

be also excluded in view of the national defense aspect.

Definitions of manufacturing sector to apply shall be, in principle, those currently in use in the industrial registration system. Manufacturing sector is so defined to mean activities to manufacture finished products using power driven mechanical means and by processing raw materials and semi-finished products, including mixing, assembling and packaging of products.

(1) Survey frequency

In general, the Omani manufacturing industry is in its infancy. Hence, enterprises start up, go out of or change their line of business quite often. Moreover, the impact of such changes in status is relatively great because of the small number of establishments in existence. It is therefore recommended that the industrial statistical survey should be conducted every year in order to correctly and timely comprehend the trend of industrial activities.

(2) Reference Period

The majority of establishments operate according to a fiscal calendar year beginning on January 1st and ending on December 31st. The taxation system also utilizes this fiscal calendar year. As it is assumed this practice will continue unchanged, the reference period of the industrial statistical survey shall be the calendar year beginning on January 1st and ending on December 31st.

(3) Timing of survey

The business income tax law which is expected to be enforced from fiscal 1993 onward requires each establishment to file a financial report for the previous fiscal year.

Establishments are therefore required to report on closed accounts no later than the end of March. According to the results of inquiries made during the field study, the majority of establishments confirmed their readiness to close their accounts during the month of March.

Climate conditions during the summer months of June and July are too severe for the field survey, and many proprietors of establishments habitually take leaves during this period. It is therefore recommended that the industrial statistical survey should be conducted during the period beginning on April 1st and ending on May 31st of every year.

7.2 Procedures and Methods of Statistical Survey

Fig. 7-2-1 "Procedures of Industrial Statistical Survey" shall be referred.

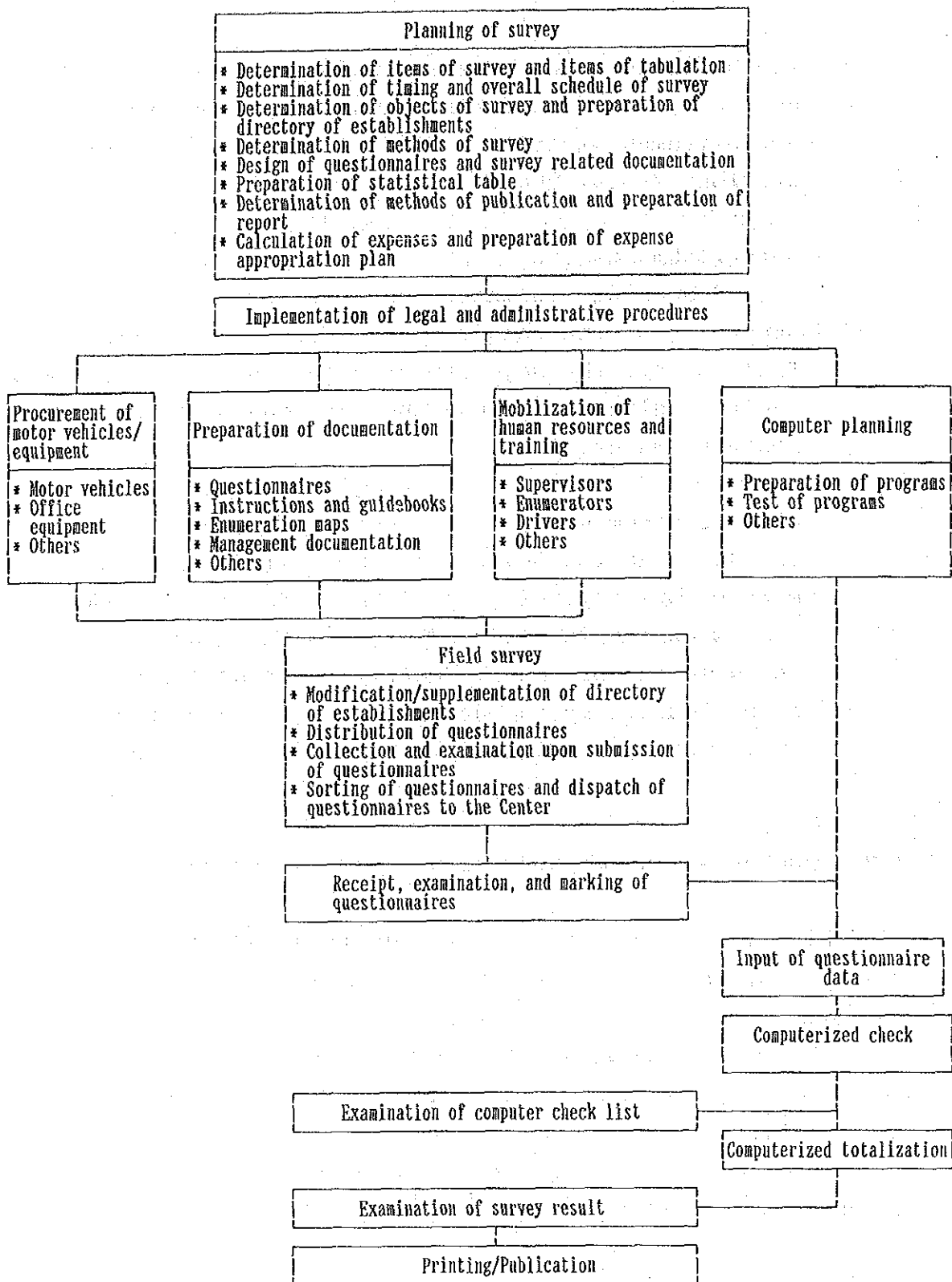


Fig. 7-2-1 Procedures of Industrial Statistical Survey

Survey shall commence with the planning of survey to be conducted by the Industrial Statistics Information Center (the Center). Implementation of legal and administrative procedures as required for the implementation of survey shall follow. Next, full scale preparation must commence with procurement of vehicles and equipment, printing of documentation, mobilization and training of human resources, and preparation of computer planning.

Those preparation works shall be, in principle, the responsibility of the Center. It is, however, desirable that procurement of vehicles and recruitment of enumerators shall be assigned for execution to Regional Offices of The Ministry of Commerce and Industry but shall be financed by the budget appropriated to the Center. Following the completion of preparation works, field survey shall be conducted. Field survey is considered best executed directly by the survey unit of the Center for Muscat capital area and by Regional Offices of The Ministry of Commerce and Industry for respective regions other than Muscat capital area under the assignment from the Center.

All questionnaires collected by field survey shall be gathered in the Center for examination/marketing/classification, being followed by data input into computers. Input data will be processed by pre-determined computerized examination and then totalized. Tabulated results will be examined and analyzed by the Center, being followed by printing and publication.

Essentials of Survey Methods are as follows:

(1) Adoption of complete enumeration method

Complete enumeration system is necessary in view of the following.

- 1) No complete profile of manufacturing sector in Oman is yet fully comprehended.
- 2) The officials in charge of policy planning need sufficient data to allow them to analyze the structure of manufacturing sector in order to plan and review impact of policies to encourage industrial development.
- 3) It is necessary to survey all manufacturing establishments in order to fully comprehend actual status by every type of industry, because the number of establishments encompassed in many types of industry is rather limited when viewed by way of industrial registrations. In other words, new entries or discontinuations of a small number of establishments may have significant impact on the status of that type of industry.

(2) Adoption of the survey by enumerators

The survey by enumerator is appropriate. An alternative of Mail Survey is not readily available under the current conditions in Oman.

Because the industrial statistical survey this time is the first survey of entire manufacturing establishments in Oman, objective to be achieved by the survey, explanations for each survey items, and how to fill-in questionnaires need to be explained personally to respondents by enumerators in details, in addition to the issue of ministerial ordinances and informing respondents in writing.

Primary check and examination of filled-in questionnaires should be conducted vis-a-vis with respondents.

In consideration of above-mentioned aspects, adoption of interview survey may be necessary. However, adoption of interview survey would not deny possibility of adopting mail survey as an auxiliary method of survey. For example, for an industrial estate, for an instance Rusayl industrial estate, where establishments can be accurately identified by documentation and capability of establishments in responding to survey is considered sufficiently high, adoption of mail survey may be considered feasible.

(3) Adoption of self-filling system

Adoption of self-filling system - filling of questionnaires by respondents by themselves - may be more practical.

The majority of small scale establishments is not used to the practice of bookkeeping and pays no attention to the perfection of business records. Accordingly, totalization of data related to annual production/ accounting is time-consuming and very burdensome for those establishments. Should statistical survey adopt filling of questionnaires by enumerators, sorting of diverse documentation/records of establishments is likely to be conducted vis-a-vis with enumerators, thus significantly increasing time to be spent by enumerators. It is therefore recommended to adopt system of self-filling by taking following steps.

- 1) Enumerators to deliver and explain all documents to persons to be interviewed during first visit to establishments.

- 2) Enumerators to allow to establishments time necessary to fill-in questionnaires and to commit themselves for follow-up visits.
 - 3) Establishments to fill-in questionnaires
 - 4) Enumerators to check and examine filled-in questionnaires during follow-up visits and to additionally fill-in questionnaires if and when necessary to do so, and then to collect questionnaires.
- (4) Preliminary survey (preparation of directory)

Directory of establishments is the basis of industrial statistical survey. This is prepared, based on the current industrial registration information, adding information on establishments which were confirmed partially by the survey conducted by study team this time.

Enumerators shall tour through the districts they are in charge of immediately prior to the implementation of full scale survey in accordance with pertinent enumeration maps and directory lists of establishments. They shall endeavor to locate and identify establishments which are not listed in the directory list and mark them in the enumeration map, and to delete from the directory list those which have discontinued, or relocated in other areas in order to update directory lists.

Thereafter, the directory of establishment shall be controlled and maintained independently by The Industrial Statistics Information Center.

7.3 Questionnaires, Examination and Tabulation

Questionnaires:

(1) Composition of questionnaires

Questionnaires are composed as follows:

- 1) Columns to enter identification data and attribute of establishment
- 2) Columns to enter employment. Volume of employment of an establishment is used as an indicator representing scale of establishment, while the same constitutes the basis to measure total volume of employment of manufacturing sector as a whole. The data can be used for the calculation of the labor productivity.
- 3) Columns to enter value of shipments and value of other revenues which constitutes basis of the calculation of value added while the same constitutes basis to totalize overall profile of types and volume of production of principal products of manufacturing sector as a whole.
- 4) Columns to enter input i.e. consumption of raw materials, consumption of utilities and any other input. The same constitutes basis for the calculation of value added as well as consumption of raw materials, consumption of water resources and energy resources by manufacturing sector as a whole.
- 5) Columns to enter value of inventory and fixed capital. The same provides basis for the calculation of national wealth and total capital formation. Value of inventory is used for the

calculation of value added while volume of fixed capital provides basis for the calculation of productivity of fixed capital and capital equipment ratio.

(2) Use of short form survey questionnaires

In view of tasks given to the industrial statistics, questionnaires to be used for statistical survey are desired to be as detailed and as strict as possible. A typical example would be the sample questionnaires included in the "Recommendation for the 1983 World Programme of Industrial Statistics" of the United Nations.

It is however, to be reminded that industrial statistical survey which may result in the end collection of information in excess of what are actually needed and neglect to pay due attention to the will and capability of respondents would be at the risk of being consequently proved unsuccessful.

The questionnaires which the study team used experimentally for the survey of sampled establishments are standard form of questionnaire which was proved apparently to be excessively detailed and complex beyond the capability of small scale establishments - sole proprietorship enterprises - in Oman.

In conclusion, it is recommended that standard form of questionnaires should be used for initial industrial statistical survey targeted to large and medium scale establishment in Oman, while significantly short form of questionnaires should be used for the survey of small scale establishments.

Short form of questionnaire for the survey of small scale establishments should include following basic data as a minimum.

- Identity and attribute of establishment
- Employment (Composition, cost)
- Main products and raw materials and cost of raw materials
- Value of shipments
- Value of electricity and water consumption
- Fixed capital

Even small scale establishments would be capable of responding with reasonable degree of accuracy for above-mentioned items.

Provisional criteria recommended to apply to the classification of small scale establishments for which short form of questionnaire should be used would be the number of employees no greater than five.

(3) Language to use in questionnaires

It is necessary that questionnaires should be prepared both in Arabic and in English language. Though questionnaires are to be filled in Arabic and/or in English, respondents would be requested to fill-in, preferably by English language into the questionnaires prepared in English language in view of computer input for totalization. However, the Center has to translate data into English for this purpose in case questionnaires are filled in Arabic.

(4) Instructions for respondents

It is desirable that important instructions should be included in the questionnaires immediately preceding related columns of the questionnaires. This enables respondents to have as many opportunities to refer to the instructions as may be needed by respondents for the filling-in.

Examination:

(1) Objective of examination

Examination is conducted in order to compare contents of each stage beginning with the identification of establishments and ending with the preparation of statistical tables with the instructions (judgement criteria). Differentials from judgement criteria would have to be corrected, while resultant figures obtained from the data would have to be examined to confirm their reliability.

It is important to record and analyze results of examination as much as possible to provide reference materials for future questionnaire design.

(2) Method of examination

1) Examination by enumerators

Enumerators shall confirm numbers of the establishments in charge, number of questionnaire sheets and questionnaire numbers.

a) Examination of questionnaires

Enumerators shall examine collected questionnaires for omission of entry and

errors in entries. In case any omission or errors are identified at the time of collection of questionnaires, enumerators shall reconfirm with the establishments and shall request persons in charge of the establishments to rectify and add entries immediately and on the spot.

b) Management of distribution and collection of questionnaires

Enumerators shall have to inspect and confirm absence of omission or overlapping in distribution and collection of questionnaires.

2) Directorate General of Commerce and Industry in Southern Region, each Regional Office and the Center

a) Management of distribution and collection of questionnaires

Control record to confirm state of distribution and collection of questionnaires shall be prepared in order to supervise distribution and collection of questionnaires by enumerators.

b) Examination of questionnaires

Questionnaires collected by enumerators shall be re-examined for omission of entry, errors in entries and contents of entries into survey items.

c) Collected questionnaires shall be dispatched to the Center together with the control records.

3) Examination by the Center

a) Preparation of control record

Items of the control record shall be as follows.

- Name of establishment, telephone number
- Establishment number and questionnaire number
- Name of enumerator
- Year/Month/Day of distribution of questionnaire
- Year/Month/Day (Planned/Actual) of collection of questionnaire
- Year/Month/Day of request for submission of questionnaire

b) Confirmation of number of questionnaire sheets distributed and collected based on the record of the control sheet.

c) Examination of individual questionnaire

- Check of sequence of questionnaire numbers and missing questionnaire numbers
- Check of establishment numbers
- Check of industrial classification code and commodity classification code
- Check of omission of entry and errors in entries
- Check of sum-up figures

d) Examination of tabulated data

- Confirmation of titles, headings and columns
- Confirmation of number of tables
- Verification of totalized resultant figures
- Cross-examination between tables

- (3) Importance of the examination by the assigned agencies

A distinct characteristic of the statistical survey by the assigned agencies is to conduct on-the-spot examination. Any errors in entries or omission of entry can be reconfirmed and rectified immediately on the basis of facts.

On the contrary, examination by the Center with respect to the contents of entries is automatically limited to the examination by documents. The closer the survey is to actual point of time and place, the better any errors in the reported data can be timely rectified.

Publication:

Results of industrial statistical survey shall be compiled into industrial statistical table and published.

- (1) Industrial statistical table

Industrial statistical table shall be classified into three editions, viz., [Industry Edition] which is classified and tabulated by the principal manufacturing activities of individual establishments on the basis of ISIC Rev.3 : International Standard Industrial Classification, [Product Edition] which is classified and tabulated by products of establishments in accordance with Omani commodity classifications, and [Infrastructure (utilities) Edition] which is tabulated relating to industrial land and industrial water.

When classified by the method to display, it can be classified into "classification by industry", and "

classification by size of establishment in number of employees" or "classification by size of capital which is a criterion to represent scale of an establishment, and "geographical classification" which represents geographical characteristics.

(2) Confidentiality

It is mandatory to keep survey items other than number of establishments confidential in the case of number of establishments displayed in all tables being one or two, in consideration of protecting confidentiality of information. Outline of methods to protect confidentiality is described in the full text.

7.4 Establishment of the Center and Survey Implementation System

(1) Statistical Survey Execution Agency

1) The Ministry of Commerce and Industry

The Ministry of Commerce and Industry shall integrate survey/statistics related in-house staff into the Industrial Statistics Information Center which will be organized using existing Industrial Statistics Unit as its nucleus and will remain for the time being under the jurisdiction of the Directorate General of Industry.

According to the statistics law, the Ministry of Commerce and Industry is able to conduct the industrial statistical survey. A Ministerial Decree or other legal actions shall be taken to define regulations for the survey implementation, data processing, tabulation, method of

publication etc. The Ministry of Commerce and Industry shall be responsible for securing budget appropriation and for the budget management as required for the activities of The Industrial Statistics Information Center and for the implementation of industrial statistical survey.

2) Industrial Statistics Information Center

The Center is a central agency to be newly established within the organization of the Ministry of Commerce and Industry for the purpose of planning and conducting various statistical surveys. For the time being, activities of the Center shall be concentrated in the works needed for the industrial statistical survey, such as planning of survey, planning of tabulations, planning of computers, staff education and training, and safekeeping of statistics information and materials.

The Center shall conduct the field enumeration in the Muscat capital area, and shall organize a survey department to be in charge of the field survey within its organization.

(2) Survey Implementation System

In conducting the industrial statistical survey in Oman, time seems not quite ripe yet to depend on the organization of regional administrative bodies (59 Wilayats). Consequently, the survey system must rely on the Industrial Statistics Information Center within the Ministry of Commerce and Industry, and the Ministry's Regional Offices, namely network of the group affiliated with The Ministry of Commerce and Industry.

The form of survey implementation system in the Muscat capital area would have to be somewhat different from the same in other regional administration areas.

1) Muscat capital area

Direct survey method shall be adopted by the Industrial Statistics Information Center to be newly established.

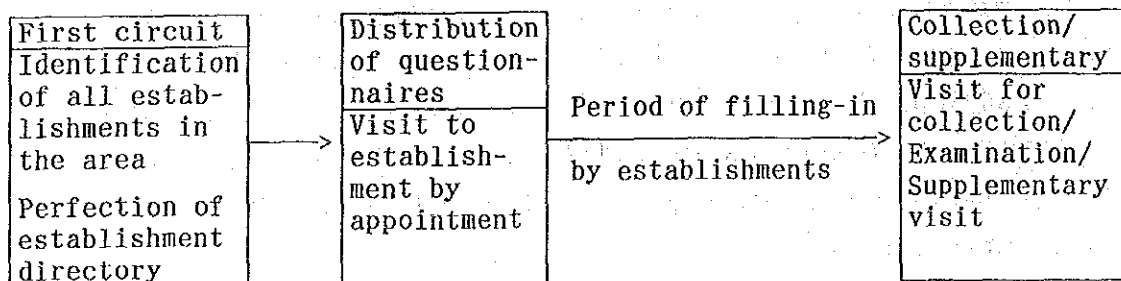
2) Regional administration areas

The Industrial Statistics Information Center will assign as much survey work as possible to Regional Offices of the Ministry of Commerce and Industry located in major cities, while control of survey work as a whole will be centralized in the Center. In this case, training of Regional Office staff will be the issue of extremely importance.

(3) Statistical Survey Enumerators and Survey Work

1) Basic policy to determine number of enumerators and basic policy to determine survey period

Field survey work of enumerators in the area to be surveyed are divided into three stages as shown below.



In setting out period of survey, it was so opted to set out a relatively long survey period (about two months) in exchange of reducing number of enumerators. Survey period can not be shortened beyond a certain limit due mainly to circumstances of establishments. Mere increase in the number of enumerators would not result proportionally shorter survey period.

2) Estimation of required number of enumerators

Required number of enumerators estimated on the basis of experience gained through the survey of sampled establishments is 91 as a minimum. The estimation is based on the following assumptions concerning survey work and work efficiency.

- a. Field survey work of enumerators begins with the first circuit throughout the area to identify all establishments existing in the area. The first circuit shall be in accordance with preliminary directory list of establishments and detailed maps. Distribution and collection of questionnaires shall then follow.
- b. Required number of enumerators for the survey of the Muscat capital area is estimated by representing survey work volume by way of the number of blocks (224 in total) determined and marked by the Muscat Municipality. It is assumed that enumerator is capable of surveying a block in two days in the Muscat capital area and that each in regional area enumerator is capable of surveying 10 establishments per day. Field survey team for the Muscat capital area will have to be assigned to the survey of certain wilayats in accordance with

administrative arrangements as agreed upon. Number of establishments existing in the areas in accordance with industrial registration record is 323. The volume of work required for the Ministry of Commerce and Industry's Muscat headquarters to identify establishments is therefore 481 man-days ($224 \times 2 + 323/10$).

c. Distribution and collection of questionnaires

It is assumed that two extra visits will be necessary to one half of the surveyed establishments to urge submission of questionnaires or for supplementary explanation.

As for the Muscat capital area, the number of registered establishments is taken as the basis for calculating work volume, just as in regional areas, because location of establishments to which questionnaires are to be distributed can be confirmed by the above-mentioned field survey.

- d. The number of establishments to be surveyed is calculated on the basis of the number of establishments in the industrial registration information. Although the actual number may be higher, due to the existence of unregistered establishments or newly founded establishments, their effect may be offset by registered establishments that have ceased operation. The number of establishments estimated to exist by the regional office concerned is taken as the basis of calculation in case it is greater than the number of establishments registered in the area.

3) Period for completion of questionnaires

Two weeks is uniformly assumed as the period for completion of questionnaires.

4) Survey period

Assuming two months (8 weeks) as the overall survey period as mentioned in 1) above, all survey work including identification of establishments to be surveyed, distribution, completion and collection of questionnaires shall be completed during this period. Deducting two weeks for completion of questionnaires, survey enumerators are given six weeks (30 working days) for their survey work.

Table 7-4-1 column (J) summarizes estimated number of survey enumerators required determined by dividing the total work volume (man-days) by six weeks (30 working days). Furthermore, a supervisor is also required for each 10 enumerators in order to quality control (column (K) in the table).

Table 7-4-1 Work volume and number of survey enumerators required for industrial statistical survey

MCI and regional offices	Number of registered establishments		Survey work volume						Total work volume (Man-days)	Number of enumerators	Supervisor	Total number of enumerators
	A	B	Identification of establishments to be surveyed C (Man-days)	Distribution of questionnaires D (Man-days)	Entry into questionnaires E (Day)	Collection of questionnaires (Man-days)		I=C+D+F				
						F=G+H	First Visit G					
Muscat	(1)933	---	(2)481	187	(10)	374	187	187	1,042	35	3	38
Sohar	401	480	48	96	(10)	192	96	96	336	12	1	13
Sur	252	196	25	51	(10)	102	51	51	178	6	---	6
Ibri	104	60	11	21	(10)	42	21	21	74	3	---	3
Buraimi	72	---	8	15	(10)	30	15	15	53	2	---	2
Nizwa	178	306	31	62	(10)	124	62	62	217	8	---	8
Ibra	228	437	44	88	(10)	176	88	88	308	11	1	12
Salalah	316	318	32	64	(10)	128	64	64	224	8	---	8
Musandam	5	---	1	1	(10)	2	1	1	4	1	---	1
Total	(4)2,489	---	681	585	---	1,170	585	585	2,436	86	5	91

* The larger of the A and B values is taken as the basis.

(1) Muscat capital area: 224 blocks, 610 establishments
10 regional Wilayats: 323 establishments

(2) Refer to item b., "Identification of establishments to be surveyed."

(3) Supervisor: a supervisor against ten enumerators is required in order to supervise enumerator's quality control.

(4) This shows number of registered establishments as of end of October, 1991 and 698 registered establishments with location unknown are excluded.

7.5 Subdivision of Enumeration Areas and Enumeration District Maps

(1) Needs for Subdivision of Enumeration Areas

Implementation of the statistical survey requires a large number of enumerators. It is necessary to ensure that each enumerator is assigned enumeration districts to assume responsibility of the enumeration districts in the assigned area. Assigning districts to enumerators would eliminate overlapping or omission of enumeration and would also lead to smooth and effective distribution and collection of questionnaires.

(2) Methods to Subdivide Enumeration Areas

The essential factors for the subdivision of enumeration areas include followings:

- 1) Each enumeration district must be of a size where an enumerator can complete the enumeration within the given period of time.
- 2) Physical boundaries between enumeration districts are objectively clear and identifiable.
- 3) Number of survey objects located within each enumeration district must be uniform from one district to another. (District size appropriate for the activities of an enumerator, however, must be determined by taking into consideration magnitude of district, topographic features, and convenience of transportation).

Subdivision of enumeration areas is therefore proposed as follows for the entire territory of Oman by taking into consideration above-mentioned factors.

- Muscat capital area

Muscat capital area should be subdivided as finely as possible up to each block unit by utilizing address system and maps adopted by Muscat Municipality Office, because a large number of manufacturing establishments are widely dispersed in this area.

- Regional areas

Search/control of establishments is considered relatively easy initially if rough basic maps are available, because locations of manufacturing establishments are likely to be concentrated in the case of regional areas. Maps which are being used by The Ministry of Housing for the planning of new towns may be used as the basic maps. Those maps accurately show main roads. Regional areas may be roughly subdivided with reference to main roads and wadis or with reference to relatively large roads.

Detailed maps of subdivisions may be produced when address systems similar to those of Muscat capital area will have been adopted in future.

(3) Subdivision of Enumeration Areas and Coding

Enumeration areas shall be subdivided by above-mentioned methods and shall be coded in accordance with the coding system.

7.6 Establishment of Legal Basis and Regulations of Industrial Statistical Survey Work

For the implementation of the industrial statistical survey, it is necessary to define legal regulations for the survey implementation and survey work procedures.

7.7 Schedule of Industrial Statistical Survey

Following schedule is suggested for the implementation of industrial statistical survey in the Sultanate of Oman after the completion of this study in March 1992 with submission of the final report.

It is necessary to conduct a pilot survey in the manner in line with the method of conducting a full-scale survey and in prior to the implementation of a full-scale industrial statistical survey. The pilot survey is aimed to the formulation of a concrete plan of implementing full-scale industrial statistical survey and to confirm from every point of view whether method of survey is compatible with actual circumstances, or whether improvements are needed. There would be cases where original plan may have to be modified in part. It is also important that the planner to have direct experience concerning needs of modifications.

- (1) 1993 (around April) Pilot survey
- (2) 1994 (around April) First industrial statistical survey

The survey will be the first nation-wide survey of the kind to be conducted during the period beginning in April and ending in July. The results shall be published before September - October 1994.

- (3) 1995 (around April) Second industrial statistical survey

Yearly nation-wide survey shall be conducted routinely following the completion of this second nation-wide survey.

Action plan to establish Industrial Statistics Information Center in accordance with the master schedule is presented in detail in chapter 8.

7.8 Industrial Classification and Commodity Classification Coding System

(1) Industrial Classification

Industrial classification to be adopted for the planning of industrial statistical survey shall be four-digit classification coding of INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION of the United Nations, 3rd edition (ISIC, Rev.3, 1989).

(2) Commodity Classification

1) Objective of commodity classification

Industrial classification of an establishment is determined by the type of activities conducted by that establishment. Type of activities is represented by the commodity (i.e. goods and services) which are produced by the establishment concerned.

Accordingly, a two-digit classification coding shall be added after four-digit ISIC code so that six-digit code in total can be used for commodity classification. The classification shall be used

for the detailed rating of manufacturing industry and shall be an indispensable means for the preparation of production/shipment statistics for each commodity.

2) Coding procedure

Commodity code shall be determined under the following procedures:

- a. First to fourth digits are 4 digit classification of ISIC Rev.3.
- b. Fifth digit is assigned to the code to classify the commodity in question. The sixth digit is assigned to the code of subdivided commodities within that classification. However classification code [9] is assigned to [others]. [91] is allocated to fifth and sixth digits to represent receipt which is accompanied by the goods produced by processing brought-in materials of other manufacturer/s, while [92] is allocated to represent receipt which is accompanied by the provision of service of an establishment to another.
- c. Classification items are based on the central product classification (CPC) of the United Nations and shall be determined by adding thereto information concerning local production in Oman and export/import.
- d. Harmonized Commodity Description and Coding System (HS) used for trade statistics shall be used for the coding of commodity classifications as much as possible. For commodities circulating in Oman and particular

to Oman however, new classification/
subdivision codes shall be allocated.

3) Compression of classification item names

Purpose of compressing classification item names is to make entry into questionnaires by each establishment and also manifestation of results of survey by commodity classifications easier.

4) Unification of the unit of quantities

Purpose of unifying the unit of quantities is to facilitate survey of quantities of production and preparation of quantitative statistics for each establishment and check by computers accuracies of amount and quantities of production as entered into questionnaires and whether unit prices given by dividing amount of production by corresponding quantities of production are within a certain range from the average.

5) Making commodity classifications known to everybody

In order to make commodity classifications known to every body without exception, it is considered desirable to hold seminars targeted to Regional Office staff, statistical survey enumerators, as well as persons in charge of entry into questionnaires on behalf of establishments.

It is also considered desirable to prepare and distribute commodity classification manuals so that respondents can enter products of their establishments into questionnaires correctly.

(3) Classification of Raw Materials:

One of the important objectives of the industrial statistical survey is to grasp status of the use of indigenous resources and imported goods by manufacturing sector. Classification concerning raw materials is equally considered necessary as the classification concerning commodities.

In the case of products included in the commodity classifications discussed hereinabove being used again for manufacture, raw materials can be classified using the commodity classification. In the case of agricultural and fishery products and mining products used as raw materials however, a new system of classification is needed.

CHAPTER 8. ACTION PLAN FOR ESTABLISHMENT OF THE CENTER AND FOR INDUSTRIAL STATISTICS SURVEY

Action plan consists of two parts, one concerning establishment of the Industrial Statistics Information Center and the other concerning implementation of industrial statistical survey.

8.1 Preparation for the Establishment of the Center

Preparation work for the establishment of the Center shall be the responsibility of Industrial Statistics Unit of the Ministry of Commerce and Industry which will be the parent body of the Center and shall prepare establishment plan for the Industrial Statistics Information Center and shall establish the Center in compliance with various procedures of the Ministry of Commerce and Industry. Items concerning the establishment of the Center are shown as follows.

(1) Outline of Preparation Work and Action Plan

1) Items of preparation work

- a. Preparation of establishment plan
- b. Preparation of Center office
 - Interior work of Center office room
 - Procurement of office equipment
 - Procurement of office furniture
- c. Recruitment of Center staff
- d. Design and development of software system
- e. Procurement of computer system and related facilities

Table 8.1.1 shows action plan of the preparation work for the establishment of the Center.

8.2 Implementation of Industrial Statistical Survey

(1) Planning and Design of Survey

The Industrial Statistics Information Center shall plan and design industrial statistical survey.

(2) Works Related to the Implementation of Industrial Statistical Survey

1) System of the survey and works to be conducted by agencies to whom works are assigned

a) System of the survey

Agencies to whom part of survey works shall be assigned include the Directorate of Commerce and Industry in Southern Region, and the Regional Office of the Ministry of Commerce and Industry.

Those agencies shall conduct survey work assigned by the Center. The Center shall conduct survey in Muscat capital area by itself.

b) Works to be conducted by agencies to whom works are assigned

Works assigned to such agencies as the Directorate of Commerce and Industry in Southern Region as well as regional offices are as follows.

- Preliminary survey
 - Confirmation of directory list of establishments to be surveyed, confirmation of areas to be surveyed and collection of renewal information of establishments
- Distribution and collection of questionnaires
- Examination of collected questionnaires
- Management and control of enumerators
- Communication with the Center

2) Survey schedule

It is necessary that the Center shall prepare work schedule of each survey system focusing on the timing of implementation and progress in accordance with the schedule so established. An example of survey schedule is shown in Table 8-2-2 [Action plan for the implementation of survey]. The schedule is normally accompanied with works associated thereto. It is important that the schedule should include certain redundancy.

3) Work of in the Industrial Statistics Information Center

Principal work of the Center is to explain to agencies to whom the Center has assigned certain works. It is therefore desirable that resume of the work assigned is distributed in advance so that survey work assigned is fully understood. Explanation may be either by assembling all persons in charge in the Center or by giving explanation to each survey area or by combination of both to be repeated several times.

- a) Survey related documents
 - Industrial survey questionnaires and manuals
 - Directory list of establishments to be surveyed
 - Enumeration maps
 - Commodity classification table and industry classification table
 - Publicity, advertisement documents
- b) Documents related to education

4) Recruitment of enumerators

Those qualified for enumerators are as follows.

- a) Those conversant with English language are desirable for enumerators because clerks in charge of accounting/business in the establishments are often expatriates not conversant with Arabic.
- b) Those who are capable of understand industrial statistical survey well and are enthusiastic to cooperate with the statistical survey
- c) Those who correctly understand survey procedures and are capable of complying with those procedures and are familiar with the state of things in the area to be surveyed.
- d) Those who have time to spare for the survey
- e) Those who can participate in field survey

f) Those who are capable of winning confidence of respondents. Those involved in security activities who may be likely to be misunderstood by respondents or those of extremely high age should be excluded.

5) Training of enumerators

It is indispensable for enumerators to acquire basic knowledge concerning statistical survey in general including interview technique to have good relationship with respondents.

a) First step training

It is desirable to train enumerators for basic knowledge as soon as possible after designation as enumerators.

Fundamental items of basic training are as follows.

- Enumerator's duty
- Basic knowledge of industrial statistics in general
- Interview technique

b) Second step training concerning industrial statistical survey

- Knowledge of industrial statistical survey items

6) Management of enumerators

To manage and control enumerators is important in having comprehension of the progress of survey.

It is necessary to prepare a card corresponding to each enumerator and to record in it detailed activities of the enumerator. It is also necessary to accompany enumerators to confirm their survey activities. Recording to erroneous entries into questionnaires or omissions on routine basis and to utilize the record for the training and guidance of enumerators would be also effective.

7) Activities of enumerators

a. Attendance to training seminar

Training seminar covers basic matters enumerators must be aware of, explanation of details of survey work of statistical survey, as well as distribution/collection of survey documents, instruction of survey area assignment etc..

b. Preliminary survey

Preliminary survey shall be conducted in prior to the statistical survey. Preliminary survey shall cover confirmation of the extent of the survey district of each enumerator, collection of information required for the renewal and update of directory list of establishments including identification of operating establishments, identification of establishments which have discontinued trade or have moved to other locations as well as those newly founded.

c. Implementation of survey

The survey shall be made by way of interviewing respondents for industrial statistical survey. Interview of respondents is the most important and fundamental basis of the survey.

d. Examination and submission of questionnaires

Enumerators shall confirm whether they have collected all questionnaires to be collected and to examine questionnaires for correct entries as instructed to do so. In case questionable items have been identified, survey enumerators must refer to respondents for rectification of questionable items. It is therefore necessary to check and examine collected questionnaires at the time of submission as much as possible and confirm questionable items with respondents. If found necessary, enumerators must request respondent to correct entries immediately.

Enumerators must collect all questionnaires and submit them after having examined and confirmed correctness of entries.

There may be cases where enumerators may be referred to by their supervisors with respect to the entries of questionnaires so submitted. Survey enumerators are requested to respond to such reference, not by their own judgement, but by having confirmed with relevant respondents.

Table 8-1-1 Action Plan concerning Establishment of the Center (Draft)

Item of work	Person in charge	Year				
		1992	1993	1994	1995	
Preparation of plan to establish the Center (Including procedures for establishment of the Center)	Center head	—				
Preparation for Center office (1) Procurement of office equipment (2) Procurement of fixture (3) Interior work	Planning and management					
Recruitment of Center staff	Center head (Personnel Dept.)	—				
Training of Center staff	Training/Expert from overseas					
Application software system • System design • System development	Computer Engineer (Computer Dept.)					
Procurement of computer and computer related equipment • Remodeling computer room • Computer system • Media, consumable • Furnishing	Computer Engineer (Computer Dept.)					
Plan/design of industrial statistical survey	Planning and management					

Table 8-2-2 Action Plan for implementation of survey (Draft) 1/2

Item of work	1992	1993	1994	1995
Work of the Center	Receipt of final report			
1. Plan/design of survey				
(1) Preparation of survey manuals (Including overall plan and processes)				
(2) Design/preparation of questionnaires, table				
(3) Preparation of survey implementation outline				
(4) Preparation of survey expense budget plan				
2. Preparation work of survey				
(1) Procurement of survey related articles				
(2) Printing/binding of questionnaires etc.				
(3) Delivery of survey related documents				
(4) Explanatory seminar for parties concerned				
(5) Recruitment/training of enumerators				
Public invitation for recruitment				
Employment of enumerators				
Training of enumerators				
(6) Publicity/advertisement of survey				
(7) Preparation of directory of establishments				
(8) Work assignment for enumerators				
(9) Contracting and arrangement of car rental				
3. Implementation of survey				
(1) Supervision of enumerators				
(2) Management of survey schedule				
(3) Examination of questionnaires				
(4) Response to questions concerning survey				
4. Totalization of questionnaires (Tabulation)				
(1) Input and totalization of data				
(2) Tabulation of statistics table				
(3) Preparation of statistics report				
(Preparation of script, printing and binding)				

