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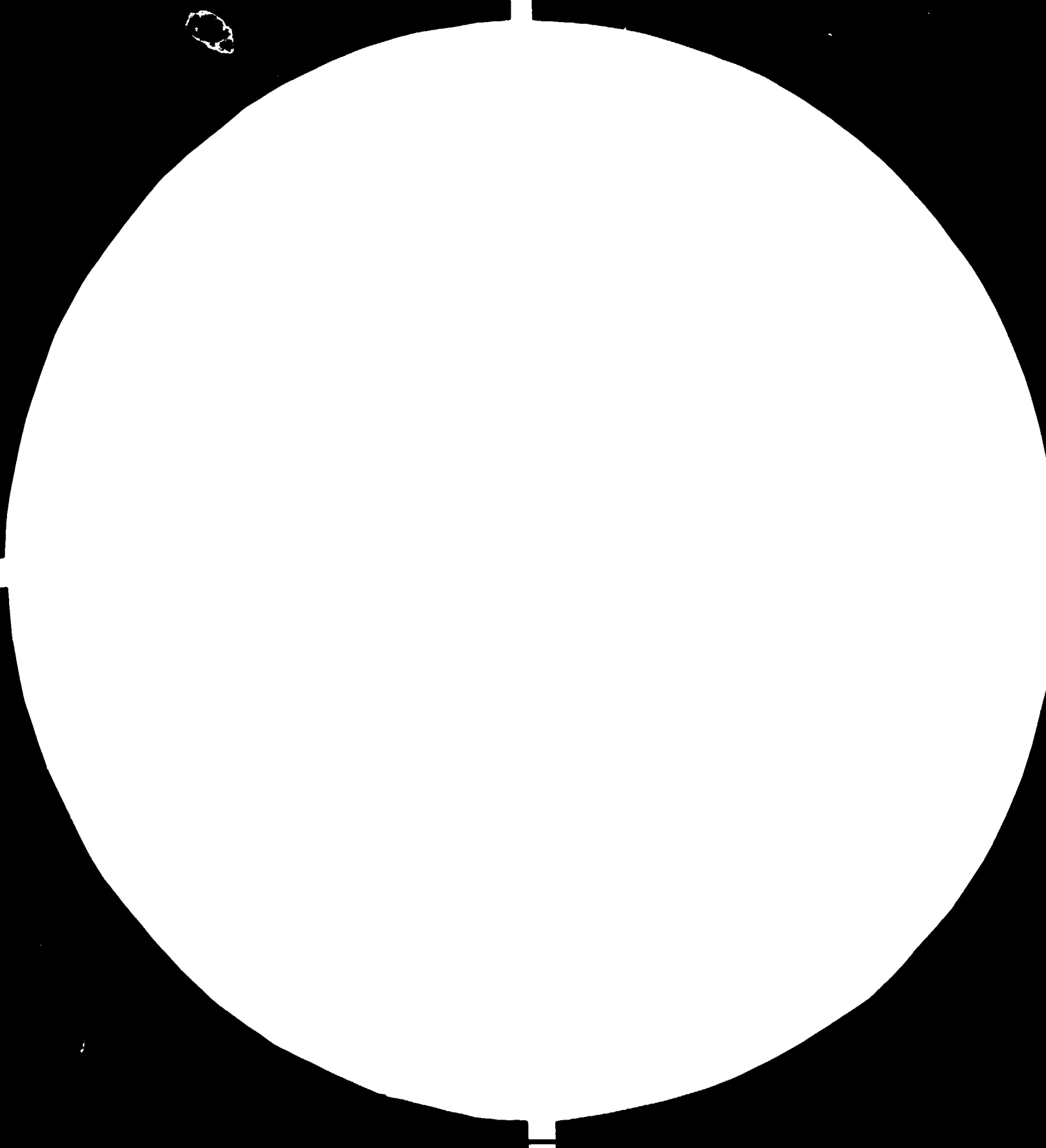
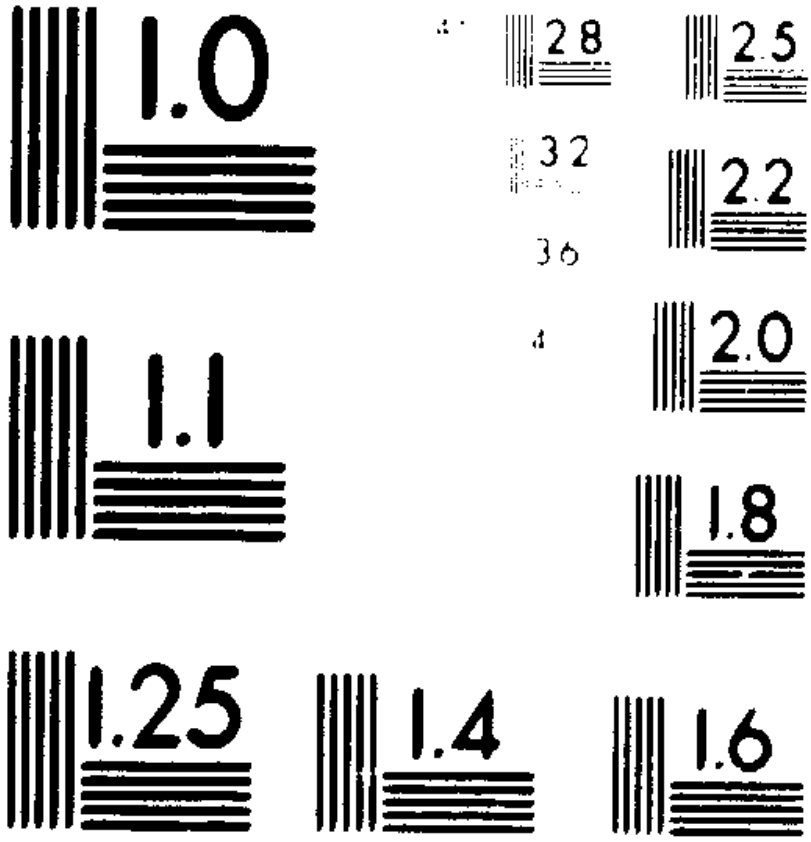




Report No. 34
October 1973

13281

Report on the Indonesian Industrial Statistics Data Collection and Presentation for the Small-scale and Household Industries

by

J.C. Spijkerman
UNIDO Consultant

TABLE OF CONTENTS

INTRODUCTION

The purpose of the mission is to make a study of the Industrial Statistics, especially for small-scale and household/cottage industries in Indonesia. Therefore it was specifically intended to:

- Evaluate the existing system of data-collection;
- Prepare a suitable format for periodic compilation of data;
- Suggest the set-up of a sample survey;
- Integrate the data relating to the household/cottage industries with the data of the other industrial sectors;
- Advise on the industrial census to be undertaken in 1984.

The foregoing document summarizes my findings concerning the Indonesian Industrial Statistics. Some recommendations, which could lead to improvements of the situation, are mentioned here.

In the absence of systematic annual data collection of the household industries, a study has been made of the various statistical inquiries for the other statistical sectors. As a matter of fact experience of the data collection for the small and medium-scale industries can be considered as very helpful for the statistical inquiry of the household/cottage industries.

For administrative and statistical purposes, the manufacturing industries in Indonesia are divided into three sectors:

- Household/cottage industries (1 - 4 employees)
- Small-scale industries (5 - 19 employees)
- Medium and large-scale industries (20 and more employees).

These sectors have been studied throughout this report.

SUMMARY

1. After having examined the existing publications concerning the Industrial Statistics of Indonesia and after having studied the methodology applied for these statistics, and more particularly the data collection by the authorities involved in Industrial Statistics, we have the following comments. Only small-scale and medium/large-scale industries are subject to an annual inquiry. Medium and large-scale industries are completely covered by the inquiry, but the small-scale industries are subject to an annual sample survey. The results of these inquiries are published annually by the Central Bureau of Statistics. Since 1979 the household/cottage industries, which covered at that time 62% of the industrial manpower, but accounted only for 13% of the Value Added, have been no more subject to an annual inquiry.

After visits had been undertaken to the provincial offices of the Ministry of Industry in Semarang, Yogyakarta and Bandung, as well as local offices in Jakarta, it would seem that the main problem concerns two fields:

(a) The registration of the statistical units or establishments, and
(b) The collection of data from the establishments.

2. The Registration of Manufacturing Establishments:

For medium and large-scale industries, which include only about 7,800 enterprises, a registration or directory is kept up-to-date throughout the annual industrial inquiry. The situation is quite different for small-scale and household industries. The last complete industrial census was held in 1974/75, and since that period no exhaustive inquiry has been made mainly due to the extremely high costs. Also no systematic up-dating of the census results has been made, therefore the list of manufacturing establishments is incomplete. Consequently, at present it is not possible to make a complete annual inquiry for these sectors unless a full census of manufacturing units involved is undertaken beforehand or at least at the same time.

3. The Problem of Data-Collection:

Another serious problem, which became apparent in all provincial offices of the Ministry of Industry, is the lack of a sufficient number of enumerators. Many staff members of these offices are acting as enumerators for the industrial inquiries, but funds are lacking for recruiting enumerators on a temporary basis. The questionnaires in use for the Industrial Inquiries, are far too detailed and complicated. Lack of instruction and systematic bookkeeping creates the need for manufacturers of assistance by enumerators, which takes far too much time.

Another source of difficulties for the Industrial Inquiry lies in the fact that the local collectors prepare only recapitulative tables of the questionnaires which had been completed by the establishments. This procedure might be useful, but the time required for transcribing the data means delays with data processing at the Central Office. Furthermore, due to the lack of an adequate presentation the local recapitulative tables have no practical use.

4. To improve the conduct of Industrial Censuses and Inquiries, the following recommendations are made:

(1) Promotion of a Central Registration Office for all manufacturing enterprises and establishments (see Chapter I).

(2) Conduct of a complete census of all small-scale establishments in the framework of the 1982 annual industrial inquiry.

(3) Preparation of a Work Flow Chart for industrial inquiries (see Chapter II).

(4) Preparation of questionnaire forms for integrated inquiry systems (see Chapter III).

(5) Drafting of revised Definitions for the Statistical Units.

(6) Preparation of instruction courses for enumerators, including an Enumerators Manual.

PART I - OBSERVATIONS

PRESENT SITUATION OF INDUSTRIAL STATISTICS IN INDONESIA:

Publications

Regular statistical documents concerning the manufacturing industry in Indonesia are published by the Central Bureau of Statistics in Jakarta.

These publications present results of two statistical inquiries in the industrial sector:

- Small-Scale Industries (latest issue 1979);
- Medium/Large-Scale Industries (latest issue 1980).

The results of an unique inquiry on household industries for the year 1979 was published in September 1980.

The following pages present summaries of the above statistical publications.

(1) Publication: Medium and Large-Scale Industrial Statistics 1980
Statistik Industri

Hasil Pengolahan Data Perusahaan Industri
Survey of Manufacturing Industries.

Editor:	Biro Statistik Central Bureau of Statistics
Published:	January 1982 (sixth survey since the 1974 census)
Coverage:	Medium and large manufacturing establishments engaging 20 or more persons.
Geographical area:	Total territory of Indonesia
Reference Period:	1980 Calendar year
Statistical Unit:	Establishment
Classification:	I.S.I.C. with ONE additional digit for local use.
Methodology:	Complete enumeration of all medium and large establishments was adopted in the 1980 survey.
Limitations in Coverage:	Manufacturing activites undertaken in association with primary agricultural production; tea, rubber and tobacco estates were included in the inquiry only when the activities were undertaken by establishments which were not part of estates.
Volume I:	In the first volume no quantitive information is presented, with the exception of the results on employment. Values only have been given.
Table of Contents:	Part I Overall summary of results by industry division (2 digits ISIC) Part II Results by major industry groups (3 digits ISIC) Part III Results for each individual industry group (5 digits ISIC)

PUBLICATION

MEDIUM AND LARGE INDUSTRIES
STANDARD TABLE FOR THE RESULTS
OF THE 1980 INQUIRY

INDUSTRY GROUP ISIC + i digit

	Description	Unit	Number/Values
I	Number of Establishments	No	----------
II	Total number of persons engaged	No	----------
III	Employment cost	ooo Rp	----------
IV	Value of fixed capital 1. Increase 2. Decrease	ooo Rp	 ------ ------
V	Input cost 1. Raw materials 2. Fuel, electricity and gas 3. Other materials 4. Repair and industrial services received 5. Rent of building, machinery and equipment 6. Non Industrial Services received 7. Total	ooo Rp	----
VI	Value of Gross Output 1. Value of goods produced 2. Value of electricity sold 3. Value of industrial services rendered 4. Gross Income for resale 5. Increase in stock of semi-finished goods 6. Receipts from non-industrial services rendered 7. Total	ooo Rp	----
VII	Value Added at market prices (VI.7 - V.7)	ooo Rp	- - - -
VIII	Indirect taxes	ooo Rp	- - - -
IX	Value Added at factor cost (VII - VIII)	ooo Rp	- - - -

MEDIUM AND LARGE

PUBLICATION

MAIN STATISTICAL DATA
FOR THE MEDIUM AND LARGE INDUSTRIES
FOR 1980

By Industry Division

	ESTABLISHMENT NUMBER	PERSONS ENGAGED NUMBER	GROSS OUTPUT 000.000 Rp.	VALUE - ADDED 000.000 Rp.
31 -	2.489	321.393	9.296.425	938.938.353
32 -	2.188	258.446	919.637	300.210
33 -	620	65.003	385.621	158.857
34 -	363	31.880	191.888	65.663
35 -	837	109.736	1.287.012	376.907
36 -	640	46.675	306.116	156.074
37 -	23	8.822	237.707	68.917
38 -	811	121.479	1.159.344	387.390
39 -	83	5.723	24.652	8.757
Total	8.054	969.187	6.818.405	2.465.140

Source : Survey of the manufacturing ndustries 1980
Central Bureau of Statistics.

MAIN STATISTICAL DATA

FOR THE MEDIUM AND LARGE INDUSTRIES

FOR 1979

By Industry Division

	ESTABLISHMENT NUMBER	PERSONS ENGAGED NUMBER	GROSS OUTPUT 000.000. Rp.	VALUE ADDED 000.000 Rp.
31 -	2.490	294.441	1.614.688	674.106
32 -	2.147	227.787	669.272	207.104
33 -	633	51.221	185.274	62.704
34 -	358	29.876	127.814	49.277
35 -	823	103.803	890.848	264.480
36 -	675	43.000	207.537	115.037
37 -	22	8.247	215.154	59.145
38 -	796	105.686	696.257	223.587
39 -	86	5.958	19.717	4.914
Total	7.960	870.019	4.630.614	1.660.459

Source :

(2) Publication: Small-Scale Industrial Statistics
Statistic Industri Kecil 1979

Editor:	Biro Pusat Statistik Central Bureau of Statistics
Published:	March 1982
Coverage:	Small-scale manufacturing establishments engaging 5 - 19 persons
Geographical Area:	Total territory of Indonesia, except East Timor
Statistical Unit:	Establishment
Classification:	ISIC with ONE additional digit

The publication contained the following tables:

Table of Contents:

Table II
Number of Persons engaged, wages and salary
Total man-days in 1979 - by industry division

Table III
Value of Intermediate Input in 1979, by industry division

Table IV
Value of Output and Value Added in 1979, by industry division

MAIN STATISTICAL DATA FOR THE SMALL-SCALE INDUSTRY

FOR 1979

By Industry Division

	ESTABLISH-MENTS NUMBER	PERSONS ENGAGED	GROSS OUTPUT 000.000 Rp.	VALUE ADDED 000. Rp.
31. Food/Drinks	57.280	403.517	344.684	82.489
32. Textile	9.692	91.402	73.929	27.684
33. Wood Furn.	15.144	110.932	71.395	29.258
34. Paper	1.263	11.931	11.082	4.659
35. Chemicals	1.786	17.363	22.864	8.756
36. Ceramics/Glass	19.814	133.687	37.648	18.549
37. Basic Metal	-	-	-	-
38. Metal Products	6.814	49.527	34.918	14.151
39. Misc.	1.231	8.676	4.410	1.776
Total	113.024	837.035	600.931	187.323

Source : Small-Scale Industrial Statistics 1979
Central Bureau of Statistics

SMALL SCALE INDUSTRY

PUBLICATION

MAIN STATISTICAL DATA FOR THE SMALL-SCALE INDUSTRY FOR 1979
BY PROVINCES

	ESTABLISH-MENTS NUMBER	PERSONS ENGAGED NUMBERS	GROSS OUTPUT 000 Rp. a.	VALUE ADDED 000 Rp. b.
PROVINCE				
1. Daerah Instimewa Aceh	737	5.043	3.831.693	1.479.388
2. Sumatera Utara	3.414	24.967	40.110.764	10.489.743
3. Sumatera Barat	4.020	23.901	14.286.512	4.073.652
4. R i a u	1.032	7.194	8.665.407	2.410.264
5. J a m b i	761	5.464	3.841.661	1.776.921
6. Bengkulu	70	528	389.930	209.660
7. Sumatera Selatan	1.830	16.918	16.699.639	5.119.874
8. Lampung	6.816	48.348	22.503.770	7.793.986
9. DKI Jakarta	3.337	31.457	43.198.959	16.843.793
10. Jawa Barat	18.714	136.849	123.690.340	32.556.395
11. Jawa Tengah	20.407	160.812	98.338.410	32.449.106
12. D.I. Yogyakarta	2.775	21.510	13.199.094	3.931.872
13. Jawa Timur	25.781	186.334	136.319.913	35.974.176
14. Kalimantan Barat	1.166	6.019	4.707.042	1.969.507
15. Kalimantan Selatan	1.465	8.597	5.588.333	2.669.283
16. Kalimantan Tengah	597	4.285	6.786.049	2.307.827
17. Kalimantan Timur	192	1.648	2.930.466	1.496.533
18. Sulawesi Utara	2.994	34.148	9.228.813	3.544.316
19. Sulawesi Tengah	3.485	9.773	829.694	468.354
20. Sulawesi Tenggara	1.548	22.050	3.974.687	2.010.298
21. Sulawesi Selatan	4.889	21.912	16.302.611	6.394.199
22. B a l i	2.513	18.979	9.330.657	3.835.280
23. Nusa Tenggara Barat	3.833	27.474	11.357.358	3.135.854
24. Nusa Tenggara Timur	331	2.889	2.390.907	729.106
25. M a l u k u	234	1.875	851.006	414.801
26. Irian Jaya	83	663	1.022.122	397.973
JUMLAH - TOTAL	113.024	837.035	600.931.353	187.322.978

(a). At Market Prices

Source : Small Scale Industrial Statistics 1979
Central Bureau of Statistics

Publication: Small-scale Industrial Statistics
General Remarks to the 1979 Publication

This small-scale manufacturing survey is a continuation of the 1974/75 Industrial Census. The survey was carried out in two stages. Stage I took place in April and Stage II in October 1979. The data presented in this publication is the average of Stage I and II results.

Scope of Survey: This small-scale manufacturing survey was carried out in all areas of Indonesia, except East Timor, and covered the activities of manufacturing establishments, included in the small-scale manufacturing group, i.e. establishments having 5 to 19 workers, paid or unpaid, regardless of whether establishments were using machinepower or not.

Methodology: A. Sampling Procedure:

The survey of small-scale manufacturing applied two sample methods, i.e.

- Area sample (to select villages);
- Establishments survey.

To: Area Sample

The area sample was not implemented in the same way in all provinces; one particular method was used in 8 dominant provinces and another one was applied in the 18 other provinces. In the 8 dominant provinces the survey studied changes in number of establishments in the sampled villages, e.g. the number of new establishments under coverage in the 1974/75 survey, and those which had moved in or to the villages, or out from the villages. The area sample in the other 18 provinces only listed small establishments operating in the sampled village and they were then enumerated. The application of two different methods was due to the following:

- The 1974/75 Industrial Census showed that the dominant provinces covered ± 84% of all small-scale manufacturing establishments in Indonesia.
- Lack of funds made it impossible to carry out the survey in the above manner for the other 18 provinces.

In each province the villages were grouped into 5 strata, i.e. the group of villages having 1-9, 10-19, 20 or more small-scale manufacturing establishments. This stratification of villages is based on the results of the 1974/75 census.

The Survey:

The survey in the 8 dominant provinces was basically carried out as follows:

- Listing of small-scale manufacturing establishments in the selected villages.

- Matching of the listing with the 1974/75 census listing in order to obtain data on new establishments.

For the other 18 provinces the procedure was:

- Listing of all active small-scale manufacturing establishments in the sample villages.
- Survey of all small-scale manufacturing establishments in the sample villages regardless to their status in the 1974/75 census.

Establishments Survey:

This survey took place in 8 dominant provinces in both stage I and stage II. The names and addresses of the establishments were selected by the Central Bureau of Statistics, based on the results of the 1974/75 census.

For the 18 other provinces stage I only was applied:

Implementation Survey:

The small-scale manufacturing establishment survey was carried out in two stages, stage I and stage II. For the 8 dominant provinces the survey was a combination of area sample and establishment survey, while for the other 18 provinces stage I was the establishment survey and stage II was the are sample.

During stage I the sample size was as follows:

a) In the 8 dominant provinces the number of villages covered in the area sample was 425, while 4,150 establishments were covered in the establishment survey.

b) 1,377 establishments were surveyed in the other 18 provinces.

During stage II the sample size was as follows:

a) In the 8 dominant provinces 574 villages were surveyed in the area sample and 4,356 establishments were covered in the establishment survey.

b) In the 18 other provinces 664 villages were sampled.

From the two stages of the survey two sets of estimates were obtained. An average data was obtained by averaging the results from stage I and from stage II.

Estimation for one year (1979): Data collected from small-scale manufacturing establishments was for the past three months. Thus, in order to obtain a picture for one year, the usual estimation calculations were made.

(3) Publication: Household/Cottage Industry
Industri/Kerajinan Rumah Tangga
National Socio-Economic Survey 1979
Survey Social Ekonomi Nasional

Editor: Biro Pusat Statistik
Central Bureau of Statistics

Published: September 1982

Geographical Area: Java and Madura
Outer Java, Indonesia

Coverage/Statistical Unit: Household manufacturing establishments engaging 1 - 4 persons.

Clasification: Six industrial branches
(2 digits of ISIC)

Table of Contents of the publication:

Table 1
Number of household/cottage industry
Number of workers
- by type of industry
- urban
- rural
- total

Table 2
Average production value per household/cottage industry during one month (in Rupiah)
- by type of industry
- urban
- rural
- total

Table 3
Average expenditure per household/cottage industry during one month
- by type of industry
- by type of expenditure

Table 4
Percentage of expenditure in accordance with production.

Table 5
Percentage number of household/cottage industry
- by type of industry
- by type of capital received.

Table 6
Percentage number of household/cottage industry
- by type of industry
- by type of difficulties in enlarging establishments.

General Remarks: This small-scale manufacturing survey is a continuation of the 1984/85 Industrial Census. The survey was carried out in two stages: stage I took place in April and stage II in October 1979. The data presented in this publication is the average of stage I and stage II results.

Scope of Survey: This small-scale manufacturing survey was carried out in all areas of Indonesia, except East Timor, and covered the activities of manufacturing establishments which are included in the small manufacturing group, i. e. establishments with 5 to 19 workers, paid or unpaid, regardless of whether the establishments were using machine power or not.

Methodology: A. Sampling Procedure:

The survey of small-scale manufacturing applied two sample methods, i.e.
- Area sample (to select villages)
- Establishments survey.

To Area Sample:
The Area Sample was not implemented in the same way in all provinces, but was done in one way in 8 dominant provinces and in another way in the 18 other provinces. In the 8 dominant provinces the survey studied changes in number of establishments in the sampled village, e. g. the number of new establishments under coverage in the 1974/75 census, and those which had moved in or out of the villages.

The area sample in the other 18 provinces only listed small establishments operating in the sampled villages and were then enumerated. The two different methods were due to the following:
- The 1974/75 Industrial Census showed that the dominant provinces covered ± 84% of all small-scale manufacturing establishments in Indonesia.
- Lack of funds made it impossible to carry out the survey in the same manner as for the other 18 provinces.

In each province the villages were grouped into 5 strata, i.e. the group of villages having 1-9, 10-19, 20 or more small manufacturing establishments. This stratification of villages is based on the results of the 1974/75 census.

The Survey: The survey in the 8 dominant provinces was basically carried out as follows:

- Listing of small-scale manufacturing establishments in selected villages;
- Matching of the listing with the 1974/75 census in order to obtain data on new establishments.

For the 18 provinces the procedure was:

- Listing of all active small-scale manufacturing establishments in the sample villages.
- Surveying of all small-scale manufacturing establishments in the sample villages regardless of their status in the 1974/75 census.

Establishments Survey:

This survey took place in the 8 dominant provinces in both stage I and stage II. The names and addresses of establishments were selected by the Central Bureau of statistics based on the results of the 1974/75 census. The establishments survey was only carried out in stage I for the 18 other provinces.

HOUSEHOLD/COTTAGE INDUSTRIES

INDONESIA

TABLE I

Number of Household/cottage industries Workers and average Worker per industry

Type of Industry	Urban and Rural		
	Nº. of industry	Nº. of worker	Average worker per industry
I. Food, beverage and tobacco.	617.668	I.362.762	2,2I
2. Textiles, wearing apparel and leather.	I77.246	293.I98	I,65
3. Wood and wood products.	434.376	735.8I6	I,69
4. Non metal mineral excluding petroleum and coal	I04.997	22I.II3	2,II
5. Metal and metal products	32.009	79.447	2,48
6. Others	5I.506	I02.497	I,99
Total:	I.4I7.802	2.794.833	I,97

TABLE 2

Average of Production Value per Household/cottage industries During a month In Rupiah

Type of Industry	Urban and Rural		
	Goods	Sources	Total
I. Food, beverage and tobacco.	57.00I	2.448	59.449
2. Textiles, wearing apparel and leather.	2I.95I	2.022	23.973
3. Wood and wood products.	I9.96I	348	20.309
4. Non metal mineral excluding petroleum and coal	35.503	I7	35.520
5. Metal and metal products	I07.054	4.I74	III.228
6. Others	95.I72	6.074	I0I.246
Total:	42.I95	I.743	43.938

HOUSEHOLD/COTTAGE INDUSTRIES

Table 3

Average expenditure per household/cottage unit during one month (in rupiah)

	Rp.
Wages and salaries	2.232
Raw materials	22.881
Fuels lubricants etc.	2.250
Repairs and maintenance	194
Transportation	536
Picevage, cerd etc.	286
Interest	49
Services	313
Other	299
Total	26.808

Table 4

Percentage number of household/ cottage industry by type of capital received

		%
Own capital		95.25
Bank	1.38	
Co-operatives	1.26	
Other	1.99	
Bank + Co-operatves	0	
Bank, Co-operatives and Other	0.12	
Total Capital received		4.76
Total number of Household/Cottage Industry		100.00

HOUSEHOLD/COTTAGE INDUSTRIES

Table 5

Percentage number of household/ Cottage industry by kind of difficulties in getting raw materials

	%
No difficulties	51.07
Kind of difficulties:	
- Distance too far	10.36
- Too expensive	6.08
- Difficulty in getting raw materials	15.92
- Too far and too expensive	0.82
- Too far and difficulty in getting raw materials	1.16
- Too expensive and difficulty in getting raw materials	1.08
- Others	13.48
Total number of household/ Cottage units	100.00

Table 6

Percentage number of household/Cottage industry in accordance with type of difficulties in enlarging the establishment

	%
Limited capital	44.13
Difficulty in marketing	9.16
Limited knowledge	2.04
Limited capital and difficulty in marketing	3.77
Limited capital and difficulty in getting raw materials	2.67
Limited capital and limited knowledge	0.59
Difficulty in marketing and getting raw materials	0.55
Difficulty in marketing and limited knowledge	0.21
Getting raw materials	0.31
Other difficulties	24.75
Total number of household/Cottage units	100.00

HOUSEHOLD/COTTAGE INDUSTRIES

CONCLUSIONS

A summary of the household statistics publication was presented in the preceding chapter.

In order to be able to calculate the proportion of the households industries in respect to the total manufacturing activities of the country, the three following tables have been prepared :

TABLE I MAIN INDICATORS FOR THE INDUSTRIAL SECTORS 1979
The total figures for Indonesia by industrial sector as well as the cummulative totals in value for the year 1979. The data have been extracted from the CBS publications

	Number of Establishments	Number of pers. engaged	Gross Output	Input Costs	Value Added
Household Ind. 1 - 4 persons engaged	1.417.802	2.794.833	747.542	456.099	291.442
Small Scale Industry 5-19 pers.eng.	113.024	837.035	600.931	413.608	187.322
Medium Scale Industry 20 and more pers. eng.	7.960	870.019	4.630.614	2.970.155	1.660.459
Total Manufacturing Industries	1.538.786	4.501.887	5.979.087	3.839.862	2.139.223

TABLE II PERCENTAGE FOR THE MAIN INDICATOR FOR THE INDUSTRIAL SECTORS TO THE TOTAL MANUFACTURING INDUSTRIES
In this table the real values of table I have been transformed into percentages showing the proportion of each industrial sector in respect to the total main data.

	Number of Establishments	Number of pers. engaged	Gross Output in 10^6 Rp.	Input Costs in 10^6	Value Added in 10^6 Rp.
Household Industries 1 - 4 persons engaged	92.14 %	62.08 %	12.50 %	11.88 %	13.62 %
Small Scale Industries 5 - 12 persons engaged	7.34 %	18.59 %	10.10 %	10.77 %	8.76 %
Medium and large Ind. 20 and more pers. engaged	0.52 %	19.33 %	77.45 %	77.35 %	77.62 %
Total Manufacturing Industries	100 %	100 %	100 %	100 %	100 %

INDUSTRIAL SURVEYS 1979

TABLE III RATIONS FOR MAIN INDICATORS BY INDUSTRIAL SECTOR

The number of employees per establishments as well as the Gross Output and Value Added per person engaged have been calculated for each sector. These data demonstrate the tremendous differences of the productivity in the three industrial sectors.

	NUMBER of Emoloyees per Establishment	Gross Output per person engaged	Value Added per person engaged	Ratio Value Added to Gross Output
	NUMBER	Rp. /YEAR	Rp./YEAR	PERCENTAGE
Household Industries	1.69	267.500	104.500	38.88 %
Small Scale Industries	7.41	718.000	223.800	31.16 %
Medium/Large Industries	109.3	5.012.100	1.909.000	38.09 %

PART II - RECOMMENDATIONS

In Part II detailed recommendations are given by the consultant which could lead to improvements in the preparation of Industrial Statistics in Indonesia.

CHAPTERS:

CHAPTER II.1 - CENTRAL INDUSTRIAL REGISTER

The motivation for the centralised registration of all manufacturing enterprises and establishments is outlined in this chapter. Also the characteristics, the purpose and the problems encountered with the creation of such a register are described therein.

The recommendations of the consultant for the creation of such a system at this moment is motivated by the fact that it is a rational solution for a permanent problem at the right moment. The fact is that the actions for the assistance and the development of the small-scale industry requires fundamental measures; the Centralized Registration could be one of them.

THE CENTRAL INDUSTRIAL REGISTER

A. Introduction

The Government creates a central agency for the REGISTRATION of all manufacturing industrial establishments and enterprises. The function of the agency will be the maintenance and the periodical publication of a REGISTER of all existing Industrial Manufacturing Establishments and Enterprises of the Indonesian Republic.

The information collected and maintained by the agency will concern exclusively the IDENTITY AND THE LOCALIZATION of the manufacturing enterprises and establishments, according to the forms given in Annex I and II.

The registration agency will create and keep up-to-date a card system or file containing only the IDENTITY and address of the enterprises and establishments. A special follow-up number will be given to the unit on this occasion.

Registering of industrial enterprises and establishments is essential for the successful implementation of a programme of industrial statistics, whatever method of enumeration is used: Whether the inquiries are carried out by complete coverage, sampling methods or a combination of the two, or whether the canvassing is by mail or field operation. It is obvious that the first inquiry to come should start with the up-dating of the existing directory and to transform it into a permanent register and keep up-to-date on a permanent basis.

In order to make the permanent registration system successful, some basic points must be kept in mind:

(a) The agency must be independant from all departments of the Ministry and must possess its own authority to proceed.

(b) The agency does request from the enterprises and establishments only the information laid down in the form of which samples are annexed to this note. The information concerns only the IDENTITY of unit, its physical location, form of ownership and size.

(c) In order to guarantee smooth functioning of the up-dating system, the agency will never request the respondents to supply information that goes beyond the purely IDENTITY information.

(d) The agency must operate on a commercial budget. Users from all departments will have to pay for the specific request of information from the agency.

It is highly recommended to set up a computerised registration system. Only a few of the numerous advantages of a computer system are listed below:

- Substitution of the directories and registration files in the various departments of the Ministry and agencies through a computer listing.
- The possibility of day-to-day up-dating of the register.
- The possibility of providing the users with pieces of information on establishments and enterprises, according to the users' specific needs.

B. Characteristics

The registration of all manufacturing establishments and enterprises will be effected by an autonomous agency, created for this purpose, by a special Government decree.

The registration authority covers the whole territory of the country and will gradually substitute existing registration systems. Every unit will get a new REGISTRATION number. The registration form will contain exclusively non-operational information concerning the IDENTITY of the establishment and the enterprise, such as name, address, location, industrial branch and size of the unit.

C. Purpose of the Central Industrial Register

The purpose of a registration file is the ready availability of a complete list of enterprises and establishments, which is up-to-date, reliable and which is at the disposal of all Governmental and private users upon request. It is considered the framework or basic element for all economic inquiries and administrative contacts with the entrepreneurs. No efficient inquiry is possible without an up-to-date register. The register contains only information known to the public, no confidential data are included and therefore it is open to all users. In order to avoid too many requests the cost-price of the listing will be charged.

D. The Unit to be Registered

Since the register is aiming at a complete coverage of all manufacturing units, it is of primary importance that from the outset a clear definition of the units is given. The experience with statistical inquiries has shown that

the most adequate unit is the Establishment, which means a factory, workshop etc. For collecting data on groups of factories, workshops etc., belonging to the same owner, it is useful to introduce also the Enterprise as a statistical unit. The definitions adopted by the Statistical Office of the United Nations are as follows:

The establishment is defined in operational terms as the Unit that is engaged in "the production of the most homogeneous group of goods and services, usually at one location, but sometimes over a wider area, for which separate records are available that can provide data concerning the production of these goods and services and the materials, labour and physical resources used in this production".

The establishment may be a part of an enterprise which engages in more than one kind of activity at a single location and the organization and record keeping practices of the enterprise may be such that separate data cannot be readily compiled on the different lines of activity.

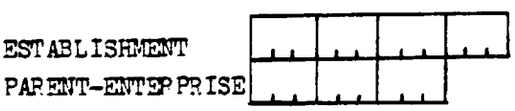
For the cottage and small-scale industry the following definition might be more adequate:

The typical establishment is a single economic unit, engaged in a single kind of business, under a single ownership, at a single location. Here the establishment and the enterprise are the same. The difference between an enterprise and an establishment lies in the fact that the enterprise does not necessarily possess a physical location. The basic characteristic for the enterprise is the legal entity.

The ENTERPRISE could be defined as "a unit of production of goods and commercial services, generally provided with a juridical existance and autonomous accounting system and a fiscal identity".

E. Registration Number

Every establishment will receive a new number when registered for the first time in the Central Industrial Register. The number is a simple follow-up without any significance. It will not be related to the activity, the geographical location, the legal status or size of the unit. The number will be unique and will never be used again, even after the unit has stopped all activities. The number will be inalienable, it cannot be transferred to another unit. Changes of ownership, activity or localization will not affect the number. The establishment will keep the same number as long as it legally exists. It is recommended that the number be composed of 12 figures for the establishment and nine figures for the parent enterprise. It is also recommended that the nine first figures of the establishment should correspond to those of parent-enterprise.



The number should be mentioned on all letterheads, documents, invoices and accounts sent out by the establishment.

No financial action can be taken without mentioning the registration number. The number will be a substitute for all previous numbers by various administrations and agencies.

F. The Creation of the Registration File System

The most efficient method for the creation of an Enterprises Establishment Register is the complete field enumeration. Thus, for the set-up of the Register, two operations are necessary:

1. The preparation of a provisional directory;
2. The field enumeration.

A provisional register or directory can be prepared by using and comparing various former directories, such as:
- listings of the latest industrial census;
- industrial license records;
- manpower records of the Ministry of Labour.

Also, use can be made of existing directories available with

- Chambers of Industry and Commerce;
- the Industrial Federation etc.

It is recommended to prepare this provisional directory at the census area level, but a detailed workplan has to be worked out. For the second operation, the field enumeration which, as a matter of fact is a real census of the establishments, there are two possibilities:

1. A simple establishment census;
2. A census combined with the industrial inquiry.

To 1.: For a complete census, the usual procedure is as follows:

The country is divided into census areas (clusters). The enumerators assigned to an area pay a visit to each establishment mentioned in the provisional directory. They compare the information given on the card with the latest information provided by the establishments and the enumerators make the required amendments and corrections.

Secondly, they cancel the registration card for those establishments which do no longer exist.

Thirdly, they explore the areas and visit the establishments which are not mentioned in the provisional list or directory. For a newly discovered establishment a first registration form is completed in agreement with the owner. After having gone through the whole census, the enumerators return the corrected cards, the cancelled cards and the new registration

cards to the central office of the census area, which transfers them to the Central Registration Authority.

To 2.: In case the census is combined with the industrial inquiry, the same operation as for the census will be made, but on the same occasion every establishment returns a completed questionnaire concerning the industrial activities of the establishment to the enumerator. In many cases the enumerator will even assist in completing the questionnaire. However, in case of such a combined operation it is highly recommended to maintain a separation between the registration of the establishment and the industrial inquiry. The first page of the questionnaire is the most important document required by the Registration Office, and will not contain any information on the operational activities of the unit.

G. Maintenance and up-dating of the Register

The maintenance and up-dating of the Register must be carefully planned from the beginning. The registration of new establishments must be organized by establishing contracts with the authorities involved, e.g. the licence offices and the taxation offices. Also, very useful information can be obtained from local public services, such as the municipality administration, the electricity authorities and the water supply organization. The parent-enterprise will have the obligation to inform the Central Industrial Registration of changes occuring in the list of establishments belonging to them.

A special procedure must be worked out to take note of those establishments which have gone bankrupt. The Central Industrial Register staff must check regularly against the list of bankruptcies in the LEMBARAN NEGARA.

H. Promotion of the C.I.R.

The promotion of the C.I.R. vis-à-vis all Ministries and Government administration bodies is of great practical value. This may be initiated by sending a copy of every new issue of the list of enterprises and establishments to all Government institutions.

A certain period of time will be required before potential users will get accustomed to using the services of a central register. However, the advantages of a centralised register are numerous, such as:

- Permanent availability of an up-to-date register to all potential users.
- Improvement in the exchange of information between the administration bodies.
- Time saving and cost-price reduction.

ESTABLISHMENT

REGISTRATION FORM

REGISTRATION NUMBER

1 1 1 0	ESTABLISHMENT				
1 1 2 0	PARENT-ENTERPRISE				
1 2 0 0	GOVERNMENT LICENSE NUMBER				
1 3 0 0	BUSINESS NAME OF THE ESTABLISHMENT				
	LOCATION OF THE ESTABLISHMENT				
1 3 1 0	Street Number				
1 3 2 0	CITY, TOWN, or VILLAGE				
1 3 3 0	DISTRICT				
1 3 4 0	PROVINCE				
1 4 0 0	LEGAL STATUS of the ESTABLISHMENT				
1 5 0 0	FORM OF OWNERSHIP				
1 6 0 0	MACHINERY AND EQUIPMENT PURCHASE VALUE				
1 7 0 0	INDUSTRIAL BRANCH OF MAJOR ACTIVITY				
1 7 1 0	LIST OF MAJOR PRODUCTS				
2 0 0 0	TOTAL NUMBER OF PERSONS ENGAGED				
	NAME of the OWNER of the ESTABLISHMENT PRIVATE PARENT-ENTERPRISE :				
	DATE OF DECLARATION SIGNATURE :				

ENTERPRISE REGISTRATION FORM

1 1 0 0	PARENT-ENTERPRISE	
1 2 0 0	GOVERNMENT LICENSE NUMBER	
1 3 0 0	BUSINESS NAME OF THE PARENT-ENTERPRISE	
		REGISTRATION NUMBER
1 1 1 1	NAME OF THE ESTABLISHMENT ..... Address CITY TOWN PROVINCE	
1 1 1 2	NAME OF THE ESTABLISHMENT ..... CITY TOWN PROVINCE	
1 1 1 3	NAME OF THE ESTABLISHMENT ..... Address CITY TOWN PROVINCE	
1 1 1 4	NAME OF THE ESTABLISHMENT ..... Address CITY TOWN PROVINCE	
1 1 1 5	NAME OF THE ESTABLISHMENT ..... Address CITY TOWN PROVINCE	

CHAPTER II.2 - CENSUS OF THE SMALL-SCALE INDUSTRIES

The pressing need for a complete census of the small-scale manufacturers enterprises and establishments is recognized and consequently recommended by the consultant.

The census in question will make it possible to realise the first valuable statistical inquiry about the small-scale industry since eight years. But also, this census will initiate the Centralized Industrial Register described in Chapter I.

A. Census of Small-scale Industry

The results of the annual inquiry for small-scale industries for the year 1979 were published in March 1982.

The results for the year 1980 are being processed and will be published soon.

These annual inquiries were executed as sample surveys. Unfortunately, the basic framework for these sample surveys is a list of establishments extrapolated from the 1974/75 industrial census. It might be acceptable to use such an extrapolated list during three or four years. The system might also be accepted in case only total data progressions are requested. However, the structural changes of the industry will never be reflected by simple mathematical calculations. Reference is made to the Recommendations for the 1983 World Programme of Industrial Statistics by the Statistical Office of the United Nations, which reads as follows:

The Council of the Statistical Commission: "3. Strongly urges that all countries should compile basic data on industry for 1983 or a year close to 1983, taking into account as far as possible the international recommendations on this subject, and recommends that developing countries should avail themselves of technical co-operation whenever necessary in order to complete the Programme successfully; 4. Requests the Secretary-General, in close co-operation with the regional commissions, the specialized agencies, the United Nations Industrial Development Organization and other multilateral and bilateral agencies, to co-ordinate technical co-operation activities in support of the Programme;"

In paragraph 10 of the same document one reads: "An infrequent establishment census is a key element in an integrated programme of economic statistics ... For countries initially developing a system of industrial statistics a full-coverage census is an essential first step ... Countries which do not maintain up-to-date registers should undertake a complete canvass for 1983 as a means to up-date the register of recognizable establishments and to obtain complete industrial and geographical detail".

In paragraph 12 it is also said: "The annual, quarterly and monthly statistical programmes depend upon the development of an adequate directory of establishments based on full-coverage census ... It is also important that the register established from the census should be systematically up-dated from various sources, both within and outside the statistical agency."

3. The Execution of the Full-Coverage Census

According to the 1979 inquiry the small-scale industry sector consists of about 113.000 establishments. The following table indicates the budget requirements for such a census. It is assumed that the census will be combined with the annual industrial inquiry for the small industry. Furthermore, taking into account that a simplified questionnaire will be used (see Chapter II.4), the average number of establishments receiving a visit from the enumerators is fixed at two units per day. Further parameters for the calculations are:
- a monthly salary of the enumerator of Pp. 30,000;
- a transport allowance of Pp. 200 per day.

One year correspondens to 280 working days, which again corresponds to 140 working days for the six months of duration of the inquiry, in certain provinces. The estimates are based on the number of establishments to be enumerated by province.

HOUSEHOLD - COTTAGE INDUSTRIES

ESTIMATED COST OF ESTABLISHMENT ENUMERATION

	URBAN AND RURAL AREAS		URBAN AREAS ONLY	
	FULL COVERAGE CENSUS		FULL COVERAGE CENSUS	FULL COVERAGE CENSUS AND ANNUAL INDUSTRIAL INQUIRY
	ALL INDUSTRIES (1)	ALL INDUSTRIES LESS FOOD+BEVERAGES INDUSTRIES (2)	ALL INDUSTRIES (3)	ALL INDUSTRIES (4)
NUMBER OF ESTABLISHMENTS	965.187	464.069	86.386	86.386
NUMBER OF VISITS PER DAY	4	4	4	2
NUMBER OF MAN-DAYS REQUIRED	241.300	116.020	21.596	43.193
DURATION OF ENUMERATION	280 DAYS	280 DAYS	60 DAYS	150 DAYS
NUMBER OF PERSONS REQUIRED	862	414	360	288
COST PER MAN-DAY	2.500 Rp	2.500 Rp	2.500 Rp	2.500 Rp
TOTAL COST OF ENUMERATION	603.250 Rp	290.050 Rp	108.280 Rp	108.280 Rp

The purpose of this table is to present an estimation for the cost of the field operations only, to show the various possibilities for an enumeration.

Col. 1: This column represents the total cost for a full-coverage census for Java and Madura in regard to Household-Cottage establishments. Information for the Central Industrial Register only will be collected. No production or other operational data are requested.

Col. 2: In this column a partial census is represented. This means that the food, beverages and tobacco industrial establishments are to be excluded.

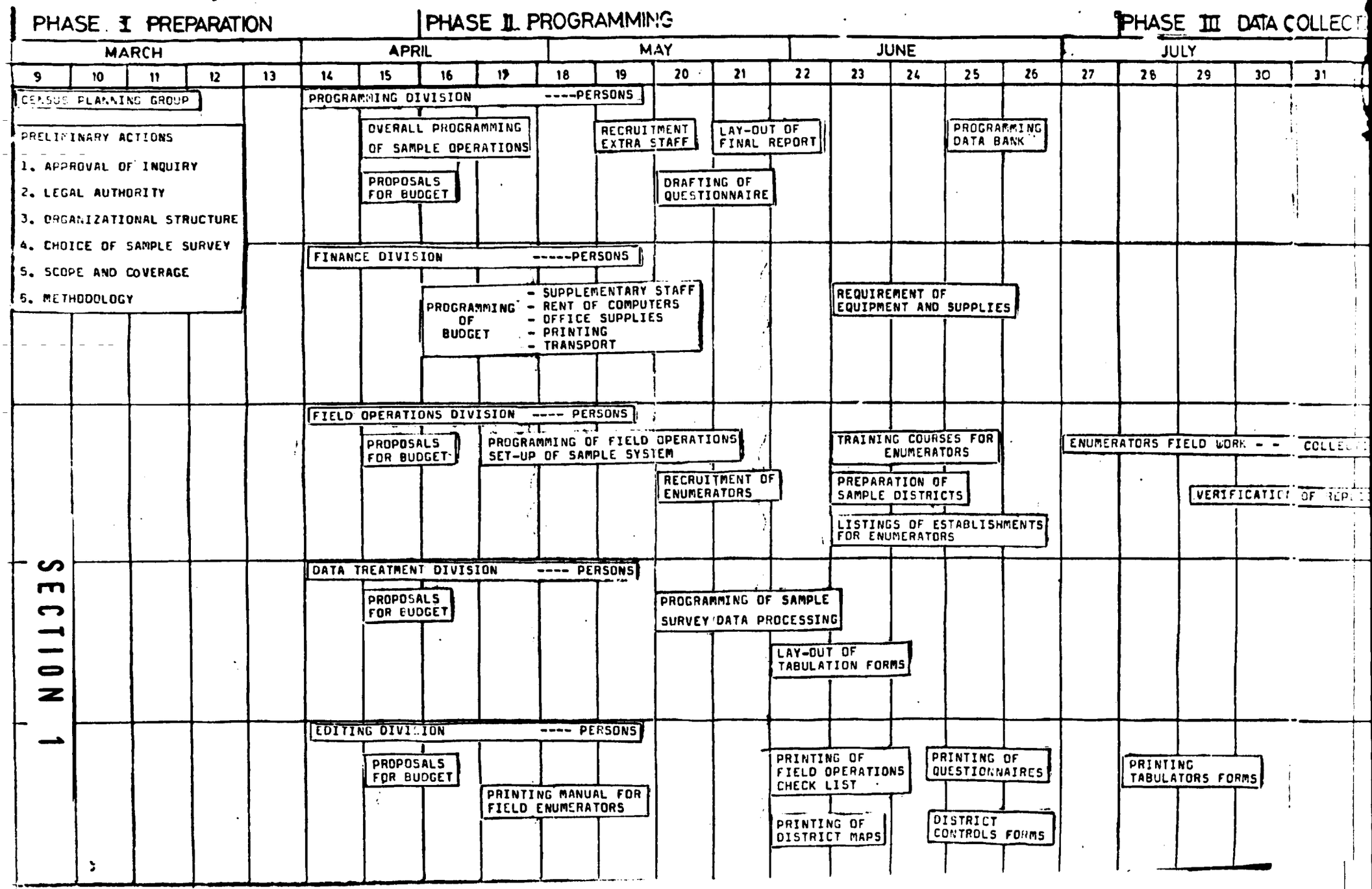
Col. 3: Herein are given the data for a simple census operation. The result will be a complete listing or Directory of all the Household-Cottage industrial establishments for the urban area. This could be the basis for a short-term sample survey.

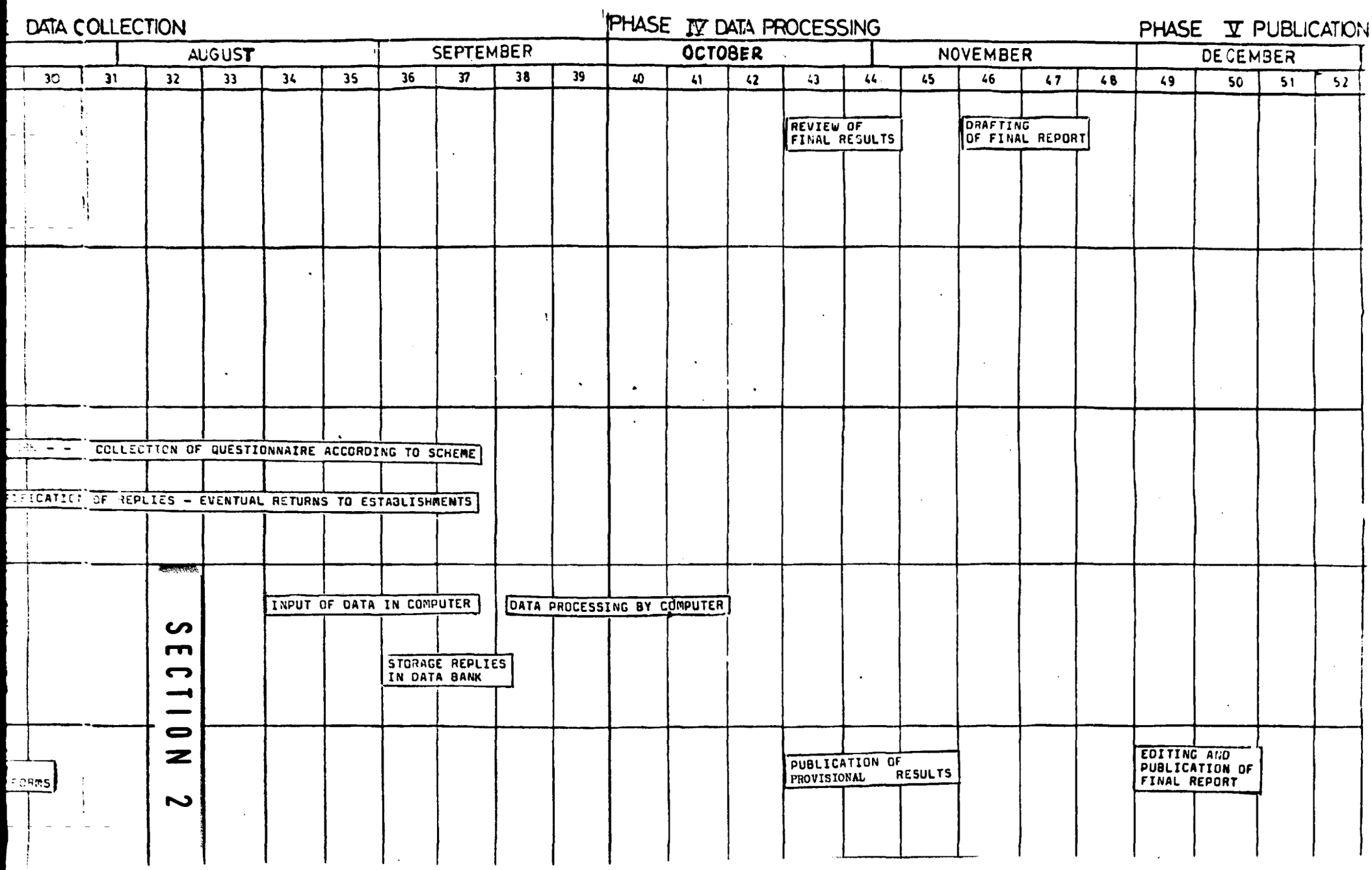
Col. 4: The data in this column indicates the cost and number of enumerators involved in a combined census industrial inquiry operation. I.e. not only the identity of the establishment is required but also the operational data, such as production, input-cost, gross-output, employment and salaries. This is a complete industrial inquiry.

CHAPTER II.3 - WORK-FLOW CHART

For the realization of a complete inquiry the consultant recommends that a work programme be prepared in form of a work-flow chart, as shown in this chapter.

For each badge on the work-flow chart an explanatory note is given in the annex.


PHASE I PREPARATION
PHASE II PROGRAMMING
PHASE III DATA COLLECT
MARCH
APRIL
MAY
JUNE
JULY
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
CENSUS PLANNING GROUP
PRELIMINARY ACTIONS
1. APPROVAL OF INQUIRY
2. LEGAL AUTHORITY
3. ORGANIZATIONAL STRUCTURE
4. CHOICE OF SAMPLE SURVEY
5. SCOPE AND COVERAGE
6. METHODOLOGY
PROGRAMMING DIVISION ----PERSONS
OVERALL PROGRAMMING OF SAMPLE OPERATIONS
PROPOSALS FOR BUDGET
RECRUITMENT EXTRA STAFF
LAY-OUT OF FINAL REPORT
PROGRAMMING DATA BANK
DRAFTING OF QUESTIONNAIRE
FINANCE DIVISION -----PERSONS
PROGRAMMING OF BUDGET
- SUPPLEMENTARY STAFF
- RENT OF COMPUTERS
- OFFICE SUPPLIES
- PRINTING
- TRANSPORT
REQUIREMENT OF EQUIPMENT AND SUPPLIES
FIELD OPERATIONS DIVISION ---- PERSONS
PROPOSALS FOR BUDGET
PROGRAMMING OF FIELD OPERATIONS SET-UP OF SAMPLE SYSTEM
RECRUITMENT OF ENUMERATORS
TRAINING COURSES FOR ENUMERATORS
PREPARATION OF SAMPLE DISTRICTS
LISTINGS OF ESTABLISHMENTS FOR ENUMERATORS
ENUMERATORS FIELD WORK - -
VERIFICATIO
DATA TREATMENT DIVISION ---- PERSONS
PROPOSALS FOR BUDGET
PROGRAMMING OF SAMPLE SURVEY DATA PROCESSING
LAY-OUT OF TABULATION FORMS
EDITING DIVISION ---- PERSONS
PROPOSALS FOR BUDGET
PRINTING MANUAL FOR FIELD ENUMERATORS
PRINTING OF FIELD OPERATIONS CHECK LIST
PRINTING OF DISTRICT MAPS
PRINTING OF QUESTIONNAIRES
DISTRICT CONTROLS FORMS
PRINTING TABULATORS FORMS
SECTION 1


DATA COLLECTION
PHASE IV DATA PROCESSING
PHASE V PUBLICATION
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
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48
49
50
51
52
REVIEW OF FINAL RESULTS
DRAFTING OF FINAL REPORT
COLLECTION OF QUESTIONNAIRE ACCORDING TO SCHEME
REPLIES - EVENTUAL RETURNS TO ESTABLISHMENTS
INPUT OF DATA IN COMPUTER
DATA PROCESSING BY COMPUTER
STORAGE REPLIES IN DATA BANK
SECTION 2
PUBLICATION OF PROVISIONAL RESULTS
EDITING AND PUBLICATION OF FINAL REPORT

Work-Flow Chart - Explanatory Notes

If an industrial census is to be successful, meticulous attention must be paid to each phase of the census operation. The planning and technical aspects of a census are important, but organization, budgeting, management and quality control are equally critical factors.

A statistical survey can be thought of as a series of inter-dependent actions leading to the publication of data. Each action stems from and flows into another action.

Another useful tool for establishing work programmes is the flow chart. Presentation in the form of a flow chart has the advantage of being more concise than written material and makes it easier for many people to follow the work flow. Flow charts also make it easier to pin-point illogical steps or omission of necessary steps. A one-page flow chart displays the same amount of information as would be contained in many pages of descriptive literature.

Several paths may be followed in stretching available funds and resources through good scheduling of work. For example, since many operations in a census are sequential, some of the existing personnel can be used at different stages of the census. Also, a Statistical Agency that is engaged in processing a number of different surveys, both population and economic, will find that its use of electronic and mechanical equipment will fluctuate widely unless it is carefully planned.

Census Planning Group

At the very beginning a Census Planning Group should be organized to set out the basic policies and guidelines to be followed throughout the programme. That group should make the early decision needed concerning the reference period and content of the census.

The Planning Group might be comprised of the Director of the Statistical Agency and Chiefs of the divisions who would hold major responsibilities in the conduct of the census. Once the census operation actually starts, the members of the planning group are expected to be available for consultation on special problems and, periodically, to review and assess the overall programme.

PRELIMINARY ACTIONS

A. Approval of the Inquiry

The decision to carry out a household industries census is based on the knowledge that this sector represents a significant part of the manufacturing activities in the country. In addition, it is an opportunity to complete the statistical picture of the manufacturing industries as a whole.

The methodology used for the small-scale and household industries is basically the same as for the medium and large industries, which means that the three censuses are integrated and complimentary to each other.

Consequently, the coverage of each industrial sector must be clearly defined in order to avoid overlapping.

The approval for holding a census of the household industries can be more easily obtained when the provisional programme, including the advance budget, for the census is worked out beforehand.

An argument in favour of the household industries census may be the fact that planning of promotion and development of this sector would be extremely difficult if the structure of the household industries sector remains unknown.

B. Legal Authority

The legal authority for the industrial census is fundamental, because it gives the project the stability and continuity needed to carry it to a successful conclusion. The decrees will specify the general nature of the inquiry to be made, the obligations of the respondent to furnish information, and the responsibilities of the Government in connexion with protecting the confidentiality of the individual returns.

C. Organizational Structure

Having in mind the particular situation of the household industries sector in Indonesia, it might be useful to mobilize various sources and institutions which could assist in some way in the census operation.

The content of this document is not only to give a broad outline for the conduct of an industrial census in general, but also covers more precisily the conduct of a small-scale and handicraft industry census.

In many cases instructions for a census are written down in a long manual or report, but for the purpose of a study group it seems that a WORK-FLOW CHART is more useful.

It provides not only in one table a list of the operations to be done, but also gives the timetable for starting the various operations, and more particularly the relationship between each of them. It

demonstrates that a specific operation cannot start if the other one is not finished, e.g. printing of instructors manual and training course for enumerators.

Usually, the Census Work-Flow Chart is divided into five phases:

1) Preparation
2) Programming
3) Data collection
4) Data processing
5) Publishing

The descriptions of the above phases are not indispensable: they merely give an idea to outsiders of how far the census operations have progressed. As far as the organization of the work is concerned, there are five essential structural divisions for the various operations.

These five Divisions are: Programming
Finance
Field Operations
Data Processing
Editing.

Each of these divisions will be headed by a responsible person. The progress of the census is examined every four weeks at a meeting held with the heads of the operations divisions. The meeting could be used to discuss any bottlenecks.

D. Choice of Sampling System

A basic consideration in any economic census is whether to use sampling or to conduct a complete coverage census. When an up-to-date directory is available a sample survey may be accomplished.

E. Scope and Coverage

For the 1983 World Programme it was recommended that developing countries attempt to achieve full coverage of all recognizable industrial establishments. The proposed cut-off for international comparability was set at establishments with five or more persons engaged. This recommendation was not generally implemented; several countries selected different cut-off points, such as 10 or 20 persons engaged (or employees).

F. Methodology

There are two basic methods of enumeration applied in censuses: self-enumeration in which questionnaires are distributed to and received from respondents by mail; and enumeration by interview or personal visit.

G. Publicity

Advance information about the industrial census will give the business community time to prepare for the census and streamline the reporting. The publicity programme for the industrial census has the threefold objective of:

a) encouraging the business community to lend its support during the data-collecting phase of the census;
b) informing the public of the availability of published census reports;
c) promoting the use of census data.

PROGRAMMING DIVISION

The work of the programming division consists of organizing and supervising all activities of other operational divisions. It determines the procedures of work in the census team, and will examine and approve the recruitment of temporary staff and requirements of equipment and supplies. The Head of the Division will also act as the Industrial Census Co-ordinator for resolving problems and conflicts. He will arrange periodical meetings, he may take action for changing priorities, move personnel and adjust the budget. He also maintains liaison with Government agencies and may conduct negotiations aimed at keeping the programme on schedule.

Overall Programming of Sample Operations

After the decision taken by the Census Planning Group to execute the industrial census as a sample survey, the programming will work out the details of the survey.

The various actions to be taken are as follows:

1) Preparation and selection of sample areas;
2) Preparation of the list of establishments to be visited within the sample area;
3) Instruction of the Field Operations Division for recruitment of enumerators and organization of training courses;
4) Discussion with the Data Treatment Division regarding the choice of sample system to be applied for the census.

Recruitment of Extra Staff - Temporary Staff Requirements

The need for recruitment of temporary staff in connexion with the census operation will be estimated by the Operations Division. The Programming Division will study these requirements and transmit the approval to the Finance Division.

Requirements of Equipment and Supplies

The Programming Division will examine, in conjunction with the Operations Division, the requirements for purchase and/or hiring of special equipment, such as reproduction machines, addressographs, drafting supplies etc. The needs for special forms, listings, maps and other documents which are to be printed are to be discussed with the Programming Division.

Lay-Out of the Final Report

The advance lay-out of the final report, in addition to planning of contents of the statistical tables, is an indispensable exercise. This will avoid unnecessary data-tabulation forms and data collection, as the lay-out of the final report will provide guidelines for data programming and formulation of the questionnaires.

Drafting of Questionnaires

The data collection forms are the key documents required in the industrial census. Their format and content will have a significant influence on the quality of the statistical results. Therefore considerable time has to be devoted to the design of questionnaires. Pre-testing of the data collection forms can often bring early deficiencies to light.

The lay-out of the questionnaire (for example, should it be printed on card-stock or paper; should it be assembled as a continuous sheet or booklet) should be determined only after consideration of the different uses to which it will be put. (For example, if it is found that many returns of questionnaires are filled in by typewriter, then the continuation sheet or accordion-folder type is preferable to the booklet.)

Preparation of the Directory

The usefulness of a directory depends on the type of data it contains, all items completed and accuracy given therein. There are a number of different sources for setting up a directory:

a) A complete field listing

Trained field enumerators seek out physically each recognizable industrial establishment, collect the necessary information by direct interview and observation.

b) Government records

These are records maintained by the Government for taxation purposes and for administration, licensing or other Government programmes.

c) Trade association or trade publication directories

Such directories tend to be incomplete and are usually limited to association members only.

d) Other potential sources

These include Telephone Directories and lists prepared by private directory companies, Chambers of Commerce etc.

The directory should be set up by using one record for each establishment in the form of plain cards, punch cards or a computer tape. For multi-unit enterprises there should also be a record for the Headquarters or Central Office.

These methods make it possible to identify the listings quickly for special purposes. Through establishment and enterprise identification numbers it is possible to link together and identify the affiliation of parent enterprises, subsidiary firms and their establishments throughout all phases of economic activity. In the case of multi-unit enterprises the same set of digits is common to the identification numbers of all the establishments that comprise the multi-unit enterprise. The second block of digits in the identifaction number is unique for the purpose of identifying each separate establishment. Therefore, linage of establishments and enterprises through a unique "establishment identification number" is achieved.

Maintaining the Directory

Countries should make every effort to keep the directory permanently up-to-date subsequent to the census. The task will be simplified if maintenance of the file is planned from the outset. The annual and also all other current surveys conducted by the Statistical Agency will constitute a significant source of information.

Coverage of Small Establishments

On one hand, many difficulties will be encountered in the collection of census data from small industrial establishments, which by their size are usually hard to locate and to identify. On the other hand, in developing countries small establishments and household industries may be a significant factor in the total industrial activity, which are effective and make a proportionally greater contribution to certain industries. Consequently, methods have to be devised to gather a minimum of information from a considerable number of geographically widely dispersed small establishments. This situation is further complicated by the fact that industrial production in small establishments is often intermittent or carried on simultaneously with other activities, such as retailing or selected services. It is especially difficult to draw on small businessmen as they may not be able to supply aggregate figures covering a whole year, particularly value figures.

Review of the Final Results

When the results of the census are available in aggregate form they can be compared against current surveys, previous annual inquiries and censuses, or data published by other countries. The object of the final review is to examine the results from every angle and decide whether it is acceptable for publication. The final review of data must be undertaken by qualified personnel with training in economics and statistics. The purpose of the final review is to check on accuracy of the data; examples of important errors are mainly the use of wrong units of measure, entries made in the wrong column or indicated on the wrong line.

FINANCE DIVISION

Programming of Budget

An important feature of census planning is the development of a sound budget. Each organizational unit (division, office etc.) is responsible for a specific function and should prepare a quarterly cost estimate covering the amount and type of personnel and equipment needed to achieve the required objectives of the census. When all the estimates are aggregated it is then possible to obtain a clear picture of cost, personnel and equipment requirements by period. When preparing the cost estimates, each unit should make certain that they include all operational steps and that the cost estimates are realistic. One of the major budgetary considerations, in terms of the labour costs involved, is the method of enumeration. Field costs in any field-canvassed economic census are heavy and importance must be given in estimating how many interviews per person per day can be held. This is not always the case and therefore is a frequent reason for underestimating resource requirements. A significant element in each cost estimate are the overhead costs, including a proportionate amount of incidental expenses, such as office supplies, communications, transportation, informational services and other miscellaneous expenses not charged as direct cost. Throughout the census period the budget must be re-examined frequently and compared with actual performance. A carefully prepared budget should set aside between 10 and 20 % of the total budget for unexpected costs arising from unforeseen problems and contingent events.

The Field Operations Division

In all census the field operations form a major part of the activities of the census. The major part of the budget is spent on field operations and therefore the success of a census depends heavily on the quality and the extent of the work done by the field operators.

The data collection or enumeration may be done in two ways:

1. Enumeration by mail, and
2. Enumeration by interview or personal visit.

The fact that no complete list of establishments is available for the moment, the enumeration by mail is not possible yet and therefore it is recommended that a personal visit to the establishments is made. The enumerator visits the industrial establishment, fills out the questionnaire at once, based on answers given by the owner. However, here it should be emphasized that owing to the great number of establishments, the questionnaire must be completed on the first visit and the necessity of a second visit should be avoided.

Preparation of Sample Districts

The basic document in the overall planning of a field enumeration is a district map. Each district map may cover several enumeration areas, but the boundaries are to be marked carefully.

Field work planning consists of preparing sets of detailed maps covering each of the enumerator's areas. The size of the area is calculated according to the number of establishments to be visited by either one or two enumerators. One may assume that an experienced enumerator can visit two establishments per day. The field work is scheduled to be finished in three months (13 weeks). This means that if the area should be covered by two enumerators, the number of establishments by area must not exceed 250.

The first task to be carried out by the local enumerators' centre will be done by means of a checklist or record-card. This consists of a set of numbered sheets, each providing for entries of up to 25 establishments. The transmission of the completed questionnaires to the local enumerators' centre will be marked on this control record. More detailed instructions regarding field work have been described in the Enumerators Manual. It must be emphasized that the qualifications of the enumerator have a great influence on the results of the census. The enumerators must have some basic knowledge in regard to the terminology of the questionnaire and must be able to distinguish a commercial establishment from a manufacturing unit, particularly when both activities are combined in one unit. He must have some knowledge of bookkeeping and be able to assess the accuracy of the data in the questionnaire.

Enumerators Field Work

The method of enumeration used in the industrial census is canvassing in the field, that is direct interview of the manufacturer by an enumerator. In field enumeration steps should be taken to ensure that information is secured from every establishment within the scope of the census. It is also necessary to avoid duplication which can occur when two field enumerators make a report for the same establishment.

An important aid to field enumerators is a set of detailed maps covering each of the enumeration districts.

The various successive operations to be made by the enumerator are described in the manual for field enumerators.

Listing of Establishments for Enumerators

For each enumeration area a provisional list of establishments is prepared by using the Directory or listings from the previous census or annual inquiry. This list, giving the address of the establishments to be visited, is a control card for the enumerators. It is also a useful tool to be used for listing new establishments not known to the authorities, and to delete the establishments which have ceased their manufacturing activities.

Recruitment of Enumerators

Enumerators may be classified by two categories:

1) Permanent staff members of the bureau in charge of the census;
2) Temporary enumerators engaged for the enumeration period.

As far as the permanent staff members are concerned, they should prepare themselves for the field work by studying the available instruction books.

Temporary enumerators must be recruited from a certain group of persons who are free from professional obligations during the enumeration period. Recommended categories of persons are: Retired postmen, teachers and university students during the holiday period, retired electricity bill collectors, retired army staff etc. Furthermore, the temporary enumerators must have a certain experience in administration and some knowledge of bookkeeping. Speaking the local language may be useful in certain areas.

A substantial remuneration and strict control of the activities are necessary for obtaining worthwhile results for the census.

Training Courses for Enumerators

The field enumeration of manufacturing establishments is quite complex. One of the first problems encountered by the field interviewer is that of determining which of the establishments are eligible for enumeration. Therefore it would be desirable if the task of training were left in the hands of a few experienced individuals in the Central Statistical Agency. The usual first step is to train individuals who will teach others. These may be regional office heads and other key personnel who are given an intensive background course in the Central Agency. Later these persons return to their areas to train local office supervisors and these, in turn, train field interviewers.

An interesting alternative would be a team of enumerators, half of whom could be employed as permanet staff members of the Central Statistical Agency and then move around the country in order to enumerate area after area until the work is completed.

At all levels training classes should be kept small as this will enable the instructor to give attention to the progress of each individual in the class, stimulate interviews, whereby an experienced person takes the part of the establishment owner or manager. The trainees may be tested on their knowledge by completing a blank questionnaire after having given information on a hypothetical establishment.

When training large numbers of field interviewers in a short period it is worthwhile to prepare a detailed class-room guide. These are intended for the use of relatively inexperienced teachers who are expected to instruct the class by following the guide practically word to word. The use of audio-visual materials has proven to be very effective in training enumerators.

Home-study reference materials can be given to prospective enumerators in advance of any class-room instruction. After several days allowed for home-study, the enumerator is given a written test; if successful in passing the written test he or she is interviewed by a supervisor. During the interview the prospective enumerator is once again tested on his knowledge of the job in question. Following this the supervisor accompanies the enumerator on at least one real interview. The enumerator's progress is again reviewed closely after a probationary period of several days.

Pocket Manuals for Field Enumerators

The condensed manual of instructions for enumerators must be carried on the person for consultation during the workday. The manual serves as a basic textbook for the training course. All procedural matters affecting enumerators, and the principal problems they may expect to encounter, are discussed in the manual. A specimen of such a manual or memorandum has been added to this report.

DATA TREATMENT DIVISION

The decision which the census authority must take is on how to process the data collected from the establishments. That decision will affect the budgeting and all activities of the census team.

If the manual tabulation is used, a certain number of clerical staff must be recruited. If electronic-data processing equipment is used, a substantial part of the budget has to be allotted to renting a computer. The procedure to be followed in selecting the appropriate processing equipment will be a simple cost consideration. But the cost comparison will certainly favour the computer over manual or electro-mechanical operations. The computer can help reduce the time from enumeration to publication of the data.

Programming Sample Survey Data Processing

Basically the programming for a complete enumeration and for a sample survey is the same operation. For sample surveys, the computer may be used for the selection of sample areas and sample units before the actual field enumeration starts. It will provide computerized listings for the enumerators, according to their plans.

Verification of Replies

After a global verification of the completed questionnaire by the Head of the District Collection Centre, the questionnaire is submitted to a second verification process by the computer. The system consists of entering the data of the questionnaire into the computer, which has been programmed to check this data. The absence of certain items is notified by the computer, but it also tests against the order of magnitude of certain rations in the reply, such as the proportion of labour to gross-output and the percentage of value added to gross-output and eventually some other tests.

Input of Data Computer

The procedure used for entering data into the computer depends on the equipment to be used. If the computer still has the punch card system, the entries are made on punch cards which will be kept in stock after the data processing. In case the magnetic tapes system is used the information is then keyed initially on to a disc which has the function of a temporary storage medium.

This intermediate disc can be used by the operator for instant retrieval, and may also be used for the verifying process described above.

Editing Division

Publication is the final step in the statistical process by which the industrial census results are made available to data users. Within the limits of safeguards taken to prevent the disclosure of confidential information, the census authority should publish all of the basic data it collects. A selection among the many conceivable cross classifications and tabulations must be made. Early study of the lay-out of the final report and planning of the statistical tables has many advantages. Errors in the questionnaire design will be brought to light and corrected. A set of tables must be prepared at the same time as the questionnaire. This makes it possible to finalize the outline of the end-report. The concord between the questionnaire, the tabulation forms and the outline of the final report is an essential feature of census programming.

Confidential Information

Respondents are much more willing to supply accurate data if they are convinced that it will not be used to their disadvantage; for example, by their competitors or the tax collector. Confidential treatment extends not only to the questionnaires, but also to the published tables. The publication of data representing two statistical units is prohibited, because the activity of each unit might be revealed to the other.

In statistical tables with horizontal and vertical totals a further complication occurs, because data can be disclosed by comparing one figure to another ("disclosure by difference" or "residual disclosure") in different tables in the same or a different publication. The application of the disclosure rule may result in accumulation of data which makes the statistical table uninteresting.

CHAPTER II.4 - QUESTIONNAIRES FOR INDUSTRIAL INQUIRIES

The questionnaires shown in this chapter are the new simplified versions recommended for future industrial inquiries.

Form No. 1 is a two page questionnaire to be used for medium and large industrial establishments.

Form No. 2 is the reduced one page version of Form No. 1 and is to be used for the small-scale industrial establishments. Both forms have been pre-coded for data processing by a computer.

FORM No. 1

QUESTIONNAIRE
for the
ANNUAL INDUSTRIAL INQUIRY 1982

		REGISTRATION NUMBER
1100		PARENT ENTERPRISE
1101		ESTABLISHMENT
1200	GOVERNMENT LICENCE NUMBER	

1300	NAME OF THE ESTABLISHMENT	
1310	STREET / NUMBER	
1320	CITY - TOWN - VILLAGE	
1330	DISTRICT	
1340	PROVINCE	

1400 LEGAL STATUS of the ESTABLISHMENT

PERORANGAN | KOPERASI | FA. CV | P.T. | LAIN-LAIN |

1500	TOTAL VALUE of INVESTMENT		
1510	MACHINERY and EQUIPMENT		
1520	TRANSPORT EQUIPMENT		
1530	BUILDING		

1600 MAJOR INDUSTRIAL ACTIVITY I. S. I. C. No.

2	EMPLOYMENT	1982			1981		
		MEN	WOMAN	TOTAL	MEN	WOMAN	TOTAL
2210	ADMINISTRATIVE - CLERICAL STAFF						
2220	OPERATIVES						
2230	UNSKILLED WORKERS						
2290	UNPAID FAMILY WORKERS						
2000	TOTAL PERSONS ENGAGED						

	PRODUCTION ACCOUNT	1982	1981
3	TOTAL INPUT COST (3100 + 3200)		
3110	RAW MATERIALS		
3120	ENERGY PRODUCTS		
3130	INDUSTRIAL SERVICES		
3100	TOTAL VALUE OF INTERMEDIATE INPUT		
3210	WAGES AND SALARIES		
3220	NON INDUSTRIAL		
3200	TOTAL VALUE ADDED		

3300	TOTAL GROSS - OUTPUT	
3310	SALES VALUE OF ALL PRODUCTS	
3320	RECEIPTS FOR INDUSTRIAL SERVICES	
3390	VALUE OF SALES OF COMMERCIAL GOODS	
3300	TOTAL VALUE OF OUTPUT IN PRODUCERS PRICES	

3110 PURCHASES OF SELECTED INDIVIDUAL MATERIALS

NAME OF MATERIAL	UNIT OF MEASUREMENT	QUANTITY	1982 DELIVERED COST	1981 DELIVERED COST

3400 OUTPUT OF SELECTED MANUFACTURED COMMODITIES

NAME OF PRODUCT	UNIT OF MEASURE	TOTAL QUANTITY PRODUCED	1982 SHIPMENTS QUANTITY	1982 SHIPMENTS VALUE	1981 SHIPMENTS QUANTITY	1981 SHIPMENTS VALUE

CAPITAL ACCOUNT

VALUE OF FIXED ASSETS	31 Dec. 1981	ADDITIONS LESS AMORTISSATIONS DURING 1981	31 DECEMBER 1982
o BUILDING			
o MACHINERY + EQUIPMENT			
o TRANSPORT EQUIPMENT			
o TOTAL VALUE			

FORM No. 2

QUESTIONNAIRE
for the
COTTAGE and SMALL-SCALE INDUSTRY

		REGISTRATION NUMBER
1100	PARENT-ENTERPRISE	
1101	ESTABLISHMENT	
1200	GOVERNMENT LICENCE NUMBER	
1300	NAME of the ESTABLISHMENT	
1310	STREET - NUMBER	
1320	CITY - TOWN - VILLAGE	
1330	DISTRICT	
1340	PROVINCE	
1400	LEGAL STATUS of THE ESTABLISHMENT	
1510	MACHINERY AND EQUIPMENT (DATE OF PURCHASE VALUE)	
1600	MAJOR INDUSTRIAL ACTIVITY	

	EMPLOYMENT	1982	1983
2000	TOTAL NUMBER OF PERSONS ENGAGED		
2220	Of which : OPERATIVES		
2290	UNPAID FAMILY WORKERS		

PRODUCTION ACCOUNT

3000	TOTAL INPUT COST		
3110	of which - RAW MATERIALS		
3210	- SALARIES		
3300	SALES VALUE OF ALL PRODUCTS		
3310	of which : - MANUFACTURED GOODS		
	- COMMERCIAL GOODS		
3400	PRODUCTION OF SELECTED MANUFACTURED COMMODITIES		

CHAPTER II.5 - DEFINITION OF THE ESTABLISHMENTS

It is recommended that a consultation should take place between the various administrative agencies in order to come to an agreemnt on a common definition of the manufacturing establishment in the small-scale industry sector.

DEFINITION OF THE ESTABLISHMENT

The manufacturing unit, the object of industrial statistical inquiries, is the establishment.

The standard definition for statistical inquiries recommended by the United Nations Statistical Office is given in Chapter II.1.

For practical reasons the Ministry of Industry, the Bank of Indonesia and the Central Bureau of Statistics are using different criteria for determining the difference between a Household Unit and a Small Industrial establishment.

The Ministry of Industry has no specific definition for Household Industries. The Small Industries are defined as establishments with less than 20 employees and an investment not exceeding 70 millions Rp.

The Bank of Indonesia defines the Small Industry with a limit of 20 employees and an investment of less than 100 millions Rp.

The Central Bureau of Statistics uses the following criteria:
- Household/Cottage Industries
  Establishments with 1 to 4 persons engaged;
- Small-scale Industries
  Establishments with 5 to 19 persons engaged;
- Medium and Large Industries
  Establishments with 20 or more persons engaged.

The UNIDO team for Small Industries recommends to organize a restricted working group meeting of representatives of the three authorities mentioned above, for the purpose of drafting the criteria for the size-classification of the Household and Small-scale Industrial establishments.

The consultant suggests the following definitions:
- Household Industry
  A manufacturing establishment which engages 1 to 4 persons, having machinery and equipment the value of which does not exceed 100 millions Rp.
- Small-scale Industry
  A manufacturing establishment which engages not more than 25 persons and having machinery and equipment the value of which amounts to more than 100 millions Rp.

Classification Procedure

The establishment is classified as a Household Unit or a Small-scale Establishment by the Central Industrial Register.

CHAPTER II.6 - TRAINING OF ENUMERATORS

The field enumeration remains one of the actions which is of crucial importance for the success of an industrial inquiry. After the recruitment of those enumerators which is a serious matter and must be given special attention, it is recommended to organize training courses for the newly recruited enumerator. Some details of the training programme as well as an example of an enumerator manual are given in this chapter.

TRAINING COURSE FOR FIELD ENUMERATORS

This chapter gives a condensed description of the various subjects which could be discussed during the training course.

The purpose of the first four chapters is to give some general knowledge of the manufacturing industries. Chapter 5 is mainly concerned with the enumeration activities as such. The chapter may be considered as a general plan for a training course which may last six to twelve days. The following paragraphs give an outline of the main subjects which should be discussed in the training course.

A. Purpose of Industrial Census and Annual Inquiries

The purpose of an industrial inquiry is to collect information and statistical data about the structure and localization of the manufacturing industries.

Secondly, it is intended to prepare a time series of data for the measurement of the economic and social progress of the industrial sector.

It is recognized that a good analysis requires accurate data, and an establishment census is a key element in an integrated programme of economic statistics. The annual inquiry provides a continuous picture of industrial activities. In general, a distinction is made between the two most usual inquiries. An industrial census is a complete enumeration of all manufacturing establishments covering the whole territory of the country. An industrial inquiry, usually done annually, is the collection of operational data from a selected group of manufacturing establishments, covering the territory completely or partially. There is also a basic difference between the two inquiries about the procedures for getting the information. For an industrial full-coverage census it is compulsory to collect the information by visits to each particular establishment. For an annual industrial inquiry, the collection of data may be effected either by personal visits to the establishment or by mail inquiries, or even a mixture of both systems. The critical point for an annual industrial inquiry is the existence of an up-to-date Industrial Directory.

B. Contribution of the Manufacturing Industries to GDP

An annual industrial inquiry provides information about the structure and the geographical distribution of the manufacturing industries. But it gives also the possibility of comparing to some extent the industrial activities to the other economic activities of the country. The methodology in use, which is usually based on international standards, makes it also possible to compare the industrial capacities with those of other countries. The Gross Output Data as well as the value added data are measured in current national money, on the same way as the value of the activities of the other economic sectors.

The main economic indication of an industrial inquiry are:

- the total value of production,
- the total value of purchase,
- cost of raw materials, wages and salaries.
- the number of persons engaged,
- with more or less details, the capital of expenditure and
- some detailed data concerning the production of selected items.

C. Methodology of Industrial Inquiries

The necessity for the comparability and consistency of data collected by an industrial census implies a Methodology, e.g. number of definitions and rules which have to be adopted for the execution of an Inquiry. The Methodology is the result of discussions between the statisticians, which are the collectors of the data, and the economists and planners, which are the principal users of the results.

The Methodology is basically a list of definitions of the items which are used for the data-collection. These definitions relate to:

- the coverage of the Inquiry, the geographical area;
- the statistical units to be included in the Inquiry;
- the description of the items included in the questionnaire used for the Inquiry.

The role of the field-enumerator is to distinguish the statistical unit to be included in the Inquiry, and to be able to provide detailed explanations concerning the definitions of the questionnaire.

The value of the data collected for the Inquiry depends upon the degree of accuracy by which the definitions are used and respected. The questionnaires used are always supplemented by an annex giving the definitions to be used. An important portion of the instruction course for the enumerators must be used for explaining those definitions.

D. The Work Programme of the Inquiry

An Industrial Inquiry is a rather complex operation where many persons are involved at different time schedules. The co-ordination of all these actions is very important. Some actions cannot start when the preceding ones are not completed. Therefore, besides the complete instruction report for the Inquiry, it is of great practical value to prepare a work-calendar in the form of a Work-Flow Chart, as shown in Chapter II.3 of this report.

The inter-relationship of the different operations of the Inquiry is clearly indicated. Also the Flow Chart demonstrates the importance of the field-enumeration in the context of the complete Inquiry.

E. The Field Work

The task of the field operators is to pay a visit to the manufacturing establishments for collecting the questionnaires with the data for the Industrial Inquiry.

The various operations to be executed by the enumerator are mentioned in the Table of Contents of the memorandum.

F. Table of Contents

1. Definitions
2. Functions of the Central Office
3. Documents for the Inquiry
4. Responsibility of the Enumerator
5. Responsibility of the Establishment
6. Enumerators Check-list
7. Reception procedure at the Establishment
8. Verification
9. Confidential Information
10. Reception Procedures at the Collection Office.

In the training courses for enumerators, a full description of each particular action of the enumerator will be explained in detail. Also, the two documents to be used for the operations, namely th enumerator's check list and the district maps, will be demonstrated during the courses. Particular attention will be paid to one aspect of the function of the enumerator, namely the global verification of the data given in the questionnaire.

A C K N O W L E D G E M E N T S

The UNIDO Consultant for Industrial Statistics, Jacques Spijkerman, desires to express his gratitude for the hospitality, assistance and co-operation received from a large number of persons during his mission in Indonesia.

Ministry of Industry	Mr. Gitosewoyo S.
	Ir. M.A. Afiat Wirjoasmoro
	Ir. S. Sjarief
	Drs. F.F. Risakotta
	Mr. Badruss S. Ahmad
	Ir. Hanafi Wirabrata, Bandung
	Drs. Soewarsono Sosromarsono, Semarang
	Mr. Dibyo, Semarang
	Ir. Winardo, Yogyakarta
UNIDO Small-Scale Industry Project	Dr. Ram K. Vepa
	Ir. A. Sjorfai
Special mention has to be made for:	Ir. J.M.P. Ohello
	Mr. Arie Sambur B.Sc.