	
Ceylon Census of Industry, Quinquennial, 1952	1962 or 1963	Korea, South Census of Manufacturing Establishments, Infrequent, 1955	
China, Republic of Census of Industry and Commerce, 1954, for the Province of Taiwan <u>2/</u>		Lebanon Industrial Census, First, 1955 <u>2/</u>	
India Census of Manufactures, Annual, 1957	1963	Pakistan Census of Manufacturing Industries, Annual, 1953	1963
National Sample Survey, 1954	1963	Philippines Economic Census, Decennial, 1948	1958
Iran Census of Industries, First, 1956 <u>2/</u>		Survey of Manufactures, Annual, First, 1956 <u>2/</u>	1963
Iraq Industrial Census of Iraq, First, 1953		Thailand Demographic and Economic Survey, 1953	
Israel Census of Industry, Infrequent, 1952			
Sample Survey of Industries, Annual, First for 1956	1963		



Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year	Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year
EUROPE			
Austria		France	
Non-Agricultural Establishment Census, Decennial, First, 1953	1963	Card Index of Establishments, Permanent, 1954	
Electricity Production, Annual (and monthly), 1956	1963	Industrial Census, Infrequent, 1959	1959
Belgium		Germany, West	
Census of Industry and Commerce, Decennial, 1947	1957	Non-agricultural Establishment Census, Decennial, 1950	1960
Census of Production, Annual, 1955	1963	Handicraft Census, Infrequent, 1956	
Cyprus		Industry Reports, Annual, (and monthly), 1957	1963
Census of Industrial Production, Quadrennial, 1954	1962	Building Report, Annual, (and monthly), 1957	1963
Czechoslovakia		Net Product of Industry Report, Infrequent, 1954	1963
Industrial Undertakings, Statistical Reports, Annual, 1955	1963	Industry Report of Public Utilities, Annual, 1957	1963
Denmark		Inquiry of Public Utilities, Monthly, 1957	1963
Establishment Census, Decennial, 1948	1958	Greece	
Production Census, Annual, 1954	1963	Industrial and Commercial Census, Decennial, 1951	1961
Inventory Inquiry, Annual, 1954	1963	Inquiry on Value Added, Annual, 1954	1963
Finland		Hungary	
General Census of Business Establishments, First, 1953	1963 or 1967	Industrial Undertakings, Statistical Reports, Annual, 195- <u>2/</u>	1963
Industrial Census, Annual, 1956	1963	Iceland	
		Industrial Census, Triennial, 1953	1962
		Ireland	
		Industrial Census, Annual, 1954	1963

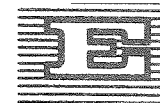
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Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year	Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year
EUROPE (continued)			
Italy		Spain	
Industrial and Commercial Census, Decennial, 1951	1961	Census of Industries, Infrequent, First <u>2/</u>	1958
Value Added Inquiry, Annual, 1954	1963	Industrial Inquiry, Annual, 1957	1963
Luxembourg		Sweden	
Industrial Census, Annual, 1955	1963	Census of Establishments, Decennial, 1951	1961 or 1963
Netherlands		Industrial Census, Annual, 1954	1963
Census of Industries, Decennial, 1950	1960	Switzerland	
Industrial Census, Annual, 1955	1963	Census of Establishments, Decennial, 1955	1965
Norway		Turkey	
Census of Industrial Establishments, Decennial, 1953	1963	Census of Establishments, Decennial, 1950	1960
Industrial Census, Annual, 1954	1962	Industrial Census, Annual, 1954	1963
Poland		United Kingdom	
Statistical Returns, Industry, Annual, 1956	1963	Full Census of Production, Triennial, 1954	1963
Statistical Returns, Handicraft, 1956	1963	Sample Census of Production, 1956 (Annual alternate between full Census)	1962
Portugal		Yugoslavia	
Industrial Census, Infrequent, <u>2/</u>	1958/60	Collieries Report, Annual, 1955	1963
Industrial Statistics, Annual, 1956	1963	Census of Arts and Crafts, Infrequent, 1954	
Romania		Inquiry on Structure and Value of Industrial Production, Annual, 1956	1963

Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year	Country, Basic Inquiry and Period for Which Data are Sought <u>1/</u>	Year
EUROPE (continued)			
Yugoslavia (continued)			
Inquiry on Power Installed in Industry, Annual, 1956	1963		
Inquiry on Electric Power Stations, Annual, 1956	1963		
Construction Report, Annual and Monthly, 1956	1963		
OCEANIA			
Australia		New Zealand	
Primary Non-rural Industries Census, Annual, 1952	1963	Industrial Production Statistics, Annual, 1953/1954	1963
Secondary Industries Census, Annual, 1953/1954	1963		

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- 1/ For coverage, source of information, statistical unit and data sought in the basic industrial inquiries listed, see E/CN.3/L.40/Add.1 and 2.
- 2/ Additional information received after completion of E/CN.3/L.40/Add.1 and 2.
- 3/ The annual census is suspended in years of quinquennial censuses.



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DRAFT REVISIONS TO THE INTERNATIONAL STANDARDS IN  
BASIC INDUSTRIAL STATISTICS

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DRAFT REVISIONS TO THE INTERNATIONAL STANDARDS  
IN BASIC INDUSTRIAL STATISTICS

I. INTRODUCTION

1. The working paper, E/CN.3/L.40, presented, for the comments of governments and international organizations, a revised set of international standards in basic industrial statistics. The dual aim of these proposed revisions was to change the previously recommended standards in the light of country experience and, in general, to couch the definitions and recommendations in more concrete, operational terms. Drafting the standards in more operationally specific terms may have one definite advantage in that these standards might then provide better guidance in the actual design of an industrial inquiry. Further, a detailed examination of concepts and definitions frequently exposes difficulties or inconsistencies hidden by more general treatment. One risk, of course, is that a common ground of country practice becomes more difficult to find with each attempt to be more specific in outlining the precise application and interpretation of the basic concepts. A further risk is that relatively lengthy discussion of certain knotty operational problems may tend to obscure the main objective of obtaining needed data of sufficient accuracy at a reasonable cost.

2. While the majority of the comments received indicated an approval of the direction taken in the revision of the standards, a few specific modifications proved to be generally unacceptable. It is interesting to note that some changes were greeted with approval by some countries and disapproval by others. It was clear that this divergency of opinion arose, in certain cases, out of differing national practices and viewpoints, but in other cases out of lack of clarity in presentation. It is the purpose of this paper to present the set of changes, suggested in the earlier paper, in the international standards in basic industrial statistics, revised and clarified at those points where the country comments have indicated that this is necessary.<sup>1/</sup>

<sup>1/</sup> These revisions are set out in the attached Annexes.

## II. COVERAGE AND FREQUENCY OF THE INDUSTRIAL INQUIRIES

3. The coverage of an inquiry is viewed, in the context of the recommendations, in terms of the field to which the results of the inquiry can be made to relate. Coverage of a particular field can be obtained either by complete enumeration of every element in the field or by enumeration of a probability sample of elements drawn from a frame which contains every element in the field. The recommended field of the infrequent industrial<sup>2/</sup> inquiry consists of all establishments primarily engaged in mining, manufacturing, construction and the production of electricity, gas or steam (i.e., those establishments that would be classified in major groups 11 through 51 of the International Standard Industrial Classification of all Economic Activities). The recommended field of the annual industrial inquiry, on the other hand, is more restricted, consisting of the larger establishments which taken together account for approximately 90 per cent of the nation's industrial activity.<sup>3/</sup>

4. With regard to the extent of direct coverage in the infrequent and annual inquiries, no specific recommendation has been made except that a more extensive coverage is assumed for the infrequent inquiry in order that it may serve its function as a benchmark for the annual and more frequent surveys. Further than this, however, the infrequent inquiry is envisaged, in a developed statistical system, as a means of providing a detailed picture of the structure and geographic distribution of industry. This, of course, implies an extensive, or even full coverage of the field.

5. The items of data which are recommended for collection and compilation in infrequent and annual inquiries are set out in Annex II to this paper. The comments of a number of countries concerning the items of

<sup>2/</sup> Unfortunately the English word "industry" or "industrial", is used both in the restricted sense meaning "mining, manufacturing, construction and the production of electricity, gas or steam" and in a very general sense connoting any economic activity. In this paper the term will be used only in its more restricted sense.

<sup>3/</sup> See also E/CN.3/L.40, paras. 4-10.

data listed in the working paper<sup>4/</sup> indicated an understanding that all of the data listed were recommended for collection from all establishments enumerated in an infrequent inquiry. Such a recommendation was, of course, not intended. On the contrary, it is recognized that to attempt the collection of all these items from a large number of small establishments, for example, would be ill advised, if not impossible.

6. There are, of course, a great variety of ways in which an integrated system of basic (i.e., annual and less frequent) industrial inquiries can be designed to accomplish the ends envisaged by the recommendations. A rather common format, however, consists of an annual inquiry designed to elicit flow data from a sample of the larger establishments and an infrequent inquiry designed to get only structural data covering all industrial establishments and flow data only from a sub-sample of those establishments directly enumerated - usually a sub-sample that is larger than the regular annual sample. Using, then, the structural data covering all establishments as the base, global estimates of the flow data, covering all industrial establishments, can be made both for publication and to serve as benchmark figures for the annual and more frequent surveys.

### III. THE STATISTICAL UNIT<sup>5/</sup>

#### A. Choice of an Appropriate Statistical Unit

7. A number of comments have been received regarding both the choice of the establishment as the basic statistical unit for industrial inquiries and the proposed definition of the establishment. In view of these comments some further exposition of the reasons for choosing the establishment seem necessary as well as clarification of the intent in proposing a more operationally specific definition of the establishment.

8. The growth of industrialization has been characterized by an increasing specialization of economic activities and a consequent

<sup>4/</sup> E/CN.3/L.40 - Annex II.

<sup>5/</sup> See also the discussion in The Choice of an Appropriate Statistical Unit for Economic Inquiries, E/CN.3/244.

increase in the interdependence of all elements of the economy. As a result, the economic policies of both governments and business must increasingly be based on a detailed knowledge of facts regarding the full range of economic activities if the risk of costly errors in judgment - that may, in the case of governments, have far-reaching effects - are to be minimized. This need for detailed facts relates not only to the number of specific items of data required, but to the number of distinct sub-divisions of the economy for which these items of data are summarized.

9. To provide the statistical facts necessary for anything more than a macro-analysis of the industrial sector of the economy, data must be summarized for relatively narrow kinds of industrial activity and, often, for relatively small geographic areas. This, of course, implies that the data are collected on a basis that allows for their identification with a specific activity and area within practicably obtainable limits.

10. The establishment has, in most cases, proven to be the most narrowly defined statistical unit - with respect to kind of activity and location - for which it is generally possible to collect a rather broad range of economic data. Having in mind, therefore, the requirements for detailed data, the establishment was proposed as an appropriate statistical unit for basic industrial inquiries even though the list of recommended items of data had then to be restricted to those directly relatable to the establishment - primarily those items that have successfully been collected on an establishment basis in a number of countries.

11. It must be emphasized that while the establishment has been recommended as a basic statistical unit for the collection of the recommended items of data, it is not intended to recommend the establishment as the sole statistical unit for industrial inquiries. Many items of data of great economic interest are obtainable and, indeed, only relevant to the enterprise, while certain of the recommended items are obtainable, and are collected, on a technical unit basis.

B. The Definition of the Establishment

12. In drafting the altered and more detailed definition for the



establishment proposed in the working paper,<sup>6/</sup> no attempt was made to change the basic concept of this unit, but rather was the definition intended to provide a more precise indication of the application of this basic concept in a variety of practical situations. Some of the comments received, however, make it clear that the proposed definition did not fulfill this function. As a result the proposed definition has been revised.

13. In the great majority of cases the enterprise consists of just one establishment - i.e., the enterprise carries on predominantly one kind of activity at a single location. There are, however, those enterprises that carry on more than one kind of activity on a significant scale and/or carry on their activities at more than one location - and these tend to be the larger, more important enterprises in the economy. If the advantages of the establishment approach are to be retained - i.e., the ability to classify the data by relatively homogeneous industry groups and by location - it is necessary to find some practicable means of splitting these multi-unit enterprises into statistical units that are reasonable approximations to the basic establishment concept. Since the data required represent, primarily, summarizations of particular activities, the delineation of statistical units must of necessity be keyed to the units for which these activities are summarized in the internal records of the enterprise. When this condition is imposed, it is apparent that the terms "single location" and "most homogeneous grouping of activities" need to be interpreted in individual cases in the light of the kind of records encountered.

14. Among the larger, multi-unit enterprises, the variation in record keeping practices is, of course, marked. Therefore, while the proposed definition lays down the procedure for delineating an establishment, it is apparent that the establishments so delineated will not be exactly uniform with respect to the range of their activities or, in many cases, with respect to singleness of location. Uniformity in these respects will be no greater than that afforded by the various organizational and

<sup>6/</sup> E/CN.3/L.40.

record keeping arrangements. Fortunately the administration and control of many of the multi-unit enterprises requires an internal record keeping system that can provide most of the data required for sub-divisions of the enterprise that are very acceptable approximations to the basic concept of the establishment. Serious problems in approximating establishment units occur, therefore, in relatively few cases and these problems are probably best resolved through direct contact and negotiation between the statistical authorities and the enterprises concerned. It should be noted that, as in all other aspects of a practical statistical programme, pursuit of the ideal should not be carried beyond the point where the expected returns, in the form of more accurate and useful data, become too costly.

15. Some countries have objected to the use of the establishment as the appropriate unit for the collection of certain of the recommended items of data - notably expenditures on fixed assets and inventories. These objections were founded on the reported difficulties encountered by multi-unit enterprises in allocating these items among their constituent establishments. There are, however, indications that these allocation problems may be marginal in the sense that while, for example, expenditures on certain types of fixed assets (e.g., those shared by more than one establishment) could not easily be apportioned among the establishments, the majority of these expenditures can be so allocated with relative ease. Consideration of such allocation problems suggested the proposed treatment of certain ancillary units, such as central administrative offices serving more than one establishment of a multi-unit enterprise, as independent establishment units. That is, in the example used above, it provides a unit, or units, to which can be allocated those expenditures for fixed assets not readily allocated to the regular establishment units thus assuring complete coverage of the expenditures of the enterprise (within the scope of the inquiry) while minimizing the allocation difficulties.

16. A number of countries have suggested that, in addition to treating ancillary units serving more than one unit of a multi-unit enterprise as independent establishment units, all ancillary units that are large or

located apart from the establishment served be similarly treated. Further it was suggested that where these units carry on an industrial activity, the unit be classified according to its own activity rather than to the activity of the establishment served. While the proposals contained in the working paper were not intended to preclude this treatment for special types of ancillary units, the suggested treatment of ancillaries has been revised to make this more apparent.<sup>7/</sup> Further, a modification in the treatment of large, separately located ancillary units is proposed. 17. The reason for recommending that, in general, ancillary units should be coded to the same activity as that of the establishment(s) served, even though the ancillary may be separately enumerated, stems from the fact that an institutional rather than a functional approach is envisaged. The aim, therefore, is to cover the totality of the activities of each establishment. Where an ancillary activity is in some cases carried on in a unit that is separately enumerated and in other cases included within the parent establishment, the separate classification of those treated as separate statistical units tends to distort the measure of the activities of some kinds of establishments. Further, a complete picture of the magnitude of this ancillary activity is not obtained, since only in some cases has it been separately delineated. It should be noted that classifying such separately enumerated ancillaries to the same activity as the establishment(s) served does not preclude the possibility of assigning them an additional code based on the activities of the ancillary itself.

#### IV. THE ITEMS OF DATA

18. The revised list of items of data to be collected and compiled in annual and less frequent industrial inquiries and the definitions of these items are set out in Annex II. In order to differentiate more clearly between the definitions per se and the explanatory material intended to illustrate the application of the definitions, the presentation has been changed somewhat from that used in the Annex to the working

<sup>7/</sup> See Annex I as well as the Draft Revised International Standard Industrial Classification of all Economic Activities, E/CN.3/243.

paper. In addition, each item of data is designated as being one of two types - "structural" or "flow". Structural data, as suggested in paragraphs 5 and 6 above, are those appropriately collected from all establishments enumerated in an infrequent inquiry. Flow data, on the other hand, are particularly appropriate to the annual inquiry and, being more complex in character, are usually collected only from the larger units enumerated in either an annual or infrequent survey. In the following paragraphs attention is devoted only to those aspects of the proposed revisions to the standards that raised serious questions in terms of the country comments.

A. Establishment Characteristics

19. As noted in the working paper ascertaining the "date of founding" in a usable way involves a number of difficulties. The comments of several countries regarding their experience in attempting to collect this kind of information also stress the practical difficulties involved and for this reason the item has been omitted from the proposed list.

B. Number Engaged

20. A suggestion was received that, in addition to the sub-groups of numbers engaged already proposed, data be collected differentiating workers on the basis of skill. While such categories may be meaningful and interesting within a particular country, it would not be possible to set up definitions of categories such as "skilled", "semi-skilled" and "unskilled" that would be internationally applicable. A further categorization was suggested to differentiate between full- and part-time workers and, in addition, that a question be added regarding the normal working time of the workers. Again, these are questions that may be of considerable interest in some countries, but the problems of obtaining internationally comparable data are great. In addition, it is felt that such additional sub-divisions of the numbers engaged are more appropriately measured by means of special small-scale surveys rather than through the medium of the basic inquiry.

C. Manhours Worked

21. Due to the suggestions of a number of countries, the proposal that man-hour data might be collected for administrative, technical, clerical,

etc., personnel has been omitted. At best this information is difficult to collect and of very limited interest.

D. Take-home Pay and Total Labour Cost During Inquiry Year

22. As a number of countries expressed considerable doubt as to the possibility of collecting these two items of data as well as reservations regarding the possibility of obtaining such data on an internationally comparable basis, these items have been omitted from the proposed list. Also, the International Labour Office has expressed the view that the difficulties of collecting such data make it advisable to consider an investigation into non-payroll labour costs, etc., in terms of a special small-scale sampling inquiry. A few countries, in view of the importance of take-home pay and non-payroll labour costs, are at present considering ways and means of collecting such data. It is apparent from the comments received that, if such data are sought in either a basic or special inquiry, considerable care in the definition of each item will be necessary and that for non-payroll labour costs it will be necessary to specify the elements of these costs very precisely.

23. Because of the general interest in certain elements of the labour cost, the revised set of proposals suggests that it may be desirable to collect separately the amount deducted by the employer from employees' total wages and salaries to cover the employees' contributions to taxes, social security, pension schemes, etc. Similarly, it may be desirable to collect the contributions of the employer toward social security, pension and like schemes - those contributions that are definitely attributable to the labour employed.

E. Capacity of Typical Pieces of Machinery (Other Than Power)

24. Some concern was expressed regarding the change in wording of this item of data. As the working paper<sup>8/</sup> makes quite clear, however, it is expected that meaningful capacity measures may be obtained for relatively few types of machines and equipment. The wording of the item has been changed to indicate better its limited nature.

<sup>8/</sup> See E/CN.3/L.40, paras. 79-87.

F. Gross Expenditures on Fixed Assets

25. A number of countries expressed the wish that the item "expenditures for used fixed assets" be retained. The view is that while such expenditures do not represent capital investment from the point of view of the whole economy, they do provide an indication of a part of the investment of a particular industry. Further, requesting these expenditures separately tends to ensure that they are not inadvertently included as expenditures on new fixed assets.

26. Comments were also received from two countries regarding the difficulties encountered in obtaining capital expenditures on an establishment basis. A suggestion has been made, however, that these difficulties might, in part at least, be avoided if the information is requested from the enterprise - i.e., by using the enterprise as a reporting unit and the establishment as the statistical unit.<sup>9/</sup>

G. Value of Sales of Used Fixed Assets

27. At the suggestion of several countries, this item of data has been reinstated. The usefulness of this information lies in the fact that, together with the data concerning gross expenditures on fixed assets, it provides the means of computing the net additions to capital within an industry.

H. Value of Stocks

28. Several countries indicated that, because the bookkeeping system of most companies do not make the distinction, the value of stocks of raw materials, etc., and fuels should not be separately requested. In addition, two countries suggested that the separation of "goods to be sold in the same condition as purchased" from "finished goods" would be difficult. Other countries, however, welcomed this latter change. It should be noted that in one case, the country suggested not only that segregation of "goods to be sold in the same condition" would be difficult, but that the aggregate value of this category would be insignificant. Where this is the situation it would obviously be inadvisable to attempt

<sup>9/</sup> See also para. 15 above.

the segregation, but in many countries the merchanting activities of essentially industrial establishments are relatively large.

I. Production

29. It is suggested that for the construction industry, and other industries characterized by a long production cycle, production be measured in terms of the value of work put in place during the inquiry year. A number of purposes would be served if, in addition to the total value of work put in place, data were obtained for the construction industry that showed the value of work under construction at the beginning and the end of the inquiry year for each type of construction (e.g., residential, commercial, roads, etc.). If, in addition, data are obtained regarding the total value of each type of construction completed during the inquiry year, a well-rounded picture of construction activities is produced.

ANNEX I

RECOMMENDATIONS RELATING TO THE FREQUENCY AND COVERAGE  
OF THE INDUSTRIAL INQUIRIES AND THE STATISTICAL UNIT

I. FREQUENCY

1. Comprehensive data relating to industrial establishments should be collected and compiled at least every ten years. For each intervening year, statistics should be collected and compiled to provide a measure of the changes occurring between the more comprehensive infrequent inquiries.

II. COVERAGE

A. INFREQUENT INQUIRIES

2. The infrequent inquiry should cover all establishments, located within the geographic boundaries of the country, primarily engaged in mining, manufacturing, construction and the production of electricity, gas and steam - i.e., establishments that would be classified in major groups 11 to 51 inclusive of the International Standard Industrial Classification of All Economic Activities.<sup>1/</sup> The inquiry should in principle cover all those establishments which were engaged in the production of goods or services for sale or exchange at any time during the inquiry year.

Explanatory Note

3. While in principle the field of inquiry should include all establishments regardless of size, legal or economic organization, the very small establishments that are not in operation at the end of the inquiry year or at the time of enumeration would normally be excluded. It should be noted that small or household units engaged in industrial activities entirely for own consumption are to be excluded from the field of inquiry. If, however, the unit produced any goods for sale or exchange, then all

<sup>1/</sup> See Indexes to the International Standard Industrial Classification of All Economic Activities, Statistical Papers, Series M, No. 4, Add.1, United Nations, New York, April 1956.



industrial activities of the unit should be reported - including that part of their production intended for own consumption.

4. The complete coverage of the field envisaged may, of course, be attained either through a complete census, a probability sample or derivation of the data required for compilation from administrative records or any combination of these methods.

#### B. ANNUAL INQUIRIES

5. The field of the annual inquiry should include all the larger industrial establishments which taken together account for approximately 90 per cent of the country's industrial activity.

#### Explanatory Note

6. The emphasis here is on obtaining reliable global estimates of industrial activity and, separately, reliable estimates of the activities of the more important industries. As in the case of the infrequent inquiry, coverage of the field of inquiry may be attained through complete enumeration or, more commonly, through a probability sample or derivation of the data from administrative records.

7. While the aim should be to provide annual estimates covering the whole industrial field, practical difficulties may dictate that a programme of annual inquiries be initiated by concentrating on the more important industries.

#### III. REFERENCE PERIOD

8. The inquiry year should, in general, be the calendar year for both annual and infrequent inquiries. Where establishment records are kept on a fiscal year basis, however, it may sometimes be necessary to accept the reporting of certain items of data on this basis.

#### IV. THE STATISTICAL UNIT

9. The statistical unit for the collection of the recommended list of items of data should be the establishment. The industrial establishment is, ideally, an economic unit which engages, under a single ownership or control, in one or predominantly one kind of industrial activity at a single physical location - e.g., the individual mine, well, workshop,

factory, generating station or household. The establishment is distinguished from the enterprise, which is the owning or controlling unit and may consist of one or a number of establishments, although in many cases the two units will be coextensive. Where the enterprise engages in more than one kind of activity and/or carries on its activities at more than one location, the establishment is defined, in operational terms as: that combination of activities and resources directed by the enterprise toward the production of the most homogeneous group of goods or services, usually at one location, for which separate records are maintained (or separate estimates can be made) that can provide the data concerning the production of these goods or services and the materials, labour and other resources (both direct and indirect) going into this combination of activities.

10. It is intended that, in general, ancillary units<sup>2/</sup> should be included as an integral part of the establishment and that the establishment be classified according to its principal activity. To the extent that the establishment comprises activities that are non-industrial, these activities should be included. That is, the aim should be to cover the totality of activities encompassed by the establishment.

#### Explanatory Note

11. In recognition of the practical difficulties of applying the above definition in certain cases, it is suggested that the appropriate statistical unit may be defined in the following manner for the particular situations cited.

a. Separately located units operating under a single control and all engaging in the same activity

i. Mining Industry

It is suggested that the most practicable statistical unit is the collection of wells, shafts or pits that tap a single field and that are owned and controlled by a single enterprise.

<sup>2/</sup> An ancillary unit provides services primarily to the establishment or produces goods and supplies, exclusively or largely for the establishment which do not become an integral part of the output of the establishment.

Ore processing or beneficiating plants located at the mine site should be reported as an integral part of the unit.

ii. Construction Industry

In view of the customary movement of labour, capital equipment, etc., from one construction site to another, it is suggested that the enterprise be taken as the statistical unit for this industry. It may, however, be feasible to obtain certain items of data, such as work put in place, related to specific areas.

b. The definition of statistical units within the multi-unit enterprise

It is suggested that within a multi-unit enterprise three types of statistical units be identified and separately enumerated - (i) the individual industrial units that accord with the basic definition of an establishment, (ii) ancillary units (see footnote 2 above) that serve more than one unit of the enterprise and that are separately located or not operated as an integral part of the establishment at the same location (e.g., a central administrative office, central warehouse, central power station, etc.) and (iii) large ancillary units that are located apart from the establishment served. Such ancillary units should be classified to the main activity of the establishment(s) served, but this does not preclude the possibility of using a supplementary classification to identify the main activity of the ancillary itself. Ancillary units serving only one unit of the enterprise and not separately located are, in general, to be treated as an integral part of that unit.

c. Special types of ancillary units

Where a particular kind of ancillary function is generally performed by units that fulfill the conditions set down in the definition for an establishment, these units should be treated as separate establishments and classified accordingly. For example, railway repair shops may universally be separately located and satisfy all the conditions for being designated establishments. Such repair shops should then be treated as repair shops and classified accordingly rather than as ancillaries to the transportation industry.

ANNEX II

RECOMMENDED LIST OF ITEMS OF DATA AND THEIR DEFINITIONS

I. ITEMS OF DATA TO BE SOUGHT

1. It is recommended that the items of data set out in the table below be collected and published for each industry at least once every ten years. An entry of "X" in the right-hand column of the table indicates that the item is also recommended for collection and publication at annual intervals.

2. The items of data listed are those appropriate to industrial establishments. The list contains data of two types - structural and flow data. Items of structural data (designated by an asterisk) are those generally recommended for collection from all establishments enumerated in an infrequent inquiry. Flow data are generally recommended for collection from larger establishments only and from, at most, a restricted sample of small establishments.

Items of data to be collected  
at least every ten years

To be collected annually

---

A. Establishment Characteristics

- \*a. Kind of activity<sup>1/</sup>
- \*b. Size of establishment<sup>1/</sup>
- \*c. Type of operation<sup>1/</sup> (not applicable to ancillaries treated as separate statistical units)
- \*d. Kind of economic organization (whether or not a member of a multi-unit enterprise)
- \*e. Kind of legal organization
- \*f. Location

<sup>1/</sup> Kind of activity, size of establishment and type of operation are characteristics derived from other items of data requested.

Items of data to be collected at  
least every ten years

To be collected annually

---

B. Employment, Manhours and Wages and Salaries

- a. Total number of persons engaged during a single period of the inquiry year. 2/
- (a) Number of working proprietors, active business partners and self-employed 2/ (not applicable to any incorporated enterprise)
- (b) Unpaid family workers<sup>2/</sup> (not applicable to any incorporated enterprise)
- (c) Home workers<sup>2/</sup> (not applicable to the mining, construction or utility industries)
- (d) Total number of employees<sup>2/</sup>
- (i) Number of operatives<sup>2/</sup> (not applicable to central administrative offices or small establishments)

For units other than those engaged in construction, distinguish

- (1) Operatives engaged solely in own account construction work
- (2) Other operatives

For units engaged in mining, distinguish

- (1) Underground workers
- (2) Other operatives

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2/ Figures should be shown separately for men and women and for adults and juveniles.

Items of data to be collected at  
least every ten years

To be collected annually

B. Employment, Manhours and Wages and  
Salaries (cont.)

For units engaged in  
production of gas,  
electricity or steam  
distinguish

(1) Operatives directly  
engaged in the  
plant where the  
gas, electricity  
or steam is pro-  
duced

(2) Other operatives

(ii) Number of administra-  
tive, technical, cleri-  
cal and other employees<sup>2/</sup>  
(not applicable to small  
establishments)

- |   |   |
|---|---|
| b. Number of employees and, separately,<br>number of operatives engaged<br>during several specified periods<br>of the inquiry year                          | X |
| c. Manhours worked by operatives<br>during the inquiry year (not<br>applicable to central administra-<br>tive offices and small establish-<br>ments)        | X |
| d. Total wages and salaries paid to<br>home workers and employees<br>during the inquiry year  | X |
| (a) Wages and salaries paid to<br>home workers during the<br>inquiry year (not appli-<br>cable to the mining, con-<br>struction or utility indus-<br>tries) | X |
| (b) Wages and salaries paid to em-<br>ployees during the inquiry<br>year  | X |

<sup>2/</sup> Figures should be shown separately for men and women and for adults  
and juveniles.

Items of data to be collected at least every ten years	To be collected annually
F. Value of stocks at beginning and end of the inquiry year <u>3/</u>	
a. Raw materials, fuel, components, supplies, containers, etc.	X
b. Work in process	X
c. Finished goods	X
d. Goods ordinarily sold in the same condition as purchased	X
G. Purchase of goods and industrial ser- vices from other enterprises during the inquiry year	
a. Total delivered cost	X
b. Total value of any subsidies received on account of these purchases	X
H. Goods and industrial services delivered or consumed	
a. Materials (excluding fuels) delivered or consumed during the inquiry year	X
(a) Total value	X
(b) Value and quantity of indi- vidually important materials	X
b. Fuels delivered or consumed during the inquiry year	X
(a) Total value	X
(b) Value and quantity of indi- vidually important fuels	X
c. Total value of goods to be sold in the same condition as purchased delivered during the inquiry year	X

3/ See section II-F for suggested alterations in the categories of stocks for particular industries.

Items of data to be collected at least every ten years	To be collected annually
H. Goods and industrial services delivered or consumed (cont.)	
d. Electricity	X
(a) Quantity and value of electricity purchased during the inquiry year	X
(b) Quantity of electricity generated during the inquiry year	X
(c) Quantity and value of electricity sold to others during the inquiry year	X
e. Total cost of contract and commission work, of an industrial nature, done by others during the inquiry year	X
f. Total cost of repair and maintenance work done by others during the inquiry year	X
*I. Sales, outside the enterprise, by the establishment during the inquiry year	
a. Total value	X
b. Total value of any subsidies received on account of sales or production	X
c. Total value of any excise or other indirect taxes levied at the enterprise on account of sales or production	X
J. Goods produced or shipped and services rendered	
a. Products shipped or produced during the inquiry year	X
(a) Total value	X
(b) Value and quantity of individually important products	X
b. Total value of goods shipped during the inquiry year in the same condition as purchased	X



	Items of data to be collected at least every ten years	To be collected annually
J.	Goods produced or shipped and services rendered (cont.)	
	c. Total cost charged to others for work done or services rendered by the establishment during the inquiry year	X
K.	Value added during the inquiry year	X

## II. DEFINITIONS

### A. ESTABLISHMENT CHARACTERISTICS AND NUMBER OF ESTABLISHMENTS

#### a. Kind of activity (industry)

3. The classification of each establishment is determined by the principal product or service (or group of products or services assignable to the same industry class of the industrial classification) produced or processed. The classification utilized to classify establishments by kind of activity should be the same as, or convertible to, the groups of the International Standard Industrial Classification.<sup>4/</sup>

#### b. Size of establishment

4. The number of persons engaged<sup>5/</sup> during a specified period of the reference year should be used to classify establishments by size. Some countries may find it desirable to substitute number of employees for number engaged either because of the source of their employment statistics or the character of their economy. In classifying establishments according to number engaged, at least, 1, 2, 5, 10, 20, 50, and 100 should be used as lower class limits.

#### c. Type of operation

5. No specific recommendation is made with regard to type of operation, but it is suggested that most countries may find it most practicable to make the distinction between essentially hand operated, home-centered units and factory-type units by using a criterion composed of size and the use of power - e.g., units engaging fewer than five persons and not employing power equipment might be considered as cottage-type industry.

#### d. Kind of economic organization

6. The number of industrial establishments owned or controlled by the same enterprise. The classification should at least distinguish between single and multi-unit enterprises. Multi-unit enterprises might be divided into classes according to the number of establishments.

<sup>4/</sup> See Indexes to the International Standard Industrial Classification of All Economic Activities, Statistical Papers, Series M, No. 4, Add.1, United Nations, New York, April 1956.

<sup>5/</sup> See item B.a below.

Explanatory Note

7. For operational purposes, information concerning the name and address of the head office should also be obtained for each establishment. In addition, the name and address of each subsidiary establishment should be obtained from the central administrative offices.

e. Kind of legal organization

8. The legal form of the enterprise which owns or controls the establishment. The classification should at least distinguish between individual proprietorships, partnerships and limited liability organizations (e.g., corporations, joint stock companies, co-operatives, limited partnerships, etc.) and all others. In addition, further distinctions might be drawn which are meaningful within the framework of the laws and customs of the particular country - e.g., between privately owned, government owned or jointly owned enterprises.

f. Location

9. The place at which the establishment is physically located. The geographic classification should distinguish between successively smaller areas - e.g., economic area, province, village or town, etc.

Explanatory Note

10. It is important for operational purposes to obtain the recognized address to which written communications may be sent. This might be the same as the physical location or the address of a central office separately located. It should be the address to which any queries concerning the establishment can be referred.

g. Number of establishments

11. The distribution of the number of establishments according to certain characteristics - particularly size - provides a picture of the structure of industry. In general, the most meaningful figure for a count of the population of establishments relates to those in business on a particular day, although for certain purposes, it may be necessary to use the number of establishments to which the data relate.

B. EMPLOYMENT, MANHOURS AND WAGES AND SALARIES

a. Total number of persons engaged

12. The total number of persons who worked in or for the establishment, including working proprietors and active business partners, unpaid family workers and home workers and separate figures should be shown for these status groups. The count should relate to the number of persons engaged during a specified period of time - e.g., a pay period or calendar week rather than on a specified day. Included are persons on short-term leave such as sick leave, casual leave or paid vacation and persons on strike; excluded are persons on unlimited leave, military leave or on pension.

13. The figures shown for the total number of engaged and for each status group should distinguish between adults and juveniles and between men and women. No standard age is suggested for distinguishing between adults and juveniles. The distinction should be made in accordance with the existing laws and customs of each country.

14. Each status group should be defined as follows:

(a) Working proprietors, active business partners and self-employed

Include all owners of the enterprise (individual proprietorship or partnership) who are actively engaged in the work of the establishment. Exclude silent or inactive partners and members of a proprietor's family unless they participate in the control and management of the business. (This category is inapplicable to any incorporated enterprise.)

(b) Unpaid family workers

All persons living in the household of any of the proprietors of the enterprise and working without regular pay in the establishment for at least one-third of the working time normal to that establishment. (This category is inapplicable to any incorporated enterprise.)

(c) Home workers

All persons employed by the establishment (usually on a piece work basis) who perform the work in their own homes.

Explanatory Note

If the "home worker" is defined in the laws of the country, this definition should be used in the industrial inquiry. Criteria that might be utilized to determine whether a person should be included in this category are: whether he is working for only one or two establishments; whether his materials are supplied by the establishment; whether the work is done to the establishment's specifications; legal responsibility of the establishment for the person - e.g., for social insurance contributions, etc. Identification of these persons is sometimes so difficult in practice that it may be desirable to omit this category and treat all such persons as proprietors of independent establishments. (This category is not applicable to the mining, construction or utility industries.)

(d) Employees

All persons who do work in the establishment for which they receive pay and persons working away from the establishment when paid by and under the control of the establishment (e.g., sales representatives, travelling engineering representatives, travelling maintenance and repair personnel, etc.). Also included are salaried managers and directors of incorporated enterprises except when paid solely for their attendance at board meetings. The category "employees" is intended to include all persons engaged other than employers, unpaid family workers and home workers.

Figures for number of employees should be shown to distinguish between the following functional groups:

(i) Operatives

All employees who are directly engaged in the production activities of the unit - from the receipt of materials at the establishment to the point where the product leaves the establishment. Included are any clerical or working supervisory personnel whose function is to record or

or expedite any step in the production process. Employees similarly engaged in units ancillary to the reporting establishment should also be included as are persons engaged in repair and maintenance. Examples are persons engaged in fabricating, processing or assembling; shop messengers, stokers and shop cleaning personnel, warehousemen, packers, repairmen, shop testing and record keeping personnel, inspectors, etc. (This category will not be applicable for the central administrative office of a multi-unit enterprise or the smaller establishments.) Within the category "operatives" it is suggested that the following distinctions may be made for the types of units cited.

For all units, except those in the construction industry and ancillary construction units serving more than one unit of a multi-unit enterprise, operatives wholly engaged in force account construction work (i.e., construction for own use) for the establishment might be shown separately.

For units engaged in mining activities, underground workers should be shown separately from other operatives. The determination of what constitutes an underground worker should be made according to the laws of each country.

For units engaged in the production of gas, electricity or steam, operatives directly engaged in the plant where electricity, gas or steam is produced might be shown separately from other operatives.

#### Explanatory Note

In the definition above, operatives are conceived of as all those persons whose physical presence is required at any point of the production process, from receipt of raw materials up to the point where the product leaves the establishment. Although this conceptual basis for

distinguishing operatives differs from the manual - non-manual concept originally employed, the actual difference in reporting would be slight. Further the proposed definition seems to accord better with the kind of distinction made in payroll records which are the usual source of these data.

(ii) Administrative, technical, clerical and other employees

All employees other than operatives. Examples are salaried managers and directors, laboratory and research workers, clerks, typists, watchmen, bookkeepers, administrative supervisors, salesmen, etc.

b. Number of employees and operatives engaged during several specified periods of the inquiry year

15. Employees and operatives are defined as above. The number of time periods for which these figures are requested will vary with the known seasonality pattern of each industry. In general, a time period (calendar week or payroll period) centered in each quarter is recommended.

c. Manhours worked by operatives during the inquiry year

16. The total number of hours actually spent at work in the establishment, including waiting time. Since it is hours worked rather than hours paid for, time spent on vacation, casual or sick leave should be excluded.

Explanatory Note

17. If complete payroll records are available and payments are made on an hourly basis, the man-hour figures may be obtained from these records, provided appropriate corrections are made for periods of non-attendance. In the absence of adequate records, the following techniques of estimation might be employed:

Where records show number of shifts per day and number of operatives per shift, an estimate of manhours worked each day may be made. The addition of these daily estimates over the inquiry year produces the desired figures.

Where records show only number of shifts worked for each period, an estimate of hours worked by each shift will have to be made. The

addition of the estimates made for each period over the inquiry year yields the manhours estimate sought. This technique of estimation is most applicable to the mining and construction industries, in countries where these industries make extensive use of contract labour.

Request the reporting of man-hour data for several short, specified periods spread throughout the inquiry year (e.g., for the four payroll periods centered in each quarter). From this information an estimate of the average manhours worked per quarter (or per month) can be computed.

18. For the small establishments where operatives and other employees cannot be distinguished, it might be of value to collect man-hour data for the total number of persons engaged. The difficulty of obtaining an adequate response from the small unit regarding manhours worked may, however, be considerable.

d. Wages and salaries paid during the inquiry year and during the single period specified for the count of numbers engaged

19. Included are all payments, whether in cash or in kind, made by the employer during the inquiry year in connexion with the work done, to all persons included in the count of employees and home workers. Include all cash payments, bonuses, cost-of-living or dearness allowances, wages paid during periods of vacation and sick leave and layoff payments (except where provided through an established programme); also taxes and social insurance contributions and the like, payable by the employee and deducted by the employer, and payments in kind. Exclude social insurance contributions and the like payable by the employer as well as pension payments, family allowances and similar social benefits.

20. Figures should be shown to distinguish between the same categories of employees indicated in B.a(d) above.

21. It may also be desirable to collect separate figures on that part of the wages and salaries paid which was deducted by the employer for obligations of the employee - i.e., for social security, withholding taxes, etc. Also data might be collected regarding the employer's contributions to social security schemes, pension funds, family allowances and the like -



those contributions that are directly attributable to the labour employed.

C. CAPACITY OF INSTALLED POWER EQUIPMENT AS OF A GIVEN DATE DURING THE INQUIRY YEAR, PREFERABLY ON THE LAST DAY OF THE YEAR

a. Prime movers not driving electric generators

22. All prime movers, mobile or stationary, that are installed as of the reference date except those used to drive vehicles or generators. Included are internal combustion engines, steam engines, water wheels, turbines, etc.

23. The capacity should be measured in terms of rated horsepower - i.e., the horsepower indicated by the manufacturer on the nameplate or elsewhere.

b. Electric motors

24. All motors installed as of the reference date and used in connexion with the production activities of the establishment. Included are motors used for driving machine tools and other equipment used in fabricating, assembling or conveying; motors driving exhaust fans or air conditioning equipment in the works proper, etc. Excluded are desk fans, non-industrial refrigerating equipment, office air conditioners, etc.

25. The capacity should be measured in terms of rated horsepower - i.e., the horsepower indicated by the manufacturer on the nameplate.

Explanatory Note

26. It may, in some cases, be more practicable to limit reporting of electric motors to those above a specified rated capacity - e.g., to those of more than one horsepower.

c. Electric generators

27. The rated capacity (in kilowatts or kilovolt amperes) of all generators installed as of the reference date.

D. CAPACITY OF TYPICAL PIECES OF MACHINERY AND EQUIPMENT (OTHER THAN POWER) INSTALLED AS OF A GIVEN DATE, PREFERABLY THE LAST DAY OF THE INQUIRY YEAR (WHERE APPROPRIATE)

28. No general definition can be given for various types of machinery nor the precise measures of capacity that might be most readily collected.

Explanatory Note

29. Three general categories of machinery and the types of capacity measures which might be appropriate are as follows:

Fully automatic machines that are built for one and only one operation

Examples are automatic spinning machines, automatic looms, blast furnaces, wiredrawing machinery, nail making machines, blooming mills, etc. For such machines precise capacity measures in terms of units of output per unit of time should be specified - e.g., blast furnaces might be rated in terms of maximum number of tons of iron per day which the furnace can produce.

Machinery and equipment built for only one operation, but whose output depends on the speed of the operator(s)

Examples are cupola furnaces, power shovels and drag-line excavators. For this type of equipment, size measures may be most appropriate - e.g., power shovels or drag-line excavators would be reported by the cubic capacity of the scoop.

General purpose machinery which is capable of a variety of jobs and whose output will depend both on the type of job and the speed of the operator

Examples are machine lathes, planers, drill presses, shapers, etc. While size measures might be specified for certain of these machines, it is not possible to suggest any meaningful measures of capacity in terms of units of output per unit of time.

E. GROSS EXPENDITURE ON FIXED ASSETS AND SALES OF FIXED ASSETS DURING THE INQUIRY YEAR

30. The value of all acquisitions during the inquiry year of physical assets which are expected to have a productive life of more than one year and that are intended for use by the establishment (land, buildings, machinery, equipment and vehicles). Included are major additions, alterations and improvements that extend the normal economic life or raise the productivity of the assets. Also included is the value of fixed assets made by the establishment's own labour for its own use and additions and improvements to fixed assets carried out by the establishment's personnel. Titles to wealth and expenditures for repair and maintenance are excluded. Acquisition of fixed assets on a rental basis is also excluded.

31. Acquisitions from others should be valued at full cost incurred i.e., at the delivered price plus the cost of installation, including any necessary fees and taxes. A transaction should be recorded only on the completion and delivery to the establishments control of the fixed assets. For fixed assets produced by the establishment for its own use, the cost of all work put in place during the year should be recorded, whether these assets are completed or not, and the cost of the labour, materials and, if possible, the overhead costs should be included.

32. The value of sales of used fixed assets should comprise all disposals of fixed assets which have been used by the establishment, regardless of their condition, valued according to the proceeds received for them.

33. In practice, where capital accounts are maintained, expenditures charged to fixed assets accounts during the reference year would be reported and, in general, these are the figures that should be requested.

#### Explanatory Note

34. For the multi-unit enterprise, expenditures for fixed assets that are not allocable to one of the subsidiary establishments should be recorded as acquisitions of the central administrative office. Fixed assets produced by one establishment for the use of another establishment in the same enterprise should be recorded at the time of completion and delivery to the control of the using establishment and, ideally, valued as though purchased from outside the enterprise.

35. For establishments where no capital accounts are maintained, it may be desirable to request separate reporting of expenditures on major alterations and improvements in order to ensure that this expenditure is not overlooked.

#### a. New fixed assets acquired from others

36. New fixed assets include all those that have not been previously used in the country. Thus, newly imported fixed assets are considered as new whether or not used before they were imported.

37. Data should be shown to distinguish between expenditures on (a) machinery and equipment (including all durable industrial and office equipment, furniture, transportation equipment, etc.) and (b) buildings

and improvements to land (including industrial, office, commercial and other buildings, roads, docks, tracks, fences, blast furnaces, brick kilns, site preparation, petroleum refineries, etc.).

b. New fixed assets produced on own account

38. Data should be shown distinguishing the same sub-group as for new fixed assets acquired from others.

c. Used fixed assets acquired from others

39. Used fixed assets include all those that have been previously used within the country.

40. Data should be shown to distinguish (a) machinery and equipment, (b) buildings and improvements to land and (c) land.

d. Sales of used fixed assets

41. All disposals of fixed assets which have been used by the establishment, regardless of their condition, valued according to the proceeds received for them.

42. Data should be shown to distinguish (a) machinery and equipment, (b) buildings and improvements to land and (c) land.

F. VALUE OF STOCKS

43. Value of all inventories owned by the enterprise and held by or under the control of the establishment (at the establishment itself, in ancillary warehouses or other warehouses). Value of stocks to be reported for the beginning and end of the inquiry year. Figures reported should distinguish between the following categories of stocks.

a. Raw materials, fuels, components, supplies, etc.

44. All raw materials, components, etc., that enter into the product as well as fuels and containers, repair and maintenance, office and other consumable supplies. Also included are raw materials, etc., for use in own account construction and materials owned by the establishment, but held by others for processing. Excluded are all materials owned by others, but held by the establishment for processing.

45. Valuation should be at the delivered (laid down) price of each item for the last transaction made by the establishment immediately prior to the reference date, excluding any rebates or discounts given by the seller

and including any duties or taxes. Where systematic accounts are maintained, the book value should be requested.

Explanatory Note

46. For the multi-unit enterprise, stocks owned by the enterprise, but not earmarked or allocated to a specific subsidiary establishment should be reported as stocks of the central administrative office.

47. For the mining and public utility industries, this category should exclude fuels produced by the establishment.

b. Work in process

48. The value of all goods and materials that have entered the production process, but are not ready for shipment as of the reference dates.

Excluded is work in process on own account construction of fixed assets.

49. Valuation should be at the cost of work put in place, including at least the cost of materials and direct labour. Where accounting records show this category separately, the book value should be requested.

Explanatory Note

50. Since it is suggested that work in process be treated as production in the case of the construction, shipbuilding and heavy machinery industries (those industries with a long production cycle), this category is not applicable to these industries.

c. Finished goods

51. The value of all goods made by the establishment that are ready for shipment as of the reference dates. Included are finished goods held by another establishment that were processed by that establishment from raw materials owned by the enterprise and controlled by the establishment.

Excluded are finished goods held by the establishment that were made from materials owned by others.

52. Valuation should be at the price at which goods have been shipped immediately prior to the reference dates, excluding rebates or discounts given and including any indirect taxes. Where systematic accounts are maintained, the book values should be requested.

Explanatory Note

53. For the mining and utility industries, the stocks of fuels produced by the establishment should be included.

d. Goods ordinarily sold in the same condition as purchased

54. Include only those goods which are not normally consumed in the production activities of the unit, but are purchased with the express purpose of resale.

55. Valuation should be on the same basis as for raw materials.

G. PURCHASES AND SUBSIDIES

a. Purchases of goods and industrial services from other enterprises

56. The value of all commodities and contract, commission, repair and maintenance services purchased from other enterprises for the account of the establishment during the inquiry year. A purchase is considered to have occurred when the goods have been delivered to the control of the establishment.

57. Valuation of the commodities purchased should be at the delivered value at the establishment (laid down), including the purchase price and all transport charges, taxes or other levies, and excluding discounts, rebates, etc., allowed to the purchaser. Valuation of contract and commission work and repair and maintenance services should be at total cost to the enterprise.

b. Subsidies

58. The total value of any subsidies received on account of commodities delivered during the inquiry year should be separately reported.

H. GOODS AND INDUSTRIAL SERVICES DELIVERED OR CONSUMED

H.(alt.) DELIVERIES

59. All commodities (excluding fixed assets) delivered to the control of the establishment during the inquiry year.

60. Valuation of commodities delivered should be at the delivered value (laid down cost) at the establishment, including the purchase price, all transport and other charges, and duties, taxes or other levies and excluding discounts, rebates, etc., allowed to the purchaser. Deliveries to an establishment from other units of the same enterprise should be valued as if

purchased - i.e., at market prices. In practice it may sometimes be necessary to accept the values posted to the books for the establishment.

Explanatory Note

61. Commodities which have been delivered to the control of a multi-unit enterprise during the inquiry year and not delivered to the control of a subsidiary establishment during that year should be recorded as deliveries to the central administrative office.

H.(alt.) CONSUMPTION

62. All commodities which have entered into the production process of the establishment during the reference period which are owned by the parent enterprise.

63. Valuation of commodities consumed should, in principle, be at the delivered value (laid down cost) at the establishment at the time that the consumption takes place of commodities identical to those consumed. Where accounting records show this category, the book value should be requested.

Explanatory Note

64. In practice the value of the commodities consumed would be estimated by using an average price over a period of time. The valuation might be accomplished, for example, by taking the average price of the commodity over each month and applying this price to the quantity consumed during the same month. In many cases, however, time periods longer than one month will have to be accepted.

Categories of materials and industrial services delivered or consumed

65. Whether data is obtained on a consumption or delivery basis, the figures should distinguish between the following categories:

a. Raw materials, components, supplies, etc.

66. Include raw materials, components, etc., that are physically incorporated in the products. Also include all auxiliary materials (lubricants, water, packaging materials, small tools, parts, materials for repairs and maintenance, etc.), materials for use in own account construction and office supplies. Figures should be obtained for both the total value of

these goods delivered or consumed and for the value and quantity of individually important materials.

b. Fuels

67. Included are all fuels used by the establishment (including gasoline and other fuels for vehicles) except those that directly enter the product (these should be reported as raw materials). As for raw materials, figures should be obtained for both the total value of fuels delivered or consumed and the value and quantity of individually important fuels.

Explanatory Note

68. For the mining industry, this category should include only fuels that are not produced for sale by the reporting unit. Consumption figures for individual fuels should include the quantities of fuel consumed by the reporting unit out of its own production.

c. Deliveries of goods to be sold in the same condition as purchased

69. Include only those goods not normally consumed in the establishment which are purchased with the express purpose of resale.

d. Electricity

(a) Electricity purchased

Quantity (in kilowatt hours) and total cost of all electricity purchased during the inquiry year.

Explanatory Note

In principle the electricity obtained from an ancillary power plant treated as an independent statistical unit should be valued as though obtained at the rate normal to the area, but in practice it may be necessary to accept the book value of electricity obtained from such ancillary power plants.

(b) Electricity generated

Quantity (in kilowatt hours) of electricity generated, both for own use and for sale to others, during the inquiry year.

(c) Electricity sold

Quantity (in kilowatt hours) and total sales value of all electricity sold during the inquiry year.



a. Goods produced or processed by the establishment

82. Figures should be obtained for both the total value of these goods shipped or produced and for the value and quantity of individually important goods.

83. If the output data for individually important products is obtained on a shipment's basis, it may be desirable to obtain, in addition to quantity and value of shipments, the quantity of the individually important products produced during the reference year.

84. For the construction industry, in addition to the total value of work put in place, data should be obtained for the value of work under construction at the beginning and end of the inquiry year for each type of construction (e.g., residential, commercial, roads, etc.). Also data should be obtained for the total value of each type of construction completed during the inquiry year.

b. Total value of goods shipped during the inquiry year in the same condition as purchased

85. The sales value ex-factory (as for products of the establishment) of all goods shipped during the reference year in the same condition as received.

c. All other receipts for work done or services rendered to others during the inquiry year, by the establishment

86. Included are all receipts other than those arising from shipment of goods - i.e., from work done or services rendered to others such as contract or commission work done for others on their materials, repair and maintenance work, installation, research and development, construction, etc. The value reported should be the total cost charged to customers for the work or service performed. If possible establishments should report separately on the several categories listed above.

K. VALUE ADDED DURING THE INQUIRY YEAR

87. The figure for value added is derived by subtracting from the gross value of output (i.e., value of goods produced, change in the value of work in process, construction of fixed assets for own use, goods sold in the same condition as purchased and all other receipts for work done or services rendered) the value of all materials (including fuels, etc.)

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consumed by the establishment and services rendered to the establishment by other industrial establishments. It should be noted that, while the items of data recommended for collection include all the elements comprising the gross value of output, several services generally utilized by the establishment are not included - services such as business services, advertising, etc. - that would normally be deducted from the gross value of output to arrive at the contribution to gross national product. Thus, the value added figure obtainable from the items of data recommended (which has sometimes been called "census value added") is not net relative to the economy as a whole, but only net relative to the agricultural sector and the population of industrial establishments that fall within the scope of industrial inquiry.

88. From the items of data recommended, it is possible to compute the value added at both the "market value" and at "factor cost". From the viewpoint of international use, however, the "market value" is of greater importance.