

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**NATIONAL STATISTICS OFFICE
REPUBLIC OF THE PHILIPPINES**

**FINAL REPORT
FOR
THE STUDY
ON
THE DEVELOPMENT OF INDUSTRIAL STATISTICS
IN
THE REPUBLIC OF THE PHILIPPINES**

MARCH 2002

UNICO INTERNATIONAL CORPORATION

Preface

In response to a request from the Government of the Republic of the Philippines, the Government of Japan decided to conduct a Development Study on the Development of Industrial Statistics, and entrusted the study to Japan International Cooperation Agency (JICA).

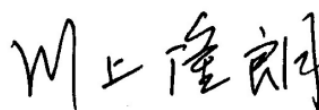
JICA sent to the Republic of the Philippines a study team headed by Mr. Toru Moriguchi, Unico International Corporation, and organized by Unico International Corporation and Mitsui Knowledge Industry Co., Ltd. from August 2002 to March 2002.

The team held discussions with the officials concerned of the Government of the Republic of the Philippines and conducted a series of field study. After its return to Japan, the team conducted further studies and compiled the results in this report.

I hope this report will contribute to the further development of industrial statistics in the Republic of the Philippines and to the enhancement of friendly relations between the two countries.

I wish to express my sincere appreciation to all those who participated in this study project for their close cooperation with the team.

March 2002



Takao Kawakami

President

Japan International Cooperation Agency

March 2002

Mr. Takao Kawakami

President,
Japan International Cooperation Agency
Tokyo, Japan

Dear Mr. Kawakami

Letter of Transmittal

We are pleased to submit the final report for the “Study on the Development of Industrial Statistics in the Republic of the Philippines”. This study was conducted with the National Statistics Office of the Philippines (NSO) for 19 months, from August 2000 to March 2002.

In the Philippines, in addition to the census, annual and quarterly surveys of the establishments, a monthly survey (MISSI) with the objective of generating the industrial indices for the manufacturing industry is already being conducted. The collected data from the establishments, however, is only of values. Dividing the value index by deflator, the industrial volume index is computed and disseminated. There is a growing demand for the production statistics of absolute figures and indices with higher reliability based on a commodity-based and volume-based survey from both government agencies and private sectors.

The objectives of this study conducted by the joint work of the study team and the NSO were; 1) design of the commodity-based and volume-based monthly survey and development of new industrial indices; 2) planning of the conversion program of the MISSI to the commodity-based and volume-based survey; and 3) technology transfer from the study team to the counterpart of the NSO.

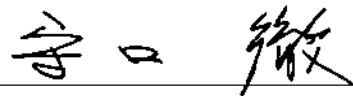
After the basic design was completed the pretest survey was conducted for three months. Then the final design was compiled as Monthly Survey of Production (MSP) with all findings by the pretest survey incorporated, which is included in this final report together with the record of the design works. The NSO has decided to implement the MSP pilot survey for 12 months in 2002 in parallel with the MISSI. The preparatory works for the survey has been completed by now.

In expecting the efforts of the NSO for the success of the MSP pilot survey, we hope that the new MISSI which combines the MSP and the MISSI as has been proposed in this report will be implemented as one of the designated surveys of the Philippines as soon as possible.

We would like to express our gratitude to your Agency, the Ministry of Foreign Affairs, the Ministry of Economy, Trade and Industry, and the Japanese Embassy in the Philippines for the assistance and support to the study. In the course of the study, we had meetings and discussions with governmental organizations of the Philippines such as NSCB, DTI, BOI and NEDA. We would like to thank for all of the support and valuable information we received from them. We would also like to express our heartfelt thanks to the private industrial groups and firms, including the FPI, for their cooperation to the study in many ways.

Finally we wish to take this opportunity to express our sincere gratitude to the NSO for all the thoughtful consideration and courtesy shown to us throughout our stay in the Philippines. We really wish for the further development of the NSO shouldering an important responsibility in the country.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Moriguchi Toru', is positioned above a horizontal line.

Toru Moriguchi

UNICO International Corporation

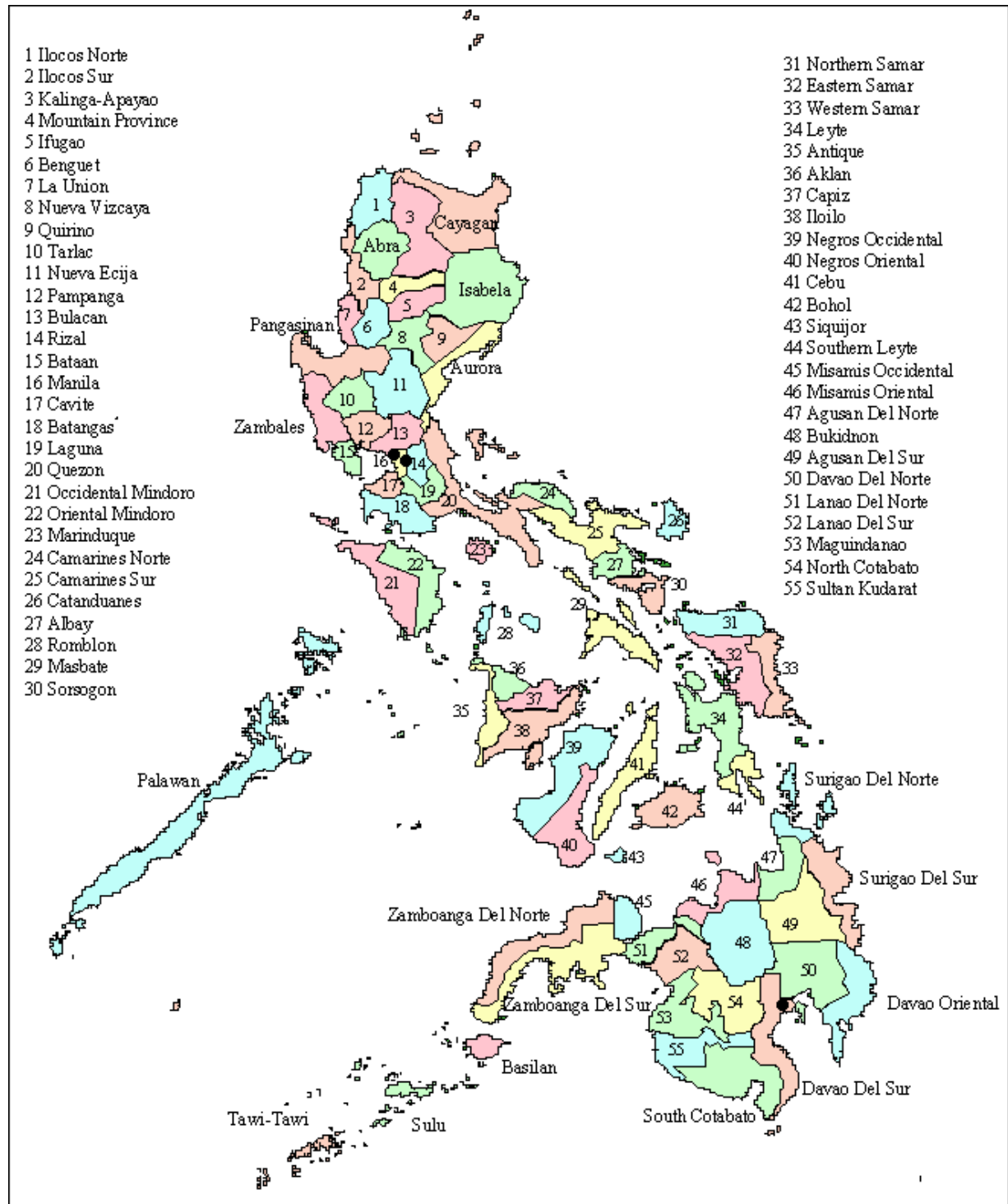
Team Leader

Study Team of the Development of Industrial

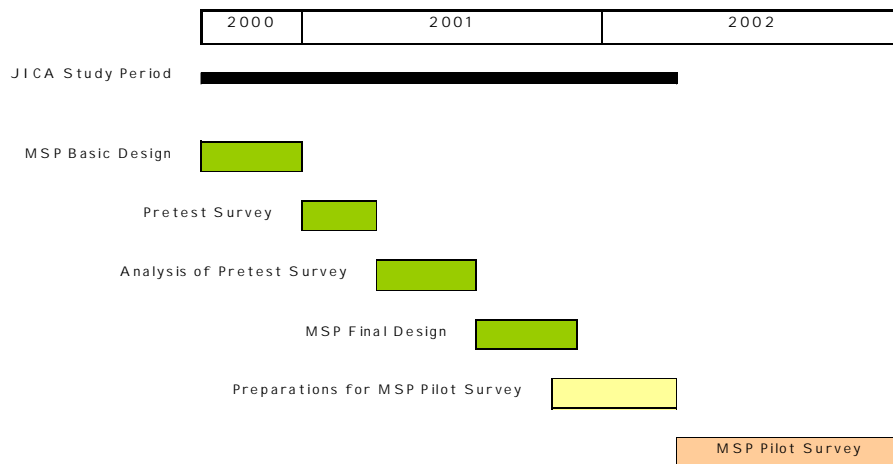
Statistics of the Philippines

Japan International Cooperation Agency

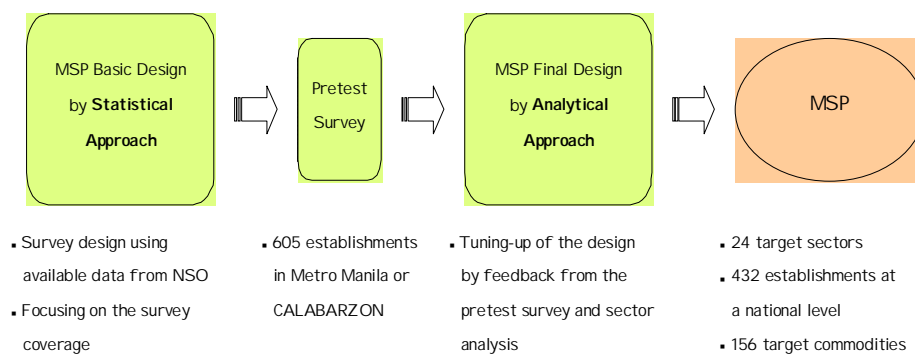
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NSO - JICA Joint Study Schedule



Work Flow of MSP Design





Based on the results of the Study conducted as a joint undertaking with the JICA Study Team, the National Statistics Office (NSO) will start the Monthly Survey of Production (MSP). On March 6, 2002 the relevant government agencies, industrial associations, and target establishments were invited to a launching program of the MSP. The NSO presented the scheme and the objectives of the MSP, and asked for the cooperation to the survey.

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Abbreviation

AFTA	:	Asian Free Trade Agreement
ASE	:	Annual Survey of Establishments
ASEAN	:	Association of Southeast Asian nations
ASPBI	:	Annual Survey of Philippine Business and Industry
ATE	:	Actual/Average Total Employment
BOI	:	Board of Investment
BTRCP	:	Bureau of Trade Regulation and Consumer Protection
CALABARZON:		
		Cavite, Laguna, Batangas, Rizal and Quezon
CAMPI	:	Chamber of Automotive Manufactures of the Philippines Inc.
CBU	:	Completely Built-Up
CD	:	Compact Disc
CDP	:	Car Development Program
CKD	:	Completely Knocked Down
CONGEP:		Confederation of Garment Exporters of the Philippines
CPBI	:	Census of Philippine Business and Industry
CVDP	:	Commercial Vehicle Development Program
DE	:	Department of Energy
DOA	:	Department of Agriculture
DTI	:	Department of Trade and Industry
EPZ	:	Export Processing Zone
GDP	:	Gross Domestic Product
GTEB	:	Garments and Textile Export Board
IMF	:	International Monetary Fund
JICA	:	Japan International Cooperation Agency
LTO	:	Land Transportation Office
MISSI	:	Monthly Integrated Survey of Selected Industries
MSP	:	Monthly Survey of Production
MVDP	:	Motor Vehicle Development Program
NCR	:	National Capital Region (Metro-Manila)
NEDA	:	National Economic and Development Authority
NSC	:	National Steel Corporation
NSCB	:	National Statistical Coordination Board

NSO	:	National Statistics Office
NTA	:	National Tobacco Association
OEM	:	Original Equipment Manufacturing
PCMC	:	Philippine Cement Manufacturers Corporation
PEZA	:	Philippine Economic Zone Authority
PPI	:	Producer's Price Index
PPS	:	Producer's Price Survey
PSA	:	Philippine Statistical Association, Inc.
PSCC	:	Philippine Standard of Commodity Classification
PSIC	:	Philippine Standard of Industrial Classification
QSME	:	Qualification Study for Manufacturing Establishments
QSPBI	:	Quarterly Survey of Philippine Business and Industry
SDDS	:	Specific Data Disclosure Standard
SEC	:	Securities and Exchange Commission
SNA	:	System of National Accounts
VaPI	:	Value of Production Index
VoPI	:	Volume of Production Index
WPI	:	Wholesale Price Index
WTO	:	World Trade Organization

Chapter 1 Background of the Study

Chapter 1 Background of the Study

Industrial statistics on the status of production, sales, and inventory by commodity and by volume are vital economic data used to analyze and assess the economic trends of specific industrial sectors at a specific point of time or during a specific period, and provide indicators indispensable for government to develop industrial as well as macroeconomic policies. They are also widely used by corporate managers as a basic tool for grasping business trends and making business plans, as well as by investors, researchers and analysts in and outside the country in making decisions on investment and business strategies.

In order to make industrial statistics valid for these purposes, they must be reliable, timely and compatible for international comparison, thereby, in order to become a useful tool to cope with the globalization of the economy. The Philippines are no exception to this and are urgently required to develop industrial statistics and flash indicators that meet the needs of the time.

Under these circumstances, the Philippine Government requested the Japanese Government to conduct the “Study on Development of Industrial Statistics.” The Japan International Cooperation Agency (hereinafter referred to as “JICA”) mission that was sent to the Philippines in February 2000 confirmed that there were growing needs, among both the public and private sectors, for industrial statistics and indices by a **commodity and volume based survey of production on a monthly basis** (hereinafter referred to as “Monthly Survey of Production (MSP)”).

The National Statistics Office of the Philippines (hereinafter referred to as “NSO”) has been conducting a monthly production survey called the Monthly Integrated Survey for Selected Industries (hereinafter referred to as “MISSI”) for the manufacturing sector since 1998. However, the current MISSI does not serve as a commodity and volume based survey of production. Both Governments agreed on the improvement of the current MISSI for conversion to the commodity and the volume based survey as the prime objective of the Study. In June 2000, JICA sent a preliminary study mission for the finalization of the details of the Study with the Philippine Government.

Chapter 2 Objectives of the Study

Chapter 2 Objectives of the Study

The Study has the following objectives:

- (1) Improvement of the current MISSI for conversion to the commodity and volume based survey (MSP);
- (2) Development of new industrial indices, including monthly production, sales and inventory indices, generated by data from the MSP; and
- (3) Technology transfer to the counterpart of NSO through the implementation of the Study by a joint work of the study team and the counterpart team.

Chapter 3 Two Methods for Development of Industrial Statistics and Improvement of MISSI

Chapter 3 Two Methods for Development of Industrial Statistics and Improvement of MISSI

3.1 Direct Method and Indirect Method

While industrial censuses and annual surveys are primarily designed to ascertain the industrial structure, monthly surveys are conducted to produce short-term statistics and indices that are used to depict the current state of the economy and to determine the direction of the economy in the context of business cycles, thereby to allow the policymaker or the planner to devise appropriate and timely action.

In order to grasp the economic trend, there are two variables, namely being price and volume. As for price, various price surveys and price indicators are provided. In principle, industrial statistics used to determine the current state and direction of the economy should be volume-based, which are free from price implication. There are two methods for the development of industrial statistics. Firstly, volume data of individual commodities for each industrial sector are directly obtained by field surveys for statistics and the generation of industrial (volume) indices, which is called the direct method. Secondly, there is an indirect method under which sector-wise industrial (volume) indices are estimated from two types of indices representing the nominal value of production and relevant price index. Volume index by the indirect method is the same as what is called the production value index on a constant price.

The direct method is a global standard method used in many countries. It focuses on supply and demand for individual commodities, and therefore represents the production status of specific commodities. The grouping of commodities, according to an applicable industrial classification standard, forms the basis of calculating industrial indices by commodity groups. Note that only volume-based production data are used to produce these indices, and no price data is required. Theoretically, industrial statistics and (volume) indices by the direct method are more accurate and reliable than those by the indirect method since the former do not involve any price factors.

On the other hand, the indirect method features a relatively easy method to determine sector-specific industrial indices. Instead of relying on data of individual commodities, it depicts performance of industrial sectors by value and price indices. As far as the value and price data are available, sector indices by the indirect method

can be divided to serve as commodity group indices. As an exceptional case, the indirect method is employed to estimate production indices of those commodities for which volume data is difficult to obtain under the direct method. The indirect method requires two types of data, value of production and price, while it does not need volume data.

3.2 Method Selection

The choice of the direct or indirect method for development of industrial statistics and indices depends largely on the purpose of their use. At the same time, the data reliability and costs required for implementation become an important consideration.

In supposing the same conditions for both of the two methods in terms of appropriateness of survey tools and survey method, and cooperation of the respondents to the survey, the reliability of indices by the direct method is higher than those by the indirect method.

The cost for the direct method survey is larger than that for the indirect method. Under the indirect method, a single questionnaire containing no name of commodity can be used for all sectors. On the other hand, the direct method needs to use different forms of questionnaires for different sectors that specify commodities that have been selected in advance. The commodities selected need to be reviewed and revised on a periodical basis in order to better reflect industry trends. Furthermore, in selecting target establishments, a preparatory field survey may be required to have a list of establishments that actually manufacture selected commodities if commodity-based data on each establishment is not available. Finally, as the direct method deals with specific commodities, it needs to handle much more data compared to that of the indirect method.

Although the indirect method involves collection of data on the value of production and price, only secondary data - the total value, price and volume indices for each industrial sector - are disseminated. On the other hand, the direct method involves the series of surveys covering individual commodities because the unit of measurement often varies among the commodities even when indices produced are by sector or by commodity group. And the primary data - absolute figures on production by commodity - are highly demanded by a variety of users. The objectives of the direct

method survey are not only the secondary data but also the primary data, i.e. absolute figures in volume. The direct method survey first entails the level of the primary data reliable enough for dissemination. Statistics of absolute figures are centers of interest of many concerned entities. Compared with the indices, verification of the reliability of the absolute figures is easier to be done by them. The direct method to generate and disseminate not only indices but also absolute figures of production requires more cost in both preparatory and implementation phases.

From the standpoint of the respondents, the questionnaire of the direct method with more number of items poses more burdens. However once the commodities with appropriate measuring units are clearly defined in the questionnaires, the better response rate may be expected in the direct method because the volume data of commodities is easier to be obtained from the managerial level of the establishments than value data which normally involves cost factors not directly relating to the production activity.

The indirect method is simple and convenient for the purpose of developing short-term macroeconomic indices that depict the overall trends of the manufacturing industry. Nevertheless, timely policymaking and short-term economic forecast require the accurate monitoring of production trends of individual commodities (groups). The direct method is an essential tool to produce such commodity-based industrial statistics and indices. Note that the Philippines is only one among the five major ASEAN countries, which produces and disseminates industrial indices by the indirect method.

3.3 MISSI

MISSI is one of the designated surveys covering 16 sectors of the manufacturing industry, which have been conducted by NSO since 1997. Its management structure includes a technical committee organized by representatives of the related government agencies, which discuss ways to improve the design of the survey and reliability of data. At the same time, there is the demand for MISSI to increase its coverage of the manufacturing industry by adding more sectors in order to meet requirements for the System of National Accounts (SNA) and NSO is currently preparing for the expanded survey.

The MISSI questionnaire consists of the following six items. A single form is used for all the sectors surveyed. Note that the “production, sales and inventory”

section has a blank space for the name of the commodity. The responding establishment is required to enter the name of the commodity (up to five) it produces, together with the unit of measurement for each commodity, followed by the volume and value of production.

1. Employment
2. Compensation
3. Production, Sales, and Inventory (both volume and value)
4. Total sales
5. Inventory of raw materials
6. Capacity utilization

MISSI was originally designed to collect and compile industrial production data by volume and by commodity, which is then used to generate industrial indices by the direct method. Nevertheless, it fails to collect sufficient amounts of data to meet the purpose, as many respondents do not take time to specify commodity names in the questionnaire. In addition, most of the commodity information reported does not serve as statistical data due to inconsistency and arbitration in naming or units of measurement.

As a result, the MISSI industrial index currently disseminated by the NSO, called the Volume of Production Index (VoPI), is calculated for each sector by the indirect method that consists of the following steps. First, the Value of Production Index (VaPI) is calculated from the total value of production of 520 establishments. VaPI is then divided by the Producer's Price Index (PPI), which is determined from the results of Producer's Price Survey (PPS) covering 180 establishments and 370 commodities. By this calculation, the VoPI is determined for each sector and disseminated to the public.

Industrial indices of MISSI are lacking in: 1) indices to assess the commodity-wise production trends; and 2) indices of sales and inventory. Furthermore, they inherently contain the following statistical errors as they are derived using the indirect method.

- (1) Survey targets are establishment. All the establishments are classified into one sector by their major activity (commodity). If an establishment of a specific sector under the survey produces commodities that should be classified in more

than one sectors, the total value of production by the establishment will inevitably include the portion that should not be counted for the sector.

- (2) PPS is conducted for individual commodities and the market basket for the PPS is reviewed periodically. However, it does not always correspond to the product mix of the sample establishments of MISSI. It should be cautioned that any volume index generated using a price index faces a risk of containing some errors.

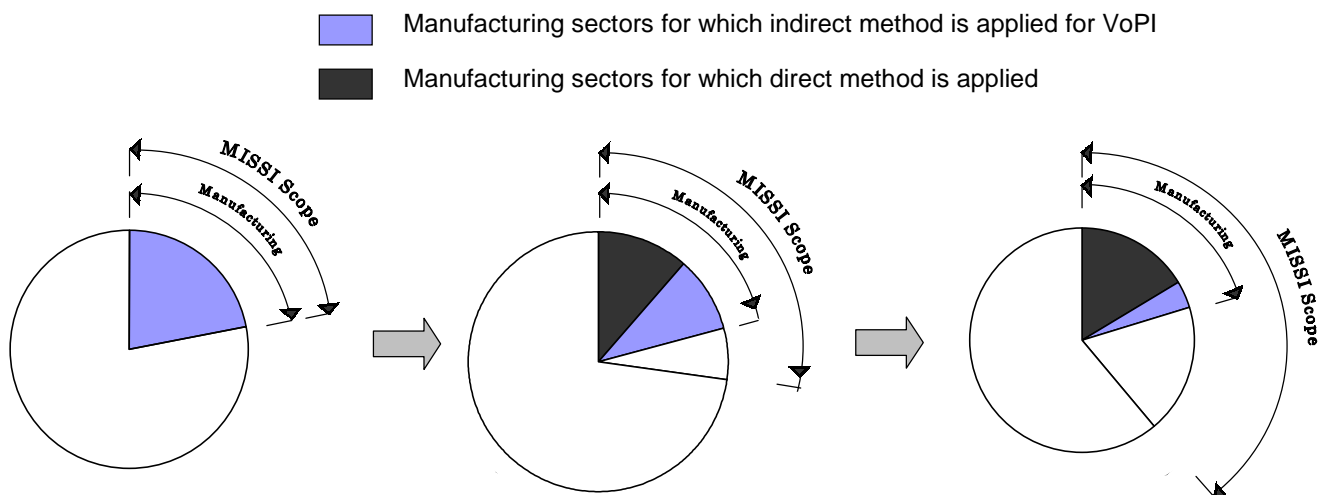
3.4 MISSI Improvement Scheme and the Study

NSO sets the following two goals for MISSI to upgrade its quality in the long run.

- To expand the survey coverage beyond the manufacturing industry by adding mining, agriculture, service industries, etc.
- For the manufacturing industry, to convert to a commodity and volume based survey (MSP) with a view to disseminating absolute production figures and industrial indices by the direct method.

Figure 3-1 presents a conceptual view of the improvement scheme of MISSI.

Figure 3-1 Improvement Scheme of MISSI



The Study is conducted to promote the goal in b. More precisely, NSO and the study team work together to make the current MISSI ready for conversion to the commodity and volume based survey (MSP) aiming at the dissemination of absolute figures of production volume by commodity and development of new industrial indices, while giving full consideration to linkage of the new indices with the existing ones that have been disseminated since 1998. The following is the list of activities of the Study.

- a. To establish the MSP design policy;
- b. To select target sectors, commodities and establishments;
- c. To design the questionnaire;
- d. To prepare survey manuals;
- e. To conduct a pretest survey to check if survey tools work properly as designed and apply the result of the survey for finalization of the design;
- f. To develop new industrial indices based on MSP
- g. To establish the implementation schedule of the conversion

Chapter 4 Use of Statistics and Indices of the MSP

Chapter 4 Use of Statistics and Indices of the MSP

The MSP is essentially designed to improve the MISSI in order to meet the original purpose as a commodity and volume based survey of industrial production, i.e., volume statistics and compilation of industrial indices using the direct method. While the MISSI questionnaire requires the respondent to identify and enter the name of commodities produced, the MSP questionnaire is improved to have the list of commodities printed on it with the unit of measurement to facilitate response by the establishment. Furthermore, the MSP intends to capture sales and inventory data on a commodity basis.

The MSP will introduce the following statistics and indices, of which its use and advantages are described below.

- a. Absolute figures of production, sales and inventory volumes of individual commodities
- b. Production, sales, inventory, and inventory ratio indices for each sector, commodity group and commodity by the direct method

4.1 Use of New Statistics and Indices to the Government

4.1.1 Economic Policy

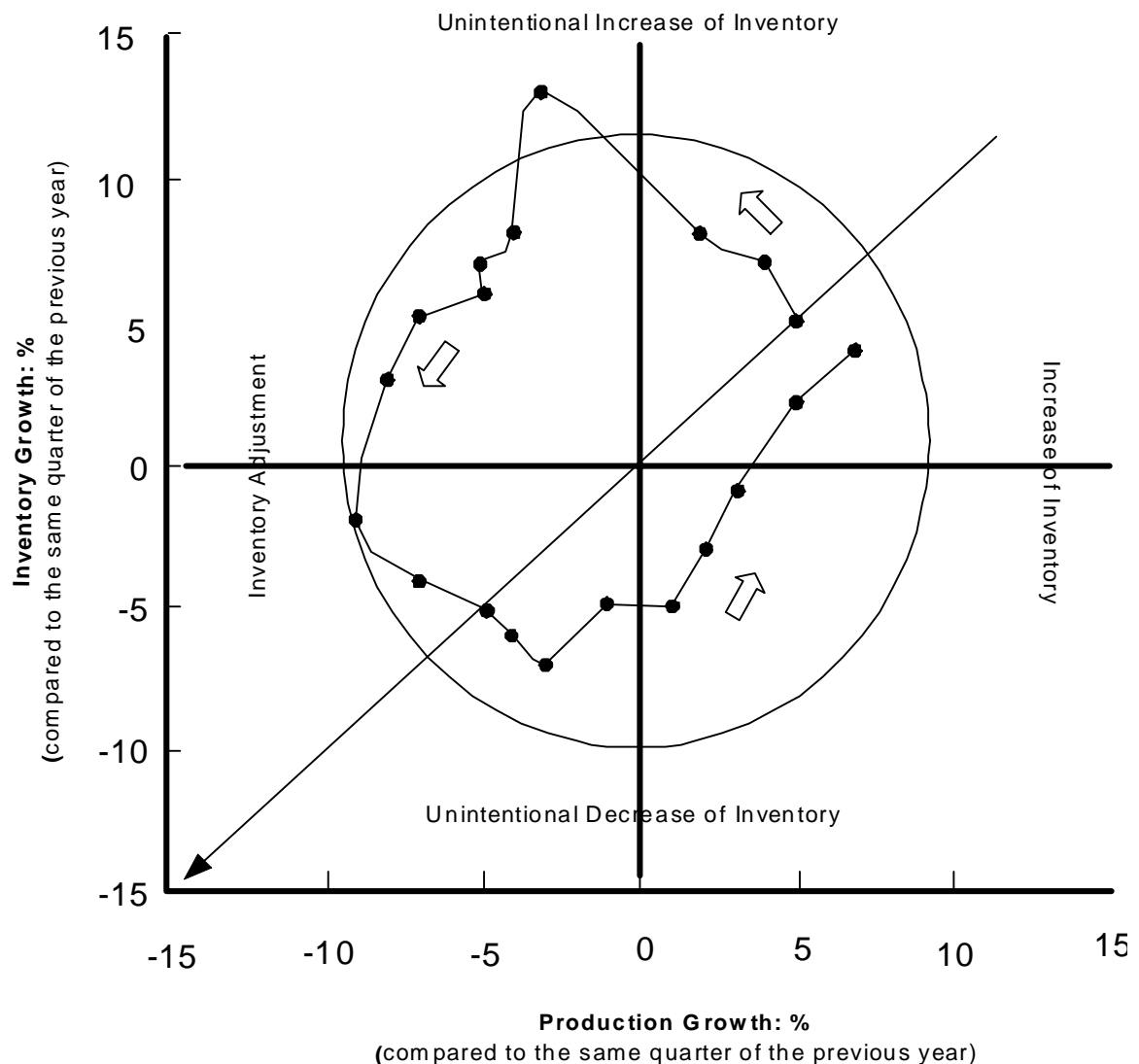
The manufacturing industry and its activities effectively govern the national economy as it has a much stronger clout than economic statistics suggest, especially when it provides a source of growth for other sectors, such as distribution and transportation. The manufacturing industry's activities can be systematically measured by industrial indices that represent relative levels of production, sales and inventory. These industrial indices are in turn highly sensitive to the general business climate and are therefore essential in grasping a general picture of the dynamically changing economy. They vary greatly over time to a much larger magnitude than the service sector does and can be used to monitor GDP trends.

In particular, the MSP is expected to provide diverse indices representing industrial production, sales and inventory trends, which will serve as an effective tool to analyze the general economic trends, in addition to production and demand levels. They can

single-handedly or as a combination with other macroeconomic indices produce a diffusion index and depict the current state of the economy and its future outlook.

Figure 4-1 shows a typical inventory cycle assumed for the short-term business forecast. As variation of inventory levels seriously affects production activities, it can also be used to determine the current business cycle and its direction. The inventory cycle is known empirically to consist of four phases, “intended increase of inventory,” “unintended increase of inventory,” “inventory adjustment” and, “unintended decrease of inventory (completion of inventory adjustment)”.

Figure 4-1 Inventory Cycle



4.1.2 Industrial Policy

Industrial policy, which is manifested as a variety of government actions - such as deregulation or privatization - has significant impacts on the private sectors by changing the business environment. Industrial policy can only be established and implemented by the aid of reliable data that provides accurate and detailed accounting of production activities and trends by industry and commodity. In the Philippines, however, data on individual commodities are only available from trade statistics, and the government has a very limited view of production activities by individual companies. Thus, commodity and volume based production data to be provided by the MSP on a monthly basis will help the government make timely industrial policy decisions effectively. Also, such data will help form a global production database that is demanded by AFTA, WTO and other international organizations in which the Philippines takes part.

4.1.3 Contribution to System of National Accounts

The Philippines joined IMF's Specific Data Disclosure Standard (SDDS) in August 1996. The SDDS signatory countries are required to publish quarterly national accounts within three months after the end of each quarter, started in June 1999.

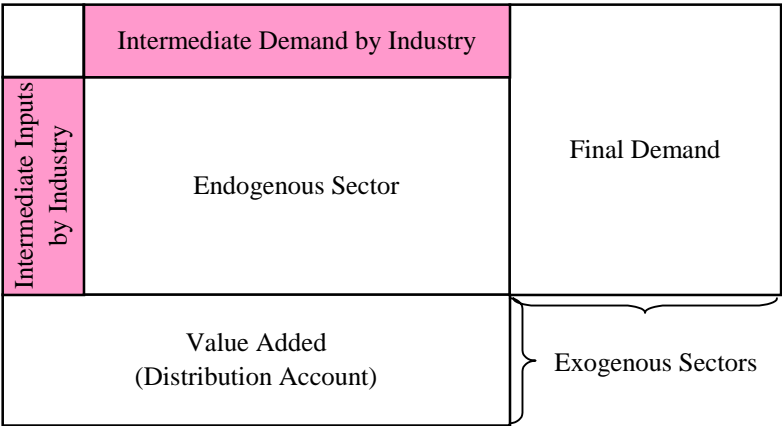
Another to be pointed out in relation to the national accounts is the shift from 68SNA (System of National Accounts adopted by the 15th U.N. Statistical Committee in 1968) to 93SNA (adopted in 1993). The new international standard, 93SNA, has already been adopted by most of the industrialized countries (including EU) as their national accounting standards. The Philippines and other ASEAN countries have still to shift from 68SNA to 93SNA.

Major changes required in 93SNA include the redefinition of the distribution account and the introduction of Chain Index. In particular, the latter is designed to better reflect the emerging economic reality that many high-tech, consumer products, typically PCs, go through rapid technological advancement and their price declines at the same time. The chain index is a product of the rates of change from the previous period, starting in a baseline period. Data from the MSP can contribute to the development of the chain index for the country.

SNA is structured by an extended input-output table on the right side as well as on the bottom side, as shown in Figure 4-2. Industry-based data is linked to the final

demand and value added sections and both data sets are added up to the grand total value, namely GDP. The I-O table is constructed by NSO every five years. Transactions between industries are estimated on the basis of surveys of sample establishments, and then value added data is added to estimate the total input and output. While annual and quarterly survey data is used to construct the I-O table comprised of 180 sectors, the MSP may not directly contribute on this account. If industry-based data from annual and quarterly surveys is found insufficient or unreliable, commodity (group)-wise data from the MSP can serve as a complement.

Figure 4-2 SNA



4.2 Use of New Statistics and Indices to Business Enterprises

Reliable industrial statistics and indices to be produced from the MSP will equally be useful for economy forecasting, production/inventory planning, or investment decision by business enterprises that provide the MSP data.

At the same time, the demand by private sectors for production data on commodities is high. They provide the private sectors with a market share and outlook for the supply-demand situation of their own products, and relative levels of capacity utilization rate compared to other competitors. In the Philippines, such data is not available at present. There are many trade associations, however they have difficulties in obtaining the commodity-wise production volume data even from their member companies. To make matters worse, registration to the associations is not mandatory. Consequently, the statistics they have are limited or involve their own estimation. The MSP is expected to provide such much-needed data in a timely and reliable manner.

4.3 Use of New Statistics and Indices to Investors and Research Organizations

The manufacturing industry widely attracts foreign investment as much as the service sector (banking, restaurant and hotel) and the mining industry. Investors require a wide variety of information for their decision-making, ranging from the country's fundamentals, such as political stability, macroeconomic conditions and consistent industrial policy, to reliable information on a specific industry and/or commodity they intend to invest or produce. Again, the MSP's new data and indices will help potential investors obtain monthly updates of the rapidly changing market conditions and form the extensive database with NSO's census and annual survey data, and data published by BOI, PEZA and trade associations.

Similarly, the MSP's monthly data will be valuable and useful for both domestic and foreign government and private research organizations to conduct an economic analysis of specific industries and commodities in the country by depicting their latest activities that cannot be captured by census data.

Chapter 5 MSP Basic Design

Chapter 5 MSP Basic Design

5.1 Statistical Approach and Analytical Approach

To start the MSP as government statistics for official dissemination purposes, a sound, well-founded survey design must first be established to provide the basis of selecting target sectors, commodities and establishments. In the Study, the survey design process began with the accurate understanding of the MISSI design principle and sampling policy, based on which survey design was proceeded taking the statistical approach in focusing on the survey coverage with data currently available in the NSO. The survey coverage was defined and target sectors in the manufacturing industry were selected. Commodities and establishments to be covered by the MSP were then selected using the currently available data with care to attain the established coverage rate.

The CPBI, ASPBI and QSPBI conducted by NSO are primarily designed to obtain a general picture of industry in the context of industrial structure and their results are largely used for national account on an annual and quarterly basis. In contrast, the monthly survey is expected to produce flash indicators that represent current economic trends. This can be accomplished by the survey design reflecting actual conditions of industries to be surveyed, and an implementing organization capable of producing the survey results with acceptable levels of accuracy and timeliness. The MSP differs from other establishment surveys that focus on general business performance of establishments without specifying commodities, as it deals with individual commodities. For these reasons, design and maintenance of survey tools, including the questionnaire, require updated information on the structure, characteristics and recent trends of individual industrial sectors surveyed.

These survey tools developed using the statistical approach and tested in the field during the pretest survey in the first half of the Study, were refined in the latter half in order to better reflect the characteristics of each industrial sector for the purpose of producing the final design package. The Study involved a variety of activities, e.g., to determine the manufacturing process in which commodities should be surveyed to obtain accurate data, and to reflect factors peculiar to each industry in the survey method, and which is collectively called the analytical approach.

5.2 MSP Basic Design

The following sections discuss the basic design of the MSP by the statistical approach as defined in 5.1.

5.2.1 Selection of Target Sectors

According to the PSIC (Philippine Standard of Industrial Classification) 1994, the manufacturing industry is classified in Major Division D, consisting of 24 divisions (two-digit), 75 groups (three-digit), 205 classes (four-digit), and 430 sub-classes (five-digit).

The industrial sectors covered by the current MISSI were selected on the basis of the production value, trade statistics, consistency with other statistics, and growth potentiality. As a result, a total of 16 sectors are surveyed, as shown in Table 5-1. They were selected from 31 groups in the manufacturing industry defined in PSIC 1977, using the 1983 census data. The base year for the production indices is 1985. At the same time, a survey of 20 sectors is being conducted. The sectors, 16 plus additional 4 (See Table 5-2), were also selected on the basis of PSIC 1977 and data have been weighed by the results of the 1994 census with 1994 as the base year in order to develop the basis of producing new indices in the future. The 20 sectors are consistent with the industrial classification employed by NSCB for national account calculation. Note that the 16 or 20 sectors above do not agree with the PSIC classification (group).

Table 5-1 MISSI 16 Target Sectors

Sector
Manufacturing
A. Food Manufacturing
B. Beverage
C. Tobacco
D. Textile
E. Wearing Apparel
F. Wood and Wood Products
G. Furniture and Fixtures
H. Paper and Paper Products
I. Chemicals
J. Rubber Products
K. Petroleum Products
L. Non-Metallic Mineral Products
M. Basic Metals
N. Transport Equipment
O. Electrical Machinery
P. Miscellaneous Manufactures

Table 5-2 MISSI Additional Target Sectors

Sector
Publishing & Printing
Leather Products
Fabricated Metal Products
Machinery Excluding Electrical

The target sectors for the MSP were selected according to the following principles:

1. To keep the overall rate of coverage, which is governed by the coverage rates for sectors, commodities and establishments, at the same level as that for the MISSI or above;
2. To select sectors from 75 groups (three-digit) in PSIC 1994; and

3. To select sectors on the basis of value added, rather than the production value.

While NSO's ASE covers all establishments with an ATE (Actual Total Employees) of 100 or more, the census covers those with an ATE of 10 or more. In terms of sampling population, the census undoubtedly offers better data for comparative analysis of sectors. However, the latest census data available is based on 1994 and is fairly old for sector analysis of the manufacturing industry that is subject to violent changes. Furthermore, the 1994 census data was based on PSIC 1977. Sector selection for the MSP was made using the results of the most recent ASE 1997, which was based on PSIC 1994.

GDP calculated in the national account process represents a grand total of value added by all sectors. The ratio of value added to total production varies among sectors according to their own operational structure, as manifested in the percentage share of raw materials and the level of labor-intensiveness. NSO has been using production value as selection criteria for sectors and establishments for the sake of convenience. So long as target establishments are selected from the same sector, the value added and the production value produce little difference in the result of selection. However, it is desirable to use the value added for sector selection comparing impacts of different industrial sectors on the national economy. Note that the results of the ASE 1997 indicate the value added by each PSIC three-digit group.

The sectors covered by the MISSI do not entirely agree with PSIC classification. Table 5-3 lists the groups (three-digit) under PSIC 1994, which are included in the 20 target sectors for the MISSI. The rate of coverage by the groups was calculated on the basis of value added in the ASE 1997. These groups accounted for 89% of total value added of the total manufacturing industry.

Table 5-3 Coverage of MISSI 20 Target Sectors

PSIC 1994		Industry Description	MISSI's Coverage No. (%)	Value-Added by ASE 1997	
2-digit	3-digit			1,000 Pesos (%)	
		TOTAL	37 (89.0)	473,189,299 (100.0)	
1) 15	1) 151	PRODN, PROCG & PRESERVATION OF MEAT, FISH & OTHER SEAFOODS, FRUITS, VEG OILS & SLAUGHTERING & MEAT PACKING	▲ (6.4)	30,414,601 (6.4)	
	2) 152	MFR OF DAIRY PRODUCTS	▲ (1.6)	7,592,858 (1.6)	
	3) 154	MFR OF STARCHES & STARCH PRODUCTS, PREPARED ANIMAL FEEDS, & GRAIN MILL	▲ (1.3)	5,999,583 (1.3)	
	4) 155	MFR OF BEVERAGES	▲ (6.3)	30,012,974 (6.3)	
	5) 156	MFR OF BAKERY PRODUCTS	▲ (0.9)	4,043,795 (0.9)	
	6) 157	MFR OF SUGAR	▲ (1.4)	6,490,319 (1.4)	
	7) 158	PRODN OF CRUDE COCONUT OIL, COPRA CAKE, MEALS & PELLETS	▲ (0.6)	2,830,340 (0.6)	
	8) 153,159	RICE & CORN MILLING, MFR OF OTHER FOOD PRODUCTS		29,237,757 (6.2)	
2) 16	9) 160	MFR OF TOBACCO PRODUCTS	▲ (4.3)	20,242,325 (4.3)	
3) 17	10) 171	SPINNING, WEAVING & FINISHING OF TEXTILES	▲ (1.1)	5,295,722 (1.1)	
	11) 172-174	MFR OF OTHER TEXTILES	▲ (1.0)	4,501,915 (1.0)	
4) 18	12) 181	READY-MADE GARMENTS MFG	▲ (3.1)	14,765,545 (3.1)	
	13) 182,189	CUSTOM TAILORING & DRESSMAKING; MFR OF WEARING APPAREL, N.E.C.		4,329,312 (0.9)	
5) 19	14) 191-192	TANNING & DRESSING OF LEATHER, MFR OF LUGGAGE, HANDBAGS & FOOTWEAR	▲ (0.7)	3,219,833 (0.7)	
6) 20	15) 201-202	MFR OF WOOD, WOOD PRODUCTS & CORK, EXCEPT FURN; MFR OF ARTICLES OF BAMBOO, CANE, RATTAN & THE LIKE; & PLATING MATL	▲ (0.9)	4,389,636 (0.9)	
7) 21	16) 210	MFR OF PULP, PAPER, & PAPERBOARD	▲ (1.9)	9,212,557 (1.9)	
8) 22	17) 221	PUBLISHING	▲ (0.5)	2,572,926 (0.5)	
	18) 222-223	PRINTING; PUBLISHING & PRINTING ACTIVITIES	▲ (0.7)	3,357,880 (0.7)	
	19) 224	REPRODUCTION OF RECORDED MEDIA		3,764 (0.0)	
9) 23	20) 232	MFR OF REFINED PETROLEUM PRODUCTS	▲ (11.9)	56,375,708 (11.9)	
	21) 231,239	MFR OF COKE OVEN PRODUCTS	▲ (0.1)	565,251 (0.1)	
10) 24	22) 241	MFR OF BASIC CHEMICALS	▲ (1.8)	8,503,341 (1.8)	
	23) 242,243	MFR OF OTHER CHEMICALS PRODUCTS, MFR OF MAN-MADE FIBERS	▲ (7.4)	35,228,296 (7.4)	
11) 25	24) 251	MFR OF RUBBER PRODUCTS	▲ (0.4)	1,975,328 (0.4)	
	25) 252	MFR OF PLASTIC PRODUCTS	▲ (2.2)	10,297,613 (2.2)	
12) 26	26) 261	MFR OF GLASS & GLASS PRODUCTS	▲ (0.7)	3,227,738 (0.7)	
	27) 262	MFR OF CEMENT	▲ (2.8)	13,361,725 (2.8)	
	28) 269	MFR OF NON-METALLIC MINERAL PROD, N.E.C	▲ (1.1)	5,385,168 (1.1)	
13) 27	29) 271	MFR OF BASIC IRON & STEEL	▲ (3.0)	14,274,983 (3.0)	
	30) 272	MFR OF BASIC PRECIOUS & NON-FERROUS METALS	▲ (1.0)	4,722,371 (1.0)	
	31) 273	METAL CASTING		2,711,762 (0.6)	
14) 28	32) 281,289	MFR OF FABRICATED METAL PRODUCTS EXCEPT MACHINERY & EQUIPMENT	▲ (1.6)	7,637,317 (1.6)	
15) 29	33) 291-294	MFR OF MACHINERY & EQUIPMENT, N.E.C	▲ (1.2)	5,621,813 (1.2)	
16) 30	34) 300	MFR OF OFFICE, ACCOUNTING & COMPUTING MACHINERY		6,993,548 (1.5)	
17) 31	35) 311-312	MFR OF ELECTRIC MOTORS, GENERATORS, & TRANSFORMERS; MFR OF ELECTRICITY DISTRIBUTION & CONTROL APPARATUS	▲ (0.5)	2,222,705 (0.5)	
	36) 313	MFR OF INSULATED WIRE & CABLES	▲ (0.8)	3,612,100 (0.8)	
	37) 314-319	MFR OF ACCUMULATORS, PRIMARY CELLS, PRIMARY BATTERIES, LIGHTING EQPT, ELEC LAMPS & OTHER ELEC EQPT, N.E.C	▲ (1.9)	9,143,350 (1.9)	
18) 32	38) 321-323	MFR OF ELECTRONIC VALVES & TUBES; SEMI-CONDUCTOR DEVICES & OTHER ELECNC COMPONENTS; MFR OF TV & OTHER RADIO TRANSMITTERS & APPARATUS FOR THE TELEPHONY & LINE TELEGRAPHY	▲ (9.0)	42,560,248 (9.0)	
	39) 324	MFR OF TV & RADIO RECEIVERS, SOUND OR VIDEO RECG OR REPROD APPARATUS & ASSOCIATED GOODS		3,923,848 (0.8)	
19) 33	40) 331-333	MFR OF MEDICAL PRECISION & OPTICAL INSTRUMENTS, WATCHES, & CLOCKS		5,016,573 (1.1)	
20) 34	41) 341-343	MFR OF MOTOR VEHICLES, TRAILERS & SEMI-TRAILERS	▲ (5.5)	26,252,274 (5.5)	
21) 35	42) 351-359	MFR OF OTHER TRANSPORT EQUIPMENT	▲ (1.5)	7,186,245 (1.5)	
22) 36	43) 360	MFR & REPAIR OF FURNITURE	▲ (0.8)	3,598,258 (0.8)	
23) 37	44) 371-372	RECYCLING OF METAL & NON-METAL WASTE & SCRAP		13,439 (0.0)	
24) 39	45) 391-399	MFR OF JEWELRY, MUSICAL INSTRUMENTS, SPORTS GOODS, GAMES & TOYS & OTHER RELATED GOODS, N.E.C.	▲ (0.9)	4,264,653 (0.9)	

Target sectors for the MSP were selected to achieve the coverage rate of 70-80% by the value added. More precisely, PSIC 1994 groups (three-digit) were partially integrated on the basis of the published data from the ASE 1997 and sectors were selected one by one in order of the value added until the coverage rate reached 70-80%, as shown in Table 5-4. The 22 sectors that were selected represented 75.7% of the total value added.

Table 5-4 MSP Coverage by Target Sectors

PSIC 3-digit	Sector Title	Share in Total Value-added (%)
151	Production, processing and preservation of meat, fish and other seafood, fruit, vegetables, oils and fats	6.4
155	Beverages	6.3
160	Tobacco products	4.3
181	Garments	3.1
232	Refined petroleum products	11.9
242	Other chemical products	7.4
262	Cements	2.8
271	Iron and steel	3.0
321, 323	Electronic valves and tubes, television and radio transmitters, and apparatus for line telephony and line telegraphy	9.0
322	Semi-conductor and other electronic components	
324	Television and radio receivers, sound or video recording apparatus, and associated goods	0.8
341-2	Motor vehicles and bodies for motor vehicles	5.5
343	Parts and accessories for motor vehicles	
152	Dairy products	1.6
210	Pulp, paper and paperboard	1.9
241	Basic chemicals	1.8
252	Plastic products	2.2
281, 289	Structural metal products and other fabricated metal products	1.6
292-4	Domestic electric appliances	1.2
300	Office, accounting and computing machinery	1.5
314-5	Primary cells and batteries, lighting equipment and electric lamps, and other electrical equipment	1.9
359	Motorcycles and bicycles	1.5
Total		75.7

Note: Share in total value-added is from NSO's Annual Survey of Establishments 1997 (Manufacturing).

5.2.2 Selection of Target Commodities

Target commodities for the MSP are, in principle, limited to: 1) finished products to consumer markets; or 2) intermediate products that are traded as marketable goods. However, there are not many cases where the entire production process from procurement of raw materials to finished products manufacturing is carried out within the country.

Under PSIC 1994, the manufacturing industry is classified into 430 sub-classes (five-digit), which correspond to commodity groups, rather than individual commodities. Previously, sub-classes of PSIC 1977 were divided into individual commodities, but this detailed commodity classification was not updated in the later revision of PSIC and cannot be used in light of the rapid changes in the manufacturing sector. Although PSCC (Philippine Standard of Classification of Commodities) defines classification for individual commodities, it is not entirely consistent with PSIC. Thus, there is no official commodity classification available for selection of target commodities for the MSP.

For these reasons, commodity selection was made according to the following steps.

1. To select PSIC sub-classes (five-digit) of each target sector, which represent 80% of total value added.

Latest value added data available on a PSIC five-digit basis are contained in the census 1994 which is based on classification according to PSIC 1977. Three-digits (groups) of PSIC 1977 corresponding to three-digits of PSIC 1994 under target sectors were identified, which were then divided into five-digits. The target five-digits of PSIC 1977 were selected one by one until the coverage rate reaches 80%. Finally, the target five-digits of PSIC 1994 were identified by the comparison list of the PSIC 1977 and 1994.

2. To identify commodities contained in the target five-digit classifications under PSIC 1994 by selection from those appearing in the following survey results:
 - Trade statistics
 - Producer's price survey (PPS)
 - WPI survey

- MISSI (commodities reported by sample establishments in the questionnaire during twelve months in 1999)

Annex-1 illustrates the above selection process.

3. To visit leading establishments, trade associations, and sector specialists of government organizations concerned of target sectors in order to invite a professional advice and suggestions on the commodity list made in 2 above and revise it accordingly.

Table 5-5 shows the selected PSIC sub-classes (five-digit) of each target sector, their total share of value added, and total number of the target commodities.

Table 5-5 MSP Target Commodities

PSIC 3-Digit	Sector Title	PSIC 5-digit Targeted for Commodity Selection	Share in Sectoral Value-added (%)	Number of Commo- dities
151	Production, processing and preservation of meat, fish and other seafood, fruit, vegetables, oils and fats	15110, 15120, 15131, 15141, 15143, 15145, 15152	90.2	11
152	Dairy products	15220, 15250, 15260, 15290	85.9	5
155	Beverages	15530, 15541, 15543, 15542	96.3	11
160	Tobacco products	16040, 16090	95.7	2
181	Garments for women, girls and infants Garments for men and boys	18110 18120	97.5	8 6
210	Pulp, paper and paperboard	21013, 21020	84.8	6
232	Refined petroleum products	23200	100.0	10
241	Basic chemicals	24113, 24115, 24119, 24123	85.1	5

242	Other chemical products	24210, 24241, 24251, 24254	82.8	4
252	Plastic products	25201, 25202, 25206, 25209	87.5	4
262	Cements	26200	100.0	4
271	Iron and steel	27110, 27121, 27122, 27129	95.8	9
281, 289	Structural metal products and other fabricated metal products	28111, 28112, 28911, 28994, 28996	83.1	10
292-294	Domestic electric appliances	29264, 29271, 29302, 29309, 29400	80.1	13
300	Office, accounting and computing machinery	30002	100.0	9
314-315	Primary cells and batteries, lighting equipment and electric lamps, and other electrical equipment	31401, 31402, 31502, 31503	87.1	6
321, 323	Electronic valves and tubes, TV and radio transmitters, and apparatus for line telephony and line telegraphy	32100, 32300	100.0	8
322	Semi-conductor and other electronic components	32200		10
324	Television and radio receivers, sound or video recording apparatus, and associated goods	32400	99.3	13
341	Motor vehicles and bodies for motor vehicles	34100	97.6	6
343	Parts and accessories for motor vehicles	34300		6
359	Motorcycles and bicycles	35911, 35922	99.5	2
TOTAL				168

5.2.3 Selection of Target Establishments

In the Philippines, there is no official data available of manufacturing establishments that are assorted according to commodities they produce.

NSO's establishment data is called the master list of establishments, which has been prepared based on the lists of establishments made by the SEC (Securities and Exchange Commission) and BTRCP (Bureau of Trade Regulation and Consumer Protection) of DTI. The list has been updated prior to the five-year census and in the mid-year by sending enumerators from regional offices to listed establishments in order to check if they still exist and are in business. The informal sector is not included. The master list of establishments of 1998 contains 680,000 establishments, of which 98,000 belong to the manufacturing industry. The list is used as the population of establishment sampling for CPBI, ASPBI, and QSPBI.

All the establishments contained in the master list of establishments are classified in PSIC sub-classes (five-digit). It should be noted, however, that this classification is based on the "major activity" declared by each establishment and a specific commodity produced cannot be identified from the list. Also an establishment may produce other commodities than the one declared as the major activity, which should possibly be included in other five-digit sub-classes. Thus, establishments classified in a target five-digit sub-class do not necessarily produce target commodities, while those classified in other five-digit sub-classes may produce the target commodities. For this reason, all the establishments in target three-digit groups should be used as the population for selection of the target establishments of the MSP. In this way, all the establishments that may produce target commodities are covered. The process of the target establishment selection for the MSP starts with making the pre-qualified establishment list by screening the establishment lists of target PSIC three-digits (groups) on the basis of contribution in terms of value added. Note that no locality factor is taken into account in the selection process for the MSP, as practiced in the MISSI.

NSO's data on establishments with value added are obtained from ASE and the Census. However, ASE data is not suitable for use as the establishment population due to its ATE-based cut-off line. On the other hand, census data is relatively old (1994) and there may be some estrangement from the actual situation.

For these reasons, target establishment selection was made according to the following steps, keeping the sector coverage rate of value added at 80%.

“Establish the ATE-based cut-off lines corresponding to 80% value added using the 1994 census, then apply them to target three-digit establishment lists of the latest master list of establishments, to obtain the list of the pre-qualified establishments”

Procedures of the steps are as follows.

1. Establishments surveyed by the census 1994 classified in the target three-digits (groups) were first arranged within each of the target sectors in order of ATE, and their value added was calculated.
2. An ATE at which the value added coverage rate reached 80% was assumed to be an “ATE-based cut-off line equivalent to the coverage rate of 80% in terms of value added”. It should be noted, however, that the cut-off line was determined using three-digit groups under PSIC 1977 because the census 1994 was conducted for industries classified under PSIC 1977, whereas the target sectors for the MSP were selected according to PSIC 1994.
Table 5-6 is an example of the worksheets for the establishment of the ATE-based cut-off line. The cut-off line of the example is ATE 200.
3. Finally, the ATE-based cut-off line was applied to each target sector of the latest master list of establishments in order to make a selection.

Selection by these procedures uses ATE as a surrogate parameter approximating the value added, the actual cutoff criteria. Establishments selected in 3 above are those that may produce target commodities. In order to make the final list of the target establishments for the MSP, a qualification survey to identify those that do in fact produce target commodities needs to be done. The result of the qualification survey is assumed to be the list of the establishments accounting for 80% of the target commodities in terms of value added, and will serve as the final list of the target establishments.

Table 5-6 How to Establish ATE Cut-Off Line (Example)

- PSIC 152: Dairy Products

Number of Establish-ments	PSIC 1994	Actual Total Employees (ATE)	Employment Stratum	Value-Added	Share			Cumulative			
					Number	ATE	V-A	Number	ATE	V-A	
				[Peso]	[%]	[%]	[%]	[%]	[%]	[%]	
1	1	D152-50	1,164	1000 +	152,621,024	3.1	16.1	2.5	3.1	16.1	2.5
2	1	D152-60	930	500 - 999	2,622,092,966						
3	2	D152-20	926		818,081,662						
4	3	D152-40	706		388,971,784	9.4	35.5	62.1	12.5	51.6	64.6
5	1	D152-50	469	200 - 499	199,106,044						
6	2	D152-60	453		17,553,892						
7	3	D152-40	424		252,738,322						
8	4	D152-50	408		115,939,751						
9	5	D152-50	351		505,160,459						
10	6	D152-50	335		174,194,699						
11	7	D152-10	222		113,121,899	21.9	36.9	22.3	34.4	88.4	86.9
12	1	D152-20	184	100 - 199	165,024,464						
13	2	D152-20	132		440,143,547	6.3	4.4	9.8	40.6	92.8	96.7
14	1	D152-40	53	50 - 99	105,029,291						
15	2	D152-50	52		11,460,013						
16	3	D152-50	51		2,154,128	9.4	2.2	1.9	50.0	95.0	98.6
17	1	D152-50	48	20 - 49	14,733,134						
18	2	D152-50	43		31,052,542						
19	3	D152-50	40		12,508,582						
20	4	D152-20	35		8,259,430						
21	5	D152-50	25		1,127,177						
22	6	D152-10	23		919,763						
23	7	D152-10	21		10,634,268	21.9	3.3	1.3	71.9	98.2	99.9
24	1	D152-50	19	10 - 19	447,813						
25	2	D152-50	16		406,010						
26	3	D152-50	16		519,365						
27	4	D152-50	16		1,049,022						
28	5	D152-50	15		380,636						
29	6	D152-90	15		904,644						
30	7	D152-50	11		230,359						
31	8	D152-50	10		52,000						
32	9	D152-50	10		506,100	28.1	1.8	0.1	100.0	100.0	100.0
TOTAL			7,223		6,167,124,790						

Note: Based on CE 1994.

5.2.4 Overall Coverage Rate of the MSP

Figure 5-1 shows the methods for selecting the target sectors, commodities and establishments for the MSP, as discussed in 5.2.1 through 5.2.3.

Figure 5-1 Selection Flow of Target Sectors/Commodities/Establishments for MSP

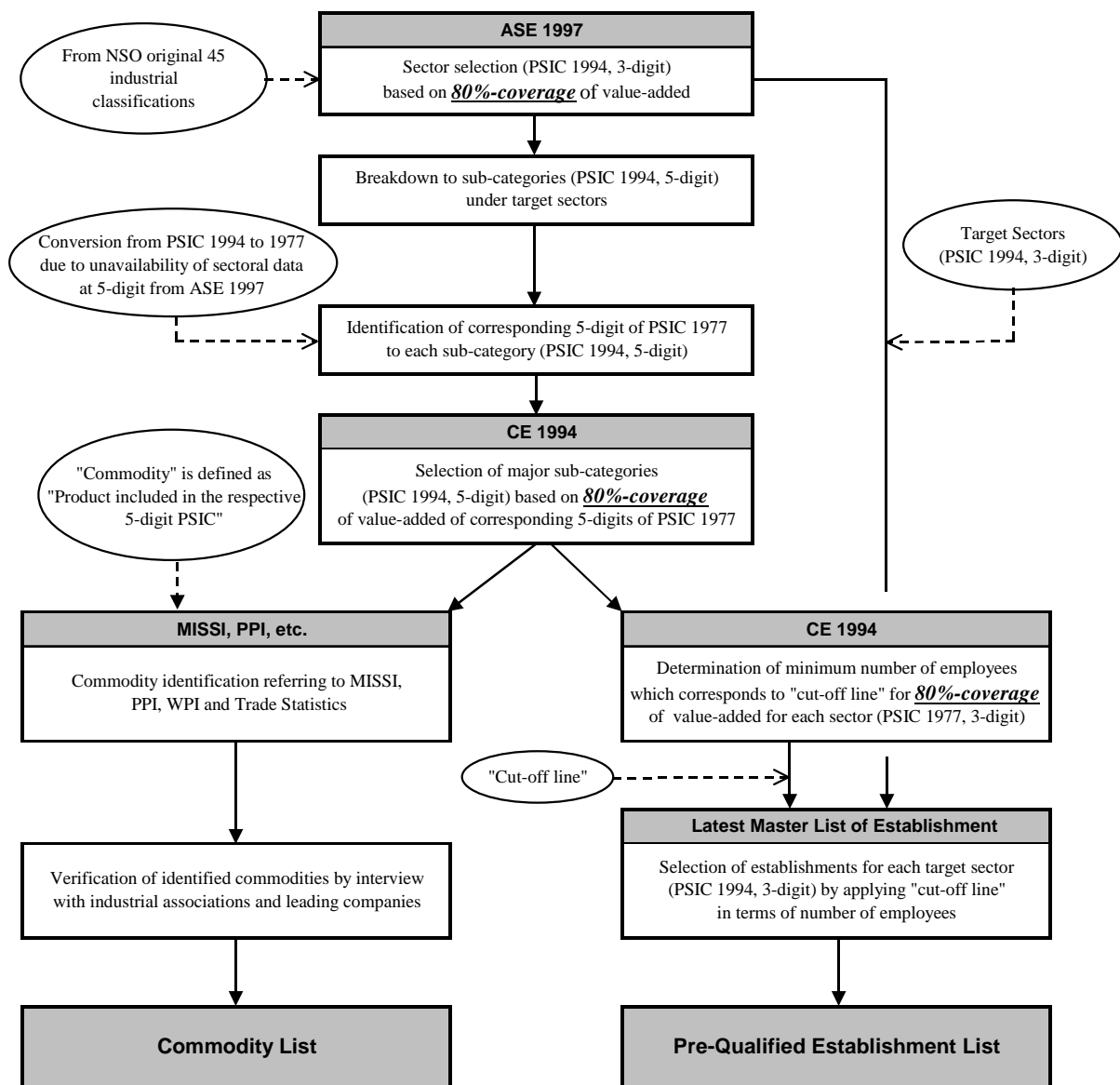
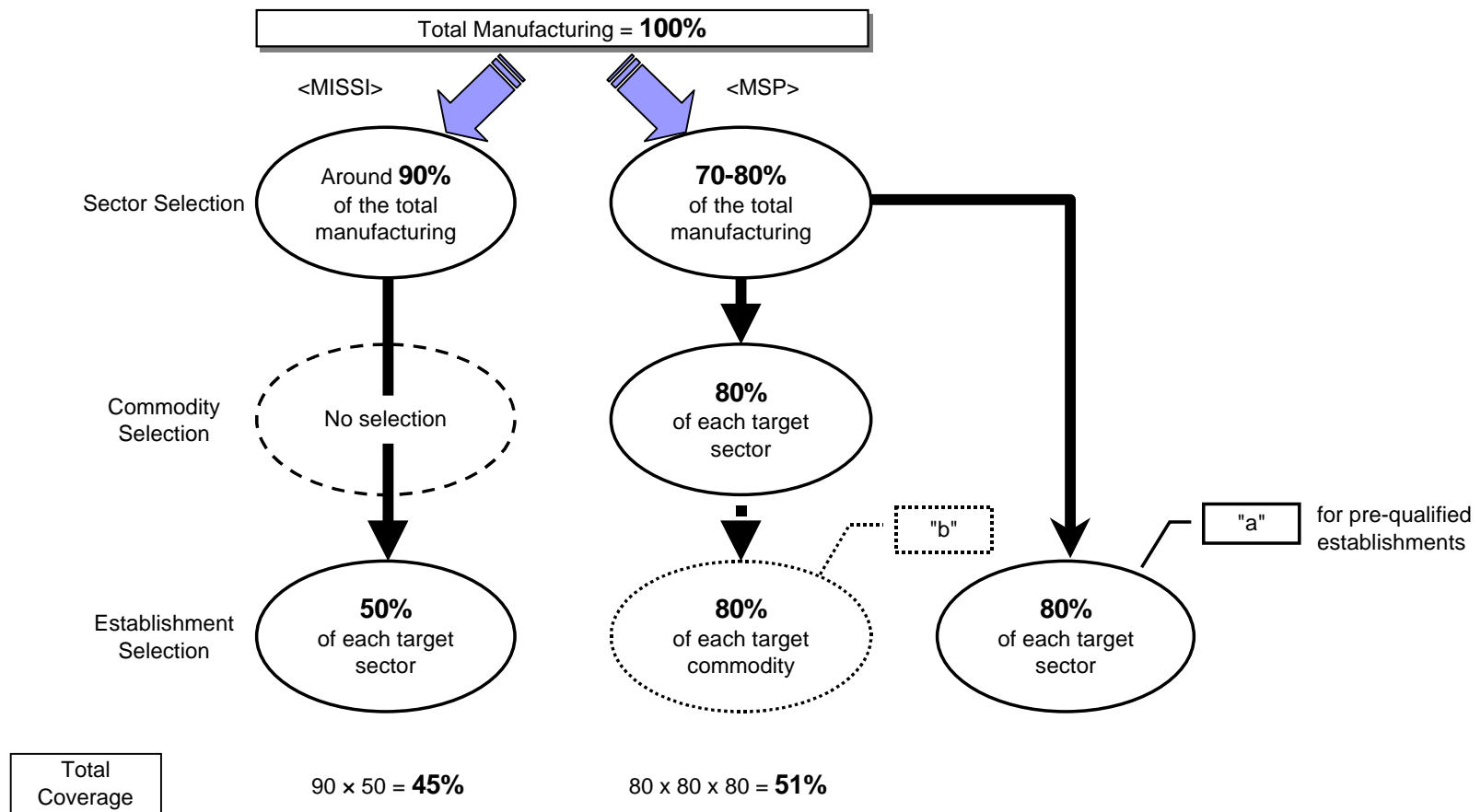


Figure 5-2 compares the coverage rates of the MISSI and MSP. The coverage rate for the MISSI is approximately 45%. For the target sectors of the MSP, the coverage rate of 80% was applied to both commodity and commodity-wise establishment selections. The overall coverage rate of the MSP is assumed to be 51% ($80\% \times 80\% \times 80\%$).

Figure 5-2 Survey Coverage of MISSI and MSP



Note: Procedure "a" and "b" for establishment selection

All the establishments are classified by 5-digit PSIC according to the major activity, not by the commodity they produce. That is, those establishments which are not classified to the target 5 digit may produce target commodity, even if it is not their major activity.

In order to play it safe under this situation, pre-qualified target establishments are selected from all the establishments under target sectors, 3-digit PSIC, applying the coverage of 80%. - Procedure "a"

Procedure "b" based on the target commodity could be done only when all the establishments were classified by commodity.

5.2.5 Survey Items

The questionnaire of the MSP consists of three sections, finished products, raw materials and production capacities.

1. Finished Products Section

The MSP collects data on individual finished products, i.e., production, sales, and inventory volume. The production volume measures the current level of production activity, the sales volume, the current level of demand for a specific product, and the inventory volume a gap between supply and demand.

Production in volume: Refers to the production volume of the specified product at the establishment during the reference month. The volume of work-in process and the volume of products repaired or fixed are not included. Entries should be based on the actual location where the manufacturing was done whether or not the establishment operates on a consignment basis.

Purchased or Received Volume: Refers to volume of finished products purchased or received, and then sold or transferred or stocked without any manufacturing process. Products received or purchased from the subcontractors are counted in this column by the client establishment. Received volume from another establishment of the same enterprise is also included.

Internal Consumption in Volume: Refers to the volume of products consumed within the same establishment as input to the subsequent production process. Note that this column should be added only to the questionnaire of the applicable sectors.

Sales in Volume: Domestic sales
Export

Other: Refers to the products transferred to another establishment of the same enterprise, or consumed for internal use.

Month-end Inventory in Volume:

Refers to inventory volume of the specified finished product, not including work-in-process.

Production Value: As in the case of other NSO surveys, it is measured by ex-factory prices, but the definition of “Production Value” in the MSP is as follows:

Production Value (MSP) = Volume of Finished Products produced x Producer’s Price

Production Value (MISSI and other NSO surveys) = Products sold + Industrial Services + Inventory Changes

Production volume not including the purchased or received volume is valued at an ex-factory price. Establishments operating as labor subcontractors are required to value their products by ex-factory prices as though sold.

Raw Material Section

Month-end Inventory in Volume:

Refers to raw materials inventory volume used for production of the target commodities.

Production Capacity Section

Monthly Production Capacity in Volume:

Refers to production capacity of each commodity under normal operation. Data is collected to calculate the utilization rate of the equipment based on the monthly production volume, which forms the basis of the utilization index of the sector that is an effective

indicator for economic forecast. Though the purpose of the question is same as that of the MISSI, production capacity data is collected for accuracy.

5.2.6 Questionnaire

A different form of questionnaire of a single sheet type is prepared for each target sector and for each reference month, containing the name of the target commodities, raw materials, and the product name for production capacity. In order to help the respondent to understand the intent of the questionnaire, “Description of Commodities” that lists actual product names and filling instructions accompany the questionnaire. An example of the questionnaire and corresponding “Description of Commodities” for PSIC 151 sector is presented in the following pages.

Questionnaire No:	151-10						Sector:	Production, processing and preservation of meat, fish and other seafoods, fruit, vegetables, oils and fats					
Establishment ID:							Reference Month / Year:	January / 2001				Please fill out by the 10th day of the next month.	

1. Finished Products			VOLUME							VALUE
Code	Name	Unit	Production	Purchased/ Received	Internal Consumption	Shipment			Inventory at the end of month (F)	Production (1000 pesos) (G)
			(A)	(B)	(X)	Domestic Sales (C)	Export (D)	Others (E)		
101	Dressed / packed poultry	Ton								
102	Dressed / packed red meat	Ton								
103	Preserved / prepared poultry and poultry products	Ton								
104	Preserved / prepared red meat and red meat products	Ton								
105	Canned fish and other aquatic animals	Ton								
106	Packed fish and other aquatic animals	Ton								
107	Smoked / dried fish and other aquatic animals	Ton								
108	Canned / packed fruits	Ton								
109	Fruit and vegetable sauces	Ton								
110	Flour of potato and wheat	Ton								
111	Coconuts and vegetable oil	Ton								

2. Raw Materials		VOLUME	
Code	Name	Unit	Inventory at the end of month
			(H)
201	Poultry	Ton	
202	Red meat	Ton	
203	Fish and other aquatic animals	Ton	
204	Fruits and vegetables	Ton	

3. Monthly Production Capacity			VOLUME	
Code	Specification	Unit	Capacity (monthly)	
			(I)	
301	Filling capacity of canned / packed fish and other aquatic animals	Ton		
302	Filling capacity of fruit and vegetable sauces	Ton		
303	Milling capacity of flour of potato and wheat	Ton		
304	Canning / bottling capacity of coconuts and vegetable oil	Ton		

(J) Remarks (If there is substantial change in production, shipment or inventory compared to the previous month, please explain why.)

[CONTACT]

[ENUMERATOR]

Tel:

DESCRIPTION OF COMMODITIES (FINISHED PRODUCTS)
SPECIFIED IN THE QUESTIONNAIRE

Questionnaire 151-10 Production, processing and preservation of meat, fish and other seafoods, vegetables, oils and fats

Commodity Code	Commodity Name	Description	Unit	PSIC 5-digit
101	Dressed / packed poultry	Includes: dressed and fresh (packed) chicken, gallantina, duck, geese, turkey	Ton	15110
102	Dressed / packed red meat	Includes: fresh (packed) and frozen meat, pork, dressed tripe except poultry	Ton	15110
103	Preserved / prepared poultry and poultry products	Includes: chicken ham, canned chicken	Ton	15120
104	Preserved / prepared red meat and red meat products	Includes: hotdog, cooked ham, bacon, chorizo, corned beef, sausages, other canned or processed meat	Ton	15120
105	Canned fish and other aquatic animals	Includes: canned tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	Ton	15131
106	Packed fish and other aquatic animals	Includes: packed tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	Ton	15131
107	Smoked / dried fish and other aquatic animals	Includes: smoked/dried tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	Ton	15132/15133
108	Canned / packed fruits	Includes: processed/canned banana, pineapple, mango, etc., fruit juices, preserved fruits, fruit cocktail, fruit concentrates, fruit jellies	Ton	15141
109	Fruit and vegetable sauces	Includes: tomato sauce, spaghetti sauce, ketchup, tomato paste and soy sauce	Ton	15143
110	Flour of potato and wheat	Includes: potato flour and wheat flour, other flour products except cassava	Ton	15145
111	Coconuts and vegetable oil	Includes: coconut oil, vegetable oil (e.g. corn oil) other than coconut, and cocoa butter, oil/fat, vegetable shortening, edible oil, acid oil, vegetable lard, cooking oil, margarine	Ton	15152

Reference : 1994 Philippine Standard Industrial Classification.

Chapter 6 Pretest Survey

Chapter 6 Pretest Survey

The pretest survey was a trial in the field, with 3 reference months from January to March 2001, using a set of survey tools which were prepared according to the MSP basic design described earlier in 5.2. When conducting the pretest survey, among the selection of target sectors, commodities and establishments, the modification mentioned in 6.2 was added only to the establishment selection, taking into consideration available resources and period of the pretest survey.

6.1 Objectives

The pretest survey was conducted by the Study Team in cooperation with NSO in order to collect information regarding the planning and design of the MSP, which is expected to further improve the existing MISSI.

The pretest survey was implemented essentially in accordance with the basic design of the MSP. Any part of the basic design, which was found during the pretest survey to be unsuitable for implementation in the field, was to be modified or re-designed.

Objectives of the pretest survey were threefold as discussed below, summarized in Figure 6-1.

(1) Verification of field applicability of survey tools

First of all, the pretest survey intended to test the following survey tools in order to verify their field applicability, identify required improvements, if any, and modify them to meet the local conditions peculiar to the Philippines.

1. Introduction letter to target establishments from the NSO;
2. Questionnaires designed for target sectors;
3. Description of commodities specified in the questionnaire;
4. Instructions for filling out the questionnaire;
5. Comment sheet to the questionnaire;
6. Enumerators' manual; and
7. Data examination manual

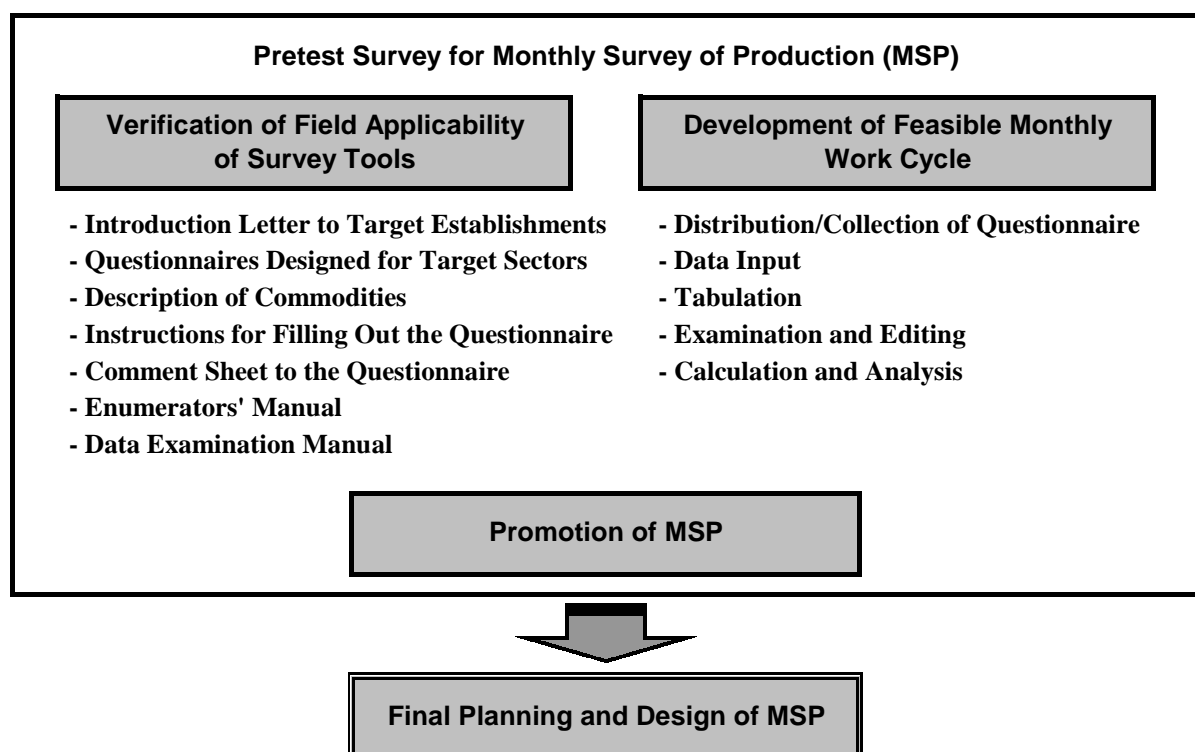
(2) Development of a feasible monthly work cycle

Secondly, the pretest survey was expected to provide an opportunity to carry out the MSP process in the actual field, ranging from the distribution and collection of questionnaires, to data input, tabulation, examination and editing, and calculation and analysis. This allows the development of a monthly MSP work cycle that can produce reliable industrial production statistics, while ensuring the timeliness of data dissemination by taking into account the local conditions in the Philippines.

(3) Promotion of the MSP

Finally, the pretest survey was supposed to serve as an effective means of gaining publicity on the MSP among major establishments to be surveyed and related organizations, groups and individuals in the private sector, and furthermore helping them to understand the purpose and significance of the MSP through hands-on experience.

Figure 6-1 Objectives of the Pretest Survey



6.2 Target Area and Target Establishments

The establishments targeted for the pre-test survey were determined as explained below, based on the basic design.

1. The region is limited to the Metro-Manila/Calabarzon area, which is the primary area in which manufacturing is centralized in the Philippines.
2. The 22 sectors selected in the basic design are divided into the first group (13 sectors) and the second group (9 sectors) based on the contribution of value added. The method by which target establishments for the pretest survey were selected in each group is described below.

First group: The MISSI sample establishments were added to the establishments selected in the basic design.

Second group: Only the MISSI sample establishments were targeted.

In selecting the first group of MISSI sample establishments, the basic policy was to include the top ten establishments in each sector in terms of value added. When the MISSI sample establishments were added to both the first and second groups, the ATE was not taken into consideration. This was because, given the purpose of the pretest survey, which is to confirm the reaction of the principal establishments to the MSP, a new type of survey and to collect comments, it was decided that establishments that already had gained an understanding of the intention of the monthly surveys conducted by the NSO through the MISSI could provide a valuable contribution to the pretest survey, even though they were below the designated ATE cut-off line.

As shown in Table 6-1, the total number of target establishments was 605. However, as the sector classifications of the MISSI do not necessarily match the PSIC in some cases, with some MISSI sample establishments that were duplicated in different sectors, the result was that the total nominal number of establishments for the pretest survey was 640.

Table 6-1 Number of Sample Establishments of MSP Pretest Survey

Sectors		Data Sources							Pretest Survey
		CE 1994		Master List of Establishments		Establishment List of the MISSI			Number of Target Establishments
		Cut-off Line	Coverage by Cut-off Line	Number of Establishments		Number of Establishments			
PSIC Code (3-digit)	1st Group (13 Sectors)	(Number of Employees)	(% in Total Value-added)	National	Metro-Manila & CALABARZON	Metro-Manila & CALABARZON [All]	Metro-Manila & CALABARZON [Duplicated with (a)]	Metro-Manila & CALABARZON [Not duplicated]	Metro-Manila & CALABARZON
					(a)	(1)	(2)	(b) = (1) - (2)	[A] = (a) + (b)
151	Meat, Fish, Fruit etc.	100	81.5	106	58	37	7	30	88
155	Beverages	200	82.0	43	14	10	5	5	19
160	Tobacco	500	98.6	5	3	6	2	4	7
181	Garments	100	72.3	229	188	28	17	11	199
232	Refined Petroleum	200	100.0	3	2	6	2	4	6
242	Chemical Products	200	82.8	47	41	51	20	31	72
262	Cements	200	100.0	14	5	7	3	4	9
271	Iron and Steel	200	74.0	33	28	25	8	17	45
321, 323	Elec. Valves, TV Transmitters	100	99.7	18	15	(*1) 18	(*1) 5	(*1) 13	36
324	TV&Radio Receivers, etc	500	80.0	12	8				
322	Semi-conductors	1,000	77.6	21	19	16	6	10	29
341-2	Motor Vehicles	500	79.0	8	8	(*1) 11	(*1) 5	(*1) 6	35
343	Parts for Automobiles	100	85.3	22	21				
Total	1st 13 Sectors	-	-	561	410	215	80	135	545
PSIC Code (3-digit)	2nd Group (9 Sectors)				Metro-Manila & CALABARZON			(*2) Top 10 Establishments in Value-added	Metro-Manila & CALABARZON
					(c)			(d)	[B] = (c) + (d)
152	Dairy Products				-			9	9
210	Pulp, Paper and Paperboard				-			10	10
241	Basic Chemicals				-				
252	Plastic				-			(*1) 10	10
281, 289	Structural Metal Products				-			9	9
292-4	Domestic Electric Appliances				-			4	4
300	Office&Computing Machinery				(*3) 8			-	8
314-5	Cell, Lighting Equipment, etc				-			10	10
359	Motorcycles&Bicycles				-			(*1) (6)	(6)
Total	2nd 9 Sectors				8			52	60
Grand Total	22 Sectors				418			187	605
(= [A] + [B])									

(= [A] + [B])

(*1) In the MISSI, the same sample establishments are selected for “PSIC 321, 323 and 324”, for “341-2, 343 and 359”, and for “241 and 252”.

(*2) In the case of less than 10 establishments being covered for a sector by the MISSI, all the establishments are taken.

(*3) PSIC 300 is not covered by the MISSI. The 8 samples are all the establishments listed in the NSO’s Master List of Establishments for PSIC 300.

6.3 Outline of Pretest Survey

6.3.1 Unit of Enumeration

The unit of enumeration for the pretest survey was “establishment” in the manufacturing industry. Subcontractors were also covered by this survey if they were actually producing the commodities specified in the questionnaire.

6.3.2 Organization for Implementation

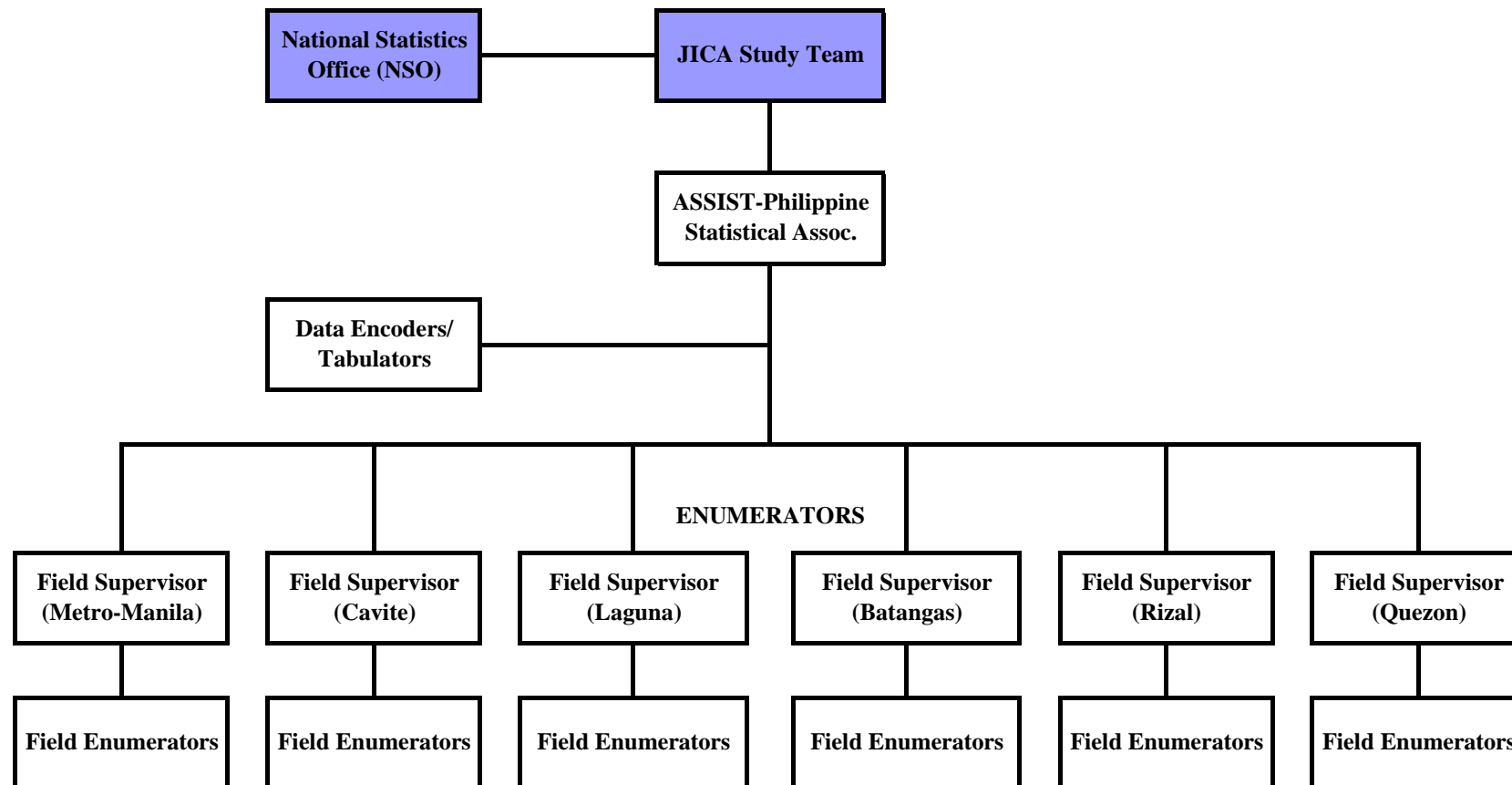
The pretest survey was conducted under the responsibility of the Study Team. However, according to the prescribed work demarcation shown below, preparatory works had been jointly done by the Study Team and the counterpart team in NSO. Analytical work on the survey results was also done jointly. On the other hand, field operation of the pretest survey was executed by PSA-ASSIST and its enumerators. PSA-ASSIT obtained cooperation, when implementing the field operation, from NSO local offices in the NCR and CALABARZON areas.

[Prescribed work demarcation between NSO and the Study Team]

- Preparation of questionnaires for each industry (Joint work)
- Selection of target establishments (Joint work)
- Planning and design of the pretest survey (Joint work)
- Preparation of manuals for enumerators (Joint work)
- Contract and control of local consultant [= PSA-ASSIST] (Study Team)
- Distribution of questionnaires to target establishments (Local consultant)
- Collection of questionnaires from target establishments (Local consultant)
- Data input (Local consultant)
- Data examination (Joint work)
- Data analysis (Joint work)
- General analysis of survey results (Joint work)

The organizational structure for the work implementation system was as shown in Figure 6-2. Enumerators consisted of six supervisors who were respectively responsible for field operation in each survey area, and of field data collectors under supervisors.

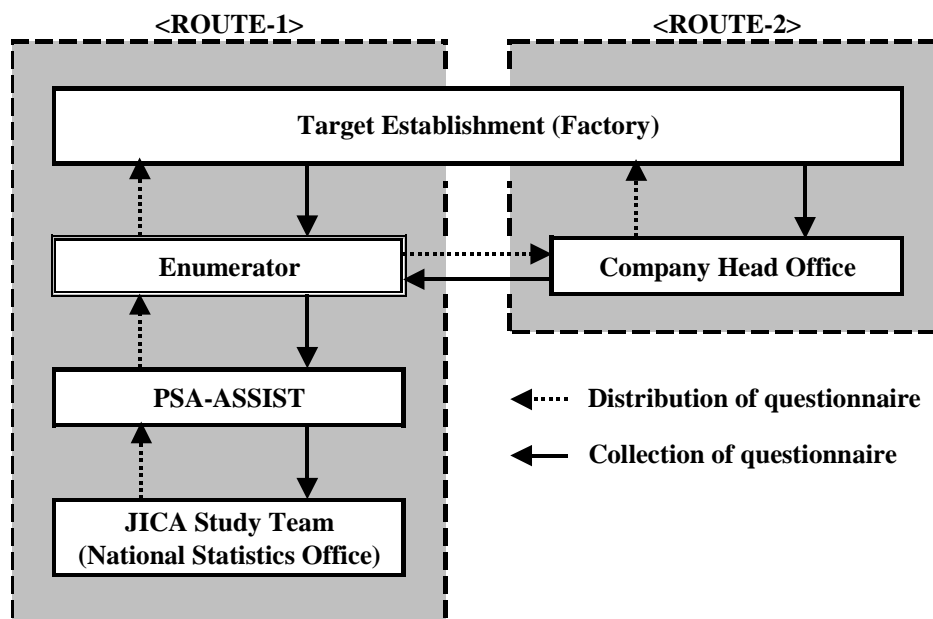
Figure 6-2 Implementing Organizations for Pretest Survey



6.3.3 Survey Route and Method

For the pretest survey, there were two routes of questionnaire distribution/collection as shown in Figure 6-3. In Route-1, enumerators visited the target establishments to distribute and collect the questionnaires. In Route-2, on the other hand, the questionnaires were distributed to and collected from the establishments via their company head offices. As for Route-2, enumerators contacted the head offices only.

Figure 6-3 Questionnaire Distribution/Collection Route in Pretest Survey



Originally, it was planned to collect all the questionnaires by enumerators. However, after the collection work started, many enumerators complained that most of the target establishments were far from the NSO local offices and difficult to visit frequently with poor transportation access. Therefore, during the pretest survey, collection by e-mail or facsimile was allowed to streamline the work. While e-mail was rarely used, a large number of questionnaires were sent by facsimile, apparently contributing to the certain reduction of time consumed for the questionnaires collection.

6.3.4 Reference Months

Reference months under the pretest survey were as follows.

<Reference month>		<Collection of questionnaires>
January 2001	→	February 2001
February	→	March
March	→	April

Basically, the “reference month” indicated the period from the 1st day to the last day of a month to be surveyed. However, respondents were permitted to choose a different reporting period (e.g., from 25th day of a month to the 24th of the next) for their own convenience.

The questionnaires for three reference months were all distributed to each target establishment by the end of January 2001.

6.3.5 Confidentiality of Information and Use of Survey Results

The Study Team strictly kept all of the information provided by the target establishments confidential. The information was never divulged to any persons except for authorized members/employees of the NSO, Study Team and PSA-ASSIST, nor used as evidence for any purposes of taxation, investigation or regulation. Results of the pretest survey were used only for planning and design of the MSP by the NSO and the Study Team, and were not disseminated to the public.

6.4 Survey Tools

(1) Introduction letter to target establishments from the NSO

To help respondents recognize that the pretest survey was conducted under approval and support by the Philippine government, an introduction letter addressed to the target establishments was written under the name of the Administrator of the NSO and sent to each establishment together with the questionnaire.

(2) Questionnaires designed for target sectors

The questionnaire for the pretest survey consisted of a single page, with commodity names being printed therein. The questionnaires were delivered to the target establishments with the data entry instructions and detailed description of commodities specified in the questionnaire.

(3) Description of commodities specified in the questionnaires

To each questionnaire, a “description of commodities” was attached, which had detailed commodity names to be considered for each finished product shown on the questionnaire.

(4) Instructions for filling out the questionnaire

The “*Instructions for Filling Out the Questionnaire*” was distributed to provide respondents with definitions of the survey items shown below and detailed instructions on how to fill out the questionnaire.

a) Finished products

- Production in volume
- Purchase/Receipt in volume
- Internal consumption in volume
- Shipment (domestic sales, export, and others) in volume
- Inventory at the end of the reference month in volume
- Production in value

b) Raw materials

- Inventory at the end of the reference month in volume

c) Production capacity in volume

(5) Comment sheet to the questionnaire

This sheet was prepared to collect opinions or suggestions from respondents regarding questionnaire design, especially on the commodity specifications for finished products and raw materials in the questionnaire. Enumerators requested respondents to fill in and submit the sheet, as well as the questionnaire, during the pretest survey period.

(6) Enumerators' manual

The “*Enumerators' Manual*” was prepared for enumerators who were responsible for the distribution and collection of questionnaires and the preliminary examination of data reported in the questionnaires collected during the pretest survey period. The general outline of the pretest survey, required survey tools, field operation procedures, definitions of survey items, and important points in the survey and its execution (basic rules) were also explained in the manual.

(7) Data examination manual

The “*Data Examination manual*” was prepared to give instructions to NSO staff who conducted the examination of reported data jointly with the Study Team, concerning important points in the examination procedures and key methods and techniques such as comparison with the previous month data, unit price check, and crosscheck on relevant survey items.

Also, special attention was paid to the data input work. As the data examination was conducted using a computer-generated summary table (“output table”) that was constructed from data entered by the PSA-ASSIST, accurate data input was a prerequisite to effective examination. To ensure that the data input work was carried out correctly and efficiently, the “*Data Examination manual*” described not only the method for generation and output of the summary table, but also the important points regarding data input. The manual was distributed to PSA-ASSIST staff in charge of the data input work as well as NSO staff.

Among the above-mentioned 7 survey tools, those in (1) through (4) were incorporated into the “Questionnaire File”, which was distributed to each target establishment by enumerators. In addition, a brochure describing the activities of the JICA was attached to the Questionnaire File.

Chapter 7 Results of Pretest Survey and Points to be Considered for MSP Final Design

Chapter 7 Results of Pretest Survey and Points to be Considered for MSP Final Design

This chapter will report on the results of the pretest survey, which was conducted to verify the applicability of the MSP basic design from various viewpoints, and will describe relevant points to be considered to finalize the MSP final design, taking into account the pretest survey results.

7.1 Qualification of Pre-qualified Establishments

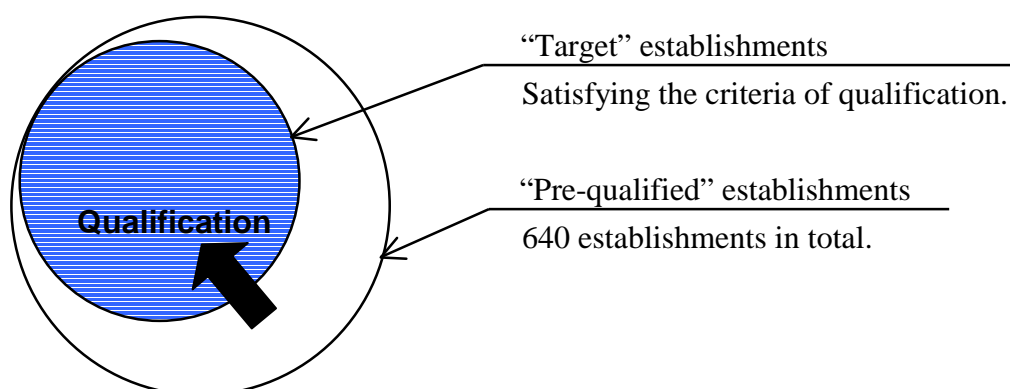
During the pretest survey, each of the 640 pre-qualified establishments were visited by enumerators to check their qualification as target establishments, by confirming if they actually produce the target commodities specified in the questionnaires.

(1) Qualification method

Target establishments covered under the pretest survey were required to meet the following two criteria. Among the 640 pre-qualified establishments, only those satisfying the criteria were selected as target establishments. (Figure 7-1)

- 1) Producing the commodities specified in the questionnaires; and
- 2) Located in NCR or CALABARZON area.

Figure 7-1 Qualification for Target Establishments of Pretest Survey



In order to gain accurate understanding of the current status of the pre-qualified establishments, they were classified into the following 8 segments of status. Those establishments classified in statuses 1 to 3 are “qualified” as target establishments of the pretest survey, while those classified in statuses 4 to 8 are “disqualified”.

- | | | |
|--------|---|---|
| Status | 1 | Those establishments which are qualified according to the above criteria 1) and 2); |
| | 2 | Those qualified but out of production temporarily due to strike or other reasons; |
| | 3 | Those qualified but refuse to receive the questionnaire; |
| ----- | | |
| | 4 | Those which are not producing the commodities listed in the questionnaire; |
| | 5 | Those out of production due to bankruptcy or long suspension; |
| | 6 | Those specialized in recycling or repair rather than manufacturing; |
| | 7 | Those which are not located in NCR or CALABARZON; and |
| | 8 | Those duplicated with another establishment. |

(2) Results of qualification

Table 7-1 shows the results of qualification. The qualified establishments totaled 416, including those classified in statuses 1, 2 and 3, representing 65% of the total 640 pre-qualified establishments. Among them, 372 establishments were classified in status 1, accounting for 58% of the total.

On the other hand, 224 establishments were classified in statuses 4-8 and therefore disqualified, accounting for 35% of the total 640 pre-qualified establishments. By status category, the highest percentage was classified in status 4, which meant those not producing the commodities listed in the questionnaire, totaling 129 establishments (58% of all the disqualified establishments). The status-4 establishments were identified in all the sectors. Then, 63 establishments were classified in status 5, which meant those out of production due to bankruptcy or long-term suspension, representing 28%.

Table 7-1 Results of Qualification of Pre-Qualified Establishments

PSIC 3-digit	Sector Name	Qualified Establishment				Disqualified Establishment						TOTAL
		Status-1	2	3		Status-4	5	6	7	8		
151	Meat, fish, fruit etc.	53	3	2	58	18	9	0	1	2	30	88
155	Beverages	8	1	1	10	4	0	2	0	3	9	19
160	Tobacco	5	0	0	5	1	0	0	0	1	2	7
181	Garments	117	7	10	134	18	36	0	5	6	65	199
232	Refined petroleum	6	0	0	6	0	0	0	0	0	0	6
242	Chemical products	34	0	4	38	21	7	0	3	3	34	72
262	Cements	6	1	0	7	0	1	0	1	0	2	9
271	Iron and steel	25	1	4	30	10	5	0	0	0	15	45
321, 323	Electric valves, TV transmitters	9	0	0	9	16	2	1	0	0	19	28
322	Semi-conductors	19	0	1	20	7	0	0	0	2	9	29
324	TV&radio receivers, etc.	8	0	1	9	11	1	0	0	0	12	21
341-2	Motor vehicles	13	0	0	13	0	0	0	0	1	1	14
343	Parts for automobiles	17	2	1	20	5	1	0	0	1	7	27
TOTAL of 1st 13 SECTORS		320	15	24	359	111	62	3	10	19	205	564
152	Dairy products	3	0	2	5	4	0	0	0	0	4	9
210	Pulp, paper and paperboard	7	0	1	8	1	1	0	0	0	2	10
241	Basic chemicals	8	0	1	9	1	0	0	0	0	1	10
252	Plastic	9	0	0	9	1	0	0	0	0	1	10
281, 289	Structural metal products	7	1	0	8	1	0	0	0	0	1	9
292-4	Domestic electric appliances	1	0	0	1	3	0	0	0	0	3	4
300	Office&computing machinery	5	0	0	5	3	0	0	0	0	3	8
314-5	Cell, Lighting equipment, etc.	7	0	0	7	3	0	0	0	0	3	10
359	Motorcycles & bicycles	5	0	0	5	1	0	0	0	0	1	6
TOTAL of 2nd 9 SECTORS		52	1	4	57	18	1	0	0	0	19	76
TOTAL of 22 SECTORS		372	16	28	416	129	63	3	10	19	224	640

Note that 267 MISSI samples were included in the pre-qualified establishments of the pretest survey. Among them, 60 were classified in status 4 as a result of the qualification. Table 7-2 shows the details and indicates that many sectors contain MISSI samples classified in status 4.

The current MISSI does not involve a screening process, unlike the qualification in the pretest survey, to exclude those establishments that are producing commodities other than covered by the survey. Therefore, there can be the case that an establishment, which does not produce any of the major commodities listed in the questionnaire, is covered by the MISSI.

Table 7-2 Number of MISSI Samples Classified in Statuses 4 to 8

Sector	Number of MISSI Samples	Status Code of Dis-qualification					
		Total	4	5	6	7	8
TOTAL	267	81	60	12	1	3	5
First Group							
151	37	14	11	2		1	
155	10	4	2		1		1
160	6	1	1				
181	28	4	1	2			1
232	6	0					
242	51	22	15	5		1	1
262	7	1				1	
271	25	7	6	1			
321, 323, 324	18	9	8	1			
322	16	5	3				2
341-3, 359	11	0					
Second Group							
152	9	4	4				
210	10	2	1	1			
241, 252	10	1	1				
281, 289	9	1	1				
292-4	4	3	3				
300	0	0					
314-5	10	3	3				

(3) Further breakdown of the status-4 establishments

Under the above definition, status 4 refers to those establishments that are not producing the commodities specified in the questionnaire. However, the field investigation on the establishments classified in status 4 revealed that they could be further divided into sub-categories with distinctive reasons. Specifically, the 129 status-4 establishments are classified into the following 7 categories.

- 1) The establishment is not manufacturing but specialized in another industry;
- 2) The establishment is misclassified;
- 3) The establishment is difficult to be classified into a specific sector due to a variety of products;
- 4) The establishment is considered to be qualified;
- 5) There is a lack of information on activities of the establishment;
- 6) The establishment is producing commodities other than specified in the questionnaire; and
- 7) The establishment is negligible due to a very small share in the market.

Table 7-3 shows composition of the status-4 establishments according to the above reasons.

Out of 129 establishments classified in status 4, reason 2) “misclassification” showed the highest percentage (49%) totaling 63 establishments, followed by reason 5) “lack of information on activities of the establishment” (27 establishments, 21%). These two reasons account for a combined share of 70%.

Table 7-3 Further Breakdown of Status-4 Establishments

Questionnaire Number	Sector Name	Reasons for being "status-4" establishments in Pretest Survey							TOTAL Status-4
		1) Not manufacturing	2) Misclassified	3) Difficult to be classified	4) Considered to be qualified	5) Lack of information	6) Producing other commodities	7) Negligible (small share)	
151-10	Meat, fish, fruit etc.	0	11	0	6	0	0	1	18
155-10	Beverages	0	3	0	0	0	1	0	4
160-10	Tobacco	1	0	0	0	0	0	0	1
181-10/20	Garments	2	12	0	1	3	0	0	18
232-10	Refined petroleum	0	0	0	0	0	0	0	0
242-10	Chemical products	1	3	0	3	3	9	2	21
262-10	Cements	0	0	0	0	0	0	0	0
271-10	Iron and steel	0	9	0	0	1	0	0	10
321-10	Electric valves, TV transmitters	0	11	0	1	4	0	0	16
322-10	Semi-conductors	0	3	0	2	2	0	0	7
324-10	TV&radio receivers, etc.	0	6	0	0	5	0	0	11
341-10	Motor vehicles	0	0	0	0	0	0	0	0
343-10	Parts for automobiles	0	2	0	0	1	0	2	5
TOTAL of 1st 13 SECTORS		4	60	0	13	19	10	5	111
152-10	Dairy products	0	0	0	0	0	3	1	4
210-10	Pulp, paper and paperboard	0	0	0	0	0	1	0	1
241-10	Basic chemicals	0	0	0	0	1	0	0	1
252-10	Plastic	0	0	0	0	1	0	0	1
289-10	Structural metal products	0	1	0	0	0	0	0	1
293-10	Domestic electric appliances	0	1	0	0	1	0	1	3
300-10	Office&computing machinery	0	0	0	0	3	0	0	3
314-10	Cell, Lighting equipment, etc.	0	1	0	0	1	0	1	3
359-10	Motorcycles & bicycles	0	0	0	0	1	0	0	1
TOTAL of 2nd 9 SECTORS		0	3	0	0	8	4	3	18
TOTAL of 22 SECTORS		4	63	0	13	27	14	8	129

The fact that a large number of establishments were classified in status 4 due to reason 2) indicates that the pre-qualified establishments selected for the pretest survey had contained many establishments that had been classified in wrong industries. Thus, industrial classification of establishments in the Master List of Establishments must be reviewed and verified for its accuracy.

In addition, reason 4) (accounting for around 10% of total) means that these establishments were disqualified due to the misjudgment by enumerators in the qualification stage. Enumerators should be reminded of careful work because their error directly produces a statistical error.

<Points to be considered for the MSP final design>

Essentially, selection criteria of target establishments for the MSP should be as follows: 1) the establishment is actually producing any of the target commodities specified in the questionnaire; and 2) the ATE of the establishment is more than the cut-off line set for each target sector. However, in the qualification stage of the pretest survey, the above criterion 2) was not strictly applied, mainly in order to include the establishments that already had gained an understanding of the intention of the monthly production survey through the MISSI. Thus, for the MSP pilot survey, those establishments satisfying both 1) and 2) must be selected as proper targets.

The qualification work should be conducted as a sole study prior to the MSP, and not as a part of the field operation of the MSP, in light of its importance. It is also necessary to prepare study tools for the qualification such as a questionnaire and field operation manual.

Furthermore, pre-qualified establishments of the MSP that should be verified at the qualification study are extracted from the Master List of Establishments of NSO. If the Master List includes establishments that are misclassified in the wrong industrial sectors, accurate results of qualification cannot be obtained. Accordingly, accuracy of the list should be improved by updating its information frequently.

7.2 Questionnaire Collection

(1) Questionnaire collection rates

The questionnaire collection rates of the pretest survey by sector and month are shown in Table 7-4. Note that the collection rates have been calculated using the

total number of establishments classified in status 1 in the qualification stage, namely 372, as the denominator.

The final average collection rate for the three-month period of the pretest survey based on all the target sectors was 72%. (Note that the “final collection rate” means the collection rate as of the end of May 2001, which was set as the deadline for questionnaire collection for the pretest survey.) This rate is fairly higher than expected for a non-governmental survey conducted by the Study Team. On a monthly basis, the collection rate was 78% in January, 72% in February and 66% in March. Such a gradual decline in collection rate does not mean a decrease in interest or a willingness to cooperate on the respondent side; it simply reflects the fact that enumerators were able to have longer time to collect the questionnaires on an earlier month due to more days available up to the end of May as the collection deadline.

As for the collection rates by sector, most of the sectors show considerably stable collection rates, except for the questionnaire “293-10: Manufacture of domestic electric appliances” for which only one establishment was qualified and there was no response at last.

Table 7-4 Questionnaire Collection Rates by Sector and Month

Questionnaire Number	Sector Name	Number of Collection				Collection Rate (%)				Ref: Number of Qualified Establishment as "Status-1"
		JAN	FEB	MAR	TOTAL	JAN	FEB	MAR	AVG.	
151-10	Meat, fish, fruit etc.	42	39	36	117	79	74	68	74	53
155-10	Beverages	9	6	5	20	100	75	63	79	8
160-10	Tobacco	5	3	3	11	100	60	60	73	5
181-10/20	Garments	101	95	91	287	86	81	78	82	117
232-10	Refined petroleum	4	4	4	12	67	67	67	67	6
242-10	Chemical products	27	25	22	74	79	74	65	73	34
262-10	Cements	4	4	3	11	67	67	50	61	6
271-10	Iron and steel	19	18	15	52	76	72	60	69	25
321-10	Electric valves, TV transmitters	5	4	4	13	56	44	44	48	9
322-10	Semi-conductors	16	15	13	44	84	79	68	77	19
324-10	TV&radio receivers, etc.	7	7	5	19	88	88	63	79	8
341-10	Motor vehicles	11	10	10	31	85	77	77	79	13
343-10	Parts for automobiles	11	9	9	29	65	53	53	57	17
1st 13 SECTORS		261	239	220	720	82	75	69	75	320
152-10	Dairy products	2	1	1	4	67	33	33	44	3
210-10	Pulp, paper and paperboard	7	7	6	20	100	100	86	95	7
241-10	Basic chemicals	1	1	1	3	13	13	13	13	8
252-10	Plastic	7	7	6	20	78	78	67	74	9
289-10	Structural metal products	5	5	5	15	71	71	71	71	7
293-10	Domestic electric appliances	0	0	0	0	0	0	0	0	1
300-10	Office&computing machinery	3	3	3	9	60	60	60	60	5
314-10	Cell, Lighting equipment, etc.	3	3	3	9	43	43	43	43	7
359-10	Motorcycles & bicycles	1	1	1	3	20	20	20	20	5
2nd 9 SECTORS		29	28	26	83	56	54	50	53	52
22 SECTORS		290	267	246	803	78	72	66	72	372

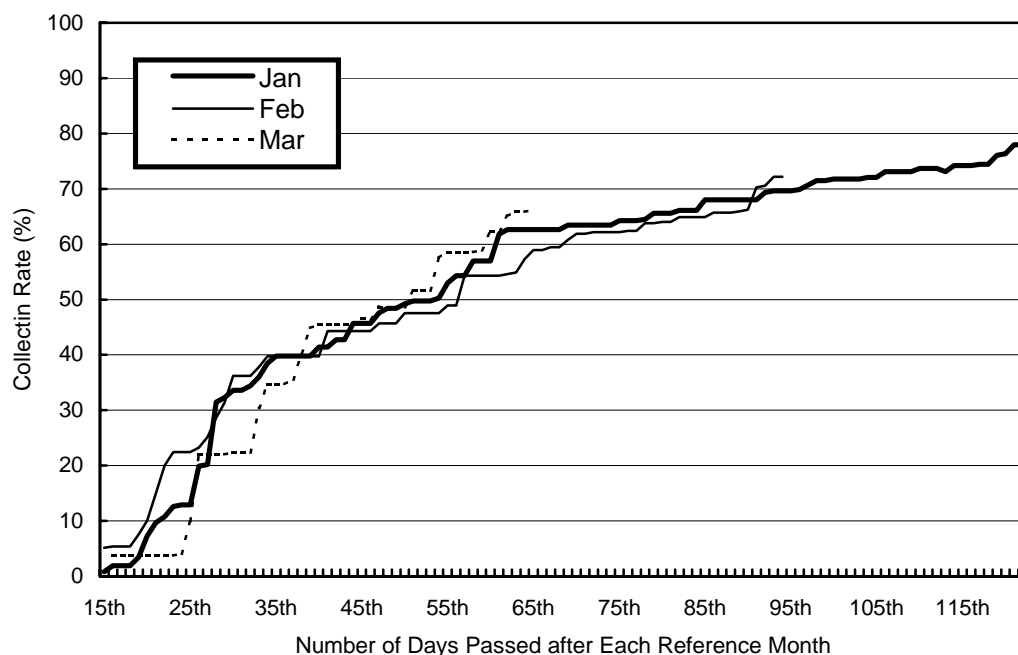
Note: Basis of collection rate is the number of status-1 establishments.

(2) Promptness of questionnaire collection

As the MSP is designed to grasp the short-term industrial trend, the questionnaire collection rate should reach a specific target level within a sufficiently short period of time. For the pretest survey, the original target collection rate as of the 15th day after the end of a reference month was set at 50%.

However, during the pretest survey, the actual questionnaire collection was not so prompt as expected. As shown in Figure 7-2, the average collection rate based on all the sectors for each of the three reference months was very close to zero as of the 15th day after each reference month. The target collection rate of 50% was achieved on the 50th day or later after the reference month, namely, the latter half of the month after the next. From Figure 7-2, a certain (not very distinctive) pattern can be read. The collection rate seems to grow at a faster pace between the 20th and 40th days after each reference month and slow down thereafter.

Figure 7-2 Daily Change in Collection Rates



<Points to be considered for the MSP final design>

The MSP requires a prompt work implementation as it attempts to generate monthly statistics. The most significant factor in deciding the promptness of the MSP as a whole is the promptness of questionnaire collection. The dissemination guideline for the MSP, which is described later in Chapter 10, proposes to publish the

statistics at the end of the following month of a reference month. In order to achieve this, effective measures for the early increase of the questionnaire collection rate should be considered and created.

(3) Consecutive respondents

Table 7-5 shows the percentage share of “consecutive respondents” by sector, which responded to the questionnaire for three reference months of the pretest survey. The average consecutive response ratio based on all the target sectors reached 66%.

It should be noted, however, that some establishments submitted the questionnaires on the three reference months at a time in April or May. Technically, they are not considered as consecutive respondents but are included in the above 66% figure, though their percentage is very small.

Table 7-5 Establishments that Responded to Three Reference Months

Questionnaire Number	Sector Name	Number of Consecutive Respondents	Number of Qualified Establishments as "Status-1"	Consecutive Response Ratio (%)
151-10	Meat, fish, fruit etc.	36	53	68
155-10	Beverages	5	8	63
160-10	Tobacco	3	5	60
181-10/20	Garments	89	117	76
232-10	Refined petroleum	4	6	67
242-10	Chemical products	22	34	65
262-10	Cements	3	6	50
271-10	Iron and steel	15	25	60
321-10	Electric valves, TV transmitters	4	9	44
322-10	Semi-conductors	13	19	68
324-10	TV&radio receivers, etc.	5	8	63
341-10	Motor vehicles	10	13	77
343-10	Parts for automobiles	9	17	53
1st 13 SECTORS		218	320	68
152-10	Dairy products	1	3	33
210-10	Pulp, paper and paperboard	6	7	86
241-10	Basic chemicals	1	8	13
252-10	Plastic	6	9	67
289-10	Structural metal products	5	7	71
293-10	Domestic electric appliances	0	1	0
300-10	Office&computing machinery	3	5	60
314-10	Cell, Lighting equipment, etc.	3	7	43
359-10	Motorcycles & bicycles	1	5	20
2nd 9 SECTORS		26	52	50
22 SECTORS		244	372	66

Note: Consecutive respondent means an establishment that responded to the questionnaire for three reference months of the pretest survey.

Consecutive Response Ratio is the ratio of the number of consecutive respondents to the number of status-1 establishments.

7.3 Data Entries to Questionnaire

7.3.1 Section and Item Response Rates

This section analyzes the response rate for the individual section of the pretest survey questionnaire and the response rate for each data item in the “Finished Products” section. The former one is referred to as “section response rate” and the latter is as “item response rate” in this report.

Analysis of the section and item response rates enables to determine the relative response rates among sections and items comparable to others. Conversely speaking, a section or an item that shows a relatively low response rate indicates that the respondents have difficulty to report for some reasons or refuse to disclose their data or information.

(1) Section response rate

The section response rate measures the number of valid responses, i.e., the number of questionnaires collected with at least one data entry in any items, as percentage in the total responses, for each of the “Finished Products,” “Raw Materials” and “Production Capacity” sections.

Table 7-6 summarizes the section response rates by sector and month for the pretest survey. First of all, the “Finished Products” section shows generally high response rates for most sectors with little variation over the 3-month period. The average response rate for the three months based on all the sectors (excluding the questionnaire “293-10” which had no response) is nearly complete response at 95%. On the other hand, the “Raw Material” section shows relatively large variations of response rates both on a sector and monthly basis. The overall average rate is 47%, considerably lower than that for the “Finished Products” section. Finally, the “Production Capacity” section shows an intermediate level of response rate, 69% on the overall average, varying relatively wide among the sectors and the months.

Table 7-6 Section Response Rates

[Unit: %]

Questionnaire Number	Sector Name	Finished Products				Raw Materials				Production Capacity			
		Jan	Feb	Mar	AVG	Jan	Feb	Mar	AVG	Jan	Feb	Mar	AVG
151-10	Meat, fish, fruit etc.	98	100	100	99	64	64	81	70	62	64	56	61
155-10	Beverages	100	83	100	94	88	83	100	90	88	83	83	85
160-10	Tobacco	100	100	100	100	100	100	100	100	100	67	100	89
181-10/20	Garments	92	98	98	96	44	47	43	45	71	78	83	77
232-10	Refined petroleum	100	100	100	100	67	50	75	64	67	75	75	72
242-10	Chemical products	93	88	86	89	44	52	32	43	85	68	32	62
262-10	Cements	100	100	100	100	75	75	100	83	75	75	100	83
271-10	Iron and steel	82	67	81	77	47	50	50	49	65	50	44	53
321-10	Electric valves, TV transmitters	80	100	100	93	40	25	33	33	40	50	33	41
322-10	Semi-conductors	82	100	92	91	41	40	38	40	53	60	46	53
324-10	TV&radio receivers, etc.	100	100	100	100	43	43	60	49	57	57	80	65
341-10	Motor vehicles	90	100	100	97	90	80	70	80	90	80	60	77
343-10	Parts for automobiles	100	100	100	100	64	78	86	76	91	100	100	97
1st 13 SECTORS		93	95	96	95	52	54	57	54	71	71	64	69
152-10	Dairy products	100	100	100	100	67	67	33	56	0	100	0	33
210-10	Pulp, paper and paperboard	88	100	100	96	29	43	29	34	63	29	57	50
241-10	Basic chemicals	100	100	100	100	0	0	0	0	100	100	100	100
252-10	Plastic	100	100	100	100	57	57	83	66	86	86	100	91
289-10	Structural metal products	80	80	80	80	29	29	0	19	60	60	60	60
293-10	Domestic electric appliances	---	---	---	---	---	---	---	---	---	---	---	---
300-10	Office&computing machinery	100	100	100	100	33	67	33	44	0	33	0	11
314-10	Cell, Lighting equipment, etc.	100	100	100	100	33	33	33	33	100	100	100	100
359-10	Motorcycles & bicycles	100	100	100	100	40	60	40	47	100	100	100	100
2nd 9 SECTORS		93	96	96	95	40	46	35	40	66	64	69	66
22 SECTORS		93	95	96	95	46	52	44	47	71	71	65	69

<Points to be considered for the MSP final design>

The results shown in Table 7-6 give several valuable suggestions for the future design of the MSP questionnaire. First of all, according to the obtained level of the section response rate, as the “Finished Products” and “Production Capacity” sections will be able to attain data collection from respondents at a high response rate, they should be necessarily included in the MSP pilot survey.

In contrast, the relatively low response rate for the “Raw Material” section suggests that this section may not be able to attain sufficient responses if it is surveyed by such a way as the pretest survey questionnaire. This could be because the commodities selected for this section are not appropriate (not applicable for many respondents), or there may be other reasons on the respondent side for refusing to disclose data.

The intention of the “Raw Materials” section is to obtain the volume data of raw material inventory and calculate the “raw material inventory index”. However, at present there are no statistics for determining such basic data as the sector coverage and weight that are required to calculate the raw material inventory index. Thus, basic statistics should first be developed for index calculation.

(2) Item response rate

The item response rate measures the number of responses in each data item of the “Finished Products” section, as a percentage share in the total number of commodity responded in the section. (In this case, a response to a target commodity listed on a questionnaire [= one record] is counted as one unit to determine the total number of commodities responded.)

Table 7-7 shows the item response rates by sector on the average for a 3-month period of the pretest survey. The average response rate based on all the target sectors (excluding the questionnaire “293-10”) is fairly high at nearly 90% for three data items; (A) Production volume; (F) Inventory volume; and (G) Production value. Item (C) Domestic sales shows 64%. On the other hand, the other 4 items show relatively lower response rates ranging between late-20% and late-30%.

Table 7-7 Item Response Rates

[Unit: %]

Questionnaire Number	Sector Name	Question Items in "Finished Products" Section							
		In Terms of Volume							Value
		(A) Production	(B) Purchased/ Received	(X) Internal Consumption	(C) Domestic Sales	(D) Export	(E) Others (Shipment)	(F) Month-end Inventory	(G) Production
151-10	Meat, fish, fruit etc.	92	45	22	94	33	22	92	97
155-10	Beverages	100	46		78	14	41	96	100
160-10	Tobacco	100	13		78	38	47	100	100
181-10/20	Garments	94	26		27	70	26	85	91
232-10	Refined petroleum	84	36	41	75	8	8	84	84
242-10	Chemical products	84	31	13	90	24	13	91	88
262-10	Cements	100	50	85	75	43	49	100	93
271-10	Iron and steel	81	27	14	66	14	19	84	90
321-10	Electric valves, TV transmitters	82	78		48	55	29	82	92
322-10	Semi-conductors	58	58		27	59	58	91	95
324-10	TV&radio receivers, etc.	75	20		78	46	38	100	75
341-10	Motor vehicles	80	19		84	12	13	94	80
343-10	Parts for automobiles	39	16		39	24	8	39	39
1st 13 SECTORS		82	36	35	66	34	29	88	86
152-10	Dairy products	100	11	44	67	11	44	100	78
210-10	Pulp, paper and paperboard	100	13		91	17	13	77	98
241-10	Basic chemicals	100	0	67	0	0	0	100	67
252-10	Plastic	96	38	13	75	13	0	88	79
289-10	Structural metal products	76	33		71	51	39	84	80
293-10	Domestic electric appliances	---	---		---	---	---	---	---
300-10	Office&computing machinery	100	33		67	89	33	100	100
314-10	Cell, Lighting equipment, etc.	100	11		56	67	33	100	100
359-10	Motorcycles & bicycles	67	67		67	0	0	67	100
2nd 9 SECTORS		92	26	41	62	31	20	90	88
22 SECTORS		86	32	37	64	33	25	88	87

Note: The item "(X) Internal consumption" was selectively included for the sectors of which production structure likely requires the internal consumption.

<Points to be considered for the MSP final design>

In regard to the item response rate, no response was made to some items in the following sectors, though their percentage is very small:

- 1) Items (B) Purchased/received, (C) Domestic sales, (D) Export and (E) Others in “241-10: Manufacture of basic chemicals”.
- 2) Item (E) Others in “252-10: Manufacture of plastic products”.
- 3) Items (D) Export and (E) Others in “359-10: Manufacture of motorcycles and bicycles”.

It is then important to analyze as to whether the above response patterns 1) –3) reflect the actual production activities of the respective sectors accurately. For instance, 1) indicates no response to the three data items (C), (D) and (E) that are related to shipment, while the response to (X) Internal consumption is relatively high at 67%. If the basic chemical industry in the Philippines uses most of its products not for domestic sales and export but for internal consumption, it can be said that 1) reflects the actual production activities. Otherwise, the definition of internal consumption might not have been understood accurately by the respondents. An examination from the same viewpoint is also necessary for 2) and 3).

7.3.2 Data Entry to Target Commodities

- (1) Commodities with no data entry during the pretest survey period

During the 3-month period of the pretest survey, no data entry has been made for the following commodities.

151-10: Production, processing and preservation of meat, fish and other seafoods, fruit, vegetables, oils and fats

- 107: Smoked / dried fish and other aquatic animals

152-10: Manufacture of dairy products

- 103: Powdered milk (including infants milk)
- 104: Pasteurized milk

155-10: Manufacture of beverages

- 104: Flavored drinks
- 105: Flavored drinks with natural fruit juice

- 106: Powdered / instant coffee
- 107: Canned / packed tea leaves
- 108: Flavored drinks
- 109: Flavored drinks with natural fruit juice
- 110: Pure fruit juices
- 111: Coffee / tea

160-10: Manufacture of tobacco products

(Nothing)

181-10: Manufacture of garments (for women, girls and infants)

(Nothing)

181-20: Manufacture of garments (for men and boys)

(Nothing)

210-10: Manufacture of pulp, paper and paperboard

(Nothing)

232-10: Manufacture of refined petroleum products

- 109: Paraffin Wax

241-10: Manufacture of basic chemicals

- 101: Industrial gases
- 102: Organic acids and organic compounds
- 103: Activated carbon

242-10: Manufacture of other chemical products

(Nothing)

252-10: Manufacture of plastic products

- 103: Plastic pipes

262-10: Manufacture of cements

- 103: Other types of cement

271-10: Manufacture of iron and steel

- 108: Hot rolled coils

289-10: Manufacture of structural metal products and other fabricated metal products

- 102: Reservoir tanks
- 104: Windows and their frames
- 107: Drums

293-10: Manufacture of domestic electric appliances

(No questionnaire collected)

300-10: Manufacture of office, accounting and computing machinery

- 101: Personal computers
- 103: Projectors
- 104: Printers
- 105: Scanners
- 106: Calculators
- 108: Floppy disks
- 109: Compact discs

314-10: Manufacture of primary cells and batteries, lighting equipment and electric lamps, and other electrical equipment

- 102: Lead-acid storage batteries
- 103: Parts of electric accumulators
- 105: Fluorescent lamps
- 106: Decorative lamps (including Christmas lights)

321-10: Manufacture of electronic valves and tubes, television and radio transmitters, and apparatus for line telephony and line telegraphy

- 102: Microwave tubes
- 103: Receiver / amplifier valves and tubes
- 105: Television camera
- 107: Cellular phones
- 108: Fax machines

322-10: Manufacture of semi-conductor and other electronic components

(Nothing)

324-10: Manufacture of television and radio receivers, sound or video recording apparatus, and associated goods

- 108: Answering machines
- 109: Cassette Players
- 110: Compact disc (CD) players
- 111: Pre-recorded tapes / discs

341-10: Manufacture of motor vehicles and bodies for motor vehicles

(Nothing)

343-10: Manufacture of parts and accessories for motor vehicles

(Nothing)

359-10: Manufacture of motorcycles and bicycles

- 102: Bicycles

<Points to be considered for the MSP final design>

As regards to the commodities that had no data entry during the pretest survey period, follow-up surveys on trade associations and leading companies should be conducted to decide if they are deleted from the MSP questionnaires.

On the other hand, it should be considered if commodities produced by those establishments that were disqualified (as they were not producing the target commodities) are newly added to the MSP target commodities. Such commodities will need to be reviewed in detail for their validity.

(2) Problems related to commodity classification and specification and measurement unit

a) Multifunctional products

The questionnaire failed to give clear instruction on multifunctional products that combine different functions. Those products should be either listed as sole products on the questionnaire or included in certain commodities with single function according to its key function. If a multifunctional product is reported in

the latter way, it should be specifically instructed in the filling manual for respondents.

Example: CD player/radio/cassette tape recorder

The relevant questionnaire listed a CD player, radio, and cassette tape recorder, but not composite products such as radio with CD player or car stereos. There was no specific explanation or instruction in the filling manual.

b) Unnecessary commodity specification

Example-1: Hard drives

It was pointed out by respondents that “external hard drives” was not a proper term because hard drives of built-in type were also produced. In this case, the specification “external” is not necessary.

Example-2: Garment

For the garment industry, two questionnaires were prepared: one for male and the other for female. However, this caused confusion in reports on the unisex products such as T-shirts.

c) Inconsistency between PSIC and common practice on commodity classification

Inconsistency in commodity classification between PSIC and common practice in relevant business circle caused confusion.

Example: Car stereo

The relevant questionnaire classified the car stereo in the sector “electronic products”, but it was pointed out by respondents that the car stereo was commonly considered as those classified in “parts for motor vehicles”.

d) Unit of measurement customarily used in business circles

Some establishments requested to use the unit of measurement customarily used in business circles, e.g., “Case” and “SPU”.

<Points to be considered for the MSP final design>

For the commodities on which such problems as above a) – d) have been identified, modification of commodity classifications and specifications and creation of more

applicable measurement units are needed, based on interviews with relevant establishments and trade organizations.

7.4 Volume Data Obtained from MSP Pretest

This section shows the volume data obtained for 5 selected sectors targeted in the pretest survey. In these 5 sectors, similar data is provided from trade associations or other organizations, and so they can be compared to the pretest survey results.

1) Sector “160-10: Tobacco”

“MDRD-Marketing Trends” publishes tobacco production data, which is summarized in Table 7-8, for comparison with data tabulated from the pretest survey results.

Table 7-8 Comparison of Tobacco Production Data Published by “MDRD-Marketing Trends” and Pretest Survey Results

	Term of survey	Production volume (cigar & cigarette)
Pretest survey	January 2001 (N=5)	716,501 cartons
	February 2001 (N=3)	630,133 cartons
	March 2001 (N=3)	560,747 cartons
MDRD-Marketing Trends	Annual average production between 1996—2000 (based on monthly production)	68,157,000 kg (= 300,572,000 cartons)/year* 25,047,666 cartons/month

* The conversion rate from raw materials to finished products is 4.41 carton/kg (85 mega kg = 75 billion sticks → 200 sticks/carton).

N: Number of effective response from target establishments.

Clearly, there is a significant difference between the two data sets. Possible causes are summarized as follows.

- Error in the reported data by the target establishments for the pretest survey, including the incorrect unit of measurement.
- Omission of large establishments, particularly foreign establishments, from the pretest survey.
- Use of an inappropriate conversion rate from raw materials to finished products.

2) Sector “232-10: Refined petroleum”

Refined petroleum production data published by the Department of Energy (DOE) of the Philippines on June 22, 2001, is compared with the pretest data as shown in Table 7-9.

Table 7-9 Comparison of Refined Petroleum Production Data Published by the Department of Energy and Pretest Survey Results

		Production volume		
		Gasoline*1 (Kilo liter)*2	Kerosene (Kilo liter)*2	Naphtha (Kilo liter)*2
Pretest survey (N=4)	Jan. 2001	99,791	37,216	40,429
	Feb. 2001	100,963	40,353	26,618
	Mar. 2001	106,620	27,562	34,755
DOE (N=6)	2000	2,748,792 (152,711)*	666,359 (37,021)*	1,027,617 (57,090)*
	1999	3,227,223 (179,290)*	727,584 (40,421)*	673,842 (37,436)*

* Figures in () were estimated from the following formula for comparison with the pretest survey data: annual production volume/12 months *(4/6).

*1 Gasoline data obtained from the pretest survey include both regular and high octane, while DOE data is a total of premium leaded, unleaded, and regular gasoline.

*2 1 Barrel = 0.159 Kilo liter.

N: Number of effective response from target establishments.

Comparison of the pretest survey results data and the DOE data indicates that their differences appear to be within a reasonably expected range for the 3 commodities compared here. This is because the sector consists of a small number of large companies, which report similar data for other statistical surveys including those by the trade association. Nevertheless, some of the commodity names and measurement units used for other published data are different from those used in the pretest survey questionnaire. Thus, the future MSP questionnaire will be supposed to reflect the situation of standardization in business circles. In general, data reported from the refined petroleum sector involved a relatively few data errors in the pretest survey and so can be relied on in the future survey.

3) Sector “262-10: Cement”

The Philippine Cement Manufacturers Corporation (PCMC) conducts annual surveys covering 18 cement manufacturers in the Philippines and publishes data as the report entitled “Cement Industry in the Philippines”. Production and shipment data published by PCMC are compared with those tabulated from the pretest survey results as shown in Table 7-10.

**Table 7-10 Comparison of Cement Production/Shipment Data
Published by PCMC and Pretest Survey Results**

(Unit: Tons)

	Production volume (Cement & clinker)		Shipment volume (Cement only)	
	Quarterly total	Monthly (min – max)	Quarterly total	Monthly (min – max)
Pretest survey (N=Jan 4, Feb. 4, Mar. 3)	8,764,508 *1	1,681,242 – 4,094,928 *3	4,468,690	1,116,798 – 1,761,016 *3
PCMC (N=18)	5,779,750 *2	1,926,583 (Monthly average) *4	2,955,249	985,083 (Monthly average) *4

* The figures are dated Jan – Mar 2001 for the pretest, and Jan - Dec 2000 for PCMC published data.

*1 As the number of establishments that responded to the pretest survey varied over the three months (4 in January, 4 in February, and 3 in March), the total volume is estimated by using the following formula:

Three-month total = January data * (18/4) + February data * (18/4) + March data * (18/3)

*2 As the PCMC’s data is on the annual basis, it is converted to three-month (quarterly) data by using the following formula:

Three-month total = Annual data/4

*3 Minimum and maximum figures for January * (18/4), February * (18/4), and March * (18/3).

*4 As the PCMC’s data is on the annual basis, it is converted to monthly data by using the following formula:

Monthly total = Annual data/12

N: Number of effective response from target establishments.

Comparison of the pretest survey results and PCMC data on quarterly basis indicates that the former is 50% larger than the latter for both production and shipment volume. This is partly because the pretest survey primarily covered relatively large establishments in terms of employment.

On a monthly basis, the minimum level of the pretest survey data nearly agrees with the monthly average level of the PCMC data.

In general, data from the cement sector does not seem to contain very significant errors and could be obtain relatively accurate results.

4) Sector “271-10: Iron and steel”

Iron and steel production data published in “SEAISI Steel Statistical Yearbook 1999” are summarized in Table 7-11, for comparison with the data obtained from the pretest survey results.

Table 7-11 Comparison of Iron and Steel Production Data Published by SEAISI and Pretest Survey Results

		Production volume		
		Steel bar (Ton)	Wire rods (Ton)	Galvanized sheets (Ton)
Pretest survey (N=Jan 17, Feb. 18, Mar. 16)	Jan. 2001	10,089	99	11,971
	Feb. 2001	6,155	103	11,320
	Mar. 2001	8,585	128	1,904
SEAISI (Annual base)	1999	1,160,000 (27,023)*	10,000 (232)*	182,000 (4,239)*

* The figures in () were calculated by the following formula for comparison with the pretest survey data: annual total volume/12 months * (17/45) * (74/100).

N: Number of effective response from target establishments.

Comparison of the two sets of data on 3 commodities indicates that the pretest data ranges one third to twice of those in the SEAISI data. The relatively low response rate for this sector in the pretest survey and a variety of products made by different establishments seem to cause such data variation. While the iron and steel sector is considered as a reliable data source with less data errors, data accuracy should be improved further by encouraging more establishments to participate in the survey.

5) Sector “341-10: Motor vehicles”

The Chamber of Automotive Manufactures of the Phils. Inc. (CAMPI) compiles shipment data in the country and provides it to its members. Shipment data

published by CAMPI are compared with those tabulated from the pretest survey results as shown in Table 7-12.

Table 7-12 Comparison of Motor Vehicle Shipment Data Published by CAMPI and Pretest Survey Results

(Unit: Units)

		Unit shipment		
		Passenger cars	Commercial vehicles	Total
Pretest survey (N=10)	Jan. 2001	1,344	6,764	8,108
	Feb. 2001	898	9,009	9,907
	Mar. 2001	1,443	9,010	10,453
CAMPI (N=18)	1999	27,580 (2,068)*	46,834 (3,512)*	74,414 (5,580)*
	1998	34,688 (2,601)*	45,543 (3,415)*	80,231 (6,016)*
	1997	75,760 (5,682)*	68,675 (5,150)*	144,435 (10,832)*

* The figures in () were estimated by the following formula: total number of units per year/12 months * 0.9).

-- This is because Japanese companies account for around 90% of both passenger cars and commercial vehicles shipped in the country, and most of them responded to the pretest.

N: Number of effective response from target establishments.

Comparison of the pretest survey results and the CAMPI data indicates that the former falls short of the latter in the number of passenger cars, while the relationship is reversed for the commercial vehicles. The total shipment volume obtained from the preset survey is more or less the same or slightly larger than the CAMPI data. Reasons for the data discrepancies have not been found out yet. There might be some affects by the seasonal factor.

In this sector, serious entry errors can be avoided due to simplicity in commodity classification, and therefore, this sector is considered as a reliable one for continuous data collection.

<Points to be considered for the MSP final design>

Analysis of the tabulation results has revealed various problems that cannot be identified in examination of individual questionnaire form separately. In particular, time series analysis allows for the identification of sections and survey items that show

a significant difference compared with the previous month and to obtain more accurate and reliable data. The MSP should include the data examination process after the data input/tabulation stage.

Every effort should be made to obtain necessary data accurately and continuously from the same target establishments so that the statistics made by the MSP will be able to be reliable enough for dissemination. In this sense, the MSP should be conducted by appropriately coping with the following:

- 1) In some questionnaires, the production value was entered for a specific commodity but not the production volume. In order to check this kind of mistakes, issuing proper instructions to enumerators and examiners including continuous education and training is required.
- 2) Some sectors showed increasing collection rates over the three months, while the other sectors declining. For the former group, data accuracy can be improved by raising the collection rate for the earlier months through follow-up contacts to those establishments that have not yet responded.
- 3) It was relatively frequently observed that the same establishment reported the value of production by different digits. In order to check these kinds of mistakes, issuing proper instructions to enumerators and examiners including continuous education and training is required. In addition, questionnaire design should be modified to encourage more consistent data entry.

Chapter 8 MSP Final Design

Chapter 8 MSP Final Design

In order to assure the coverage rate of the survey, the basic design of the MSP incorporates survey tools that have been created using a statistical approach. When putting together the final design, the pre-test survey results are incorporated in the design, and at the same time, the analytical approach described in section 5.1 is used to: 1) reflect the configuration, features, and trends of each sector in the design and thus boost the representativeness of the survey; and 2) create survey tools with the appropriate content and scale.

8.1 Features of the MSP

Before the survey design is finalized, the features of the MSP are organized.

8.1.1 Activity Survey

The CSPBI, ASPBI, QSPBI, and MISSI currently being conducted by the NSO are all establishment surveys. “Establishment” is defined as follows: “An economic unit recognized as a single corporate entity, operating under a single ownership and management, located at a specific and fixed location, and conducting a single or principally single economic activity”. Establishments are classified based on the PSIC, and production figures and all other data are totaled as the data for the sector in which the establishment has been classified, and is used in the statistics and indices indicating the configuration and trends of the sector.

The target of the MSP, on the other hand, is not the establishment, but rather the activities. For a manufacturing enterprise, the activity is expressed as the commodities being produced, and the targets of the survey will be the individual commodities. Representative commodities are selected for the various sectors that serve as good indicators of the production trends of the sector, and the production trends of those commodities are surveyed. When an establishment is surveyed, the establishment always receives one questionnaire, but with the MSP, which is an activities (commodities) survey, some establishments receive more than one questionnaire.

Table 8-1 Survey Target

Survey	Sampling Unit	Survey Target
CPBI	Establishment	Local Unit (=Establishment)
ASPBI	Establishment	Local Unit (=Establishment)
QSPBI	Establishment	Local Unit (=Establishment)
MISSI	Establishment	Local Unit (=Establishment)
MSP	Establishment	Activity Unit (= Commodity)

8.1.2 Criteria for Selecting Target Establishments

There are two methods for selecting establishments to be surveyed: complete enumeration and sampling. Complete enumeration targets all of the establishments that fit the criteria, but for sample surveys, a given percentage of the establishments that meet the criteria are selected for surveying. In some cases, establishments above a certain scale are targeted for complete surveys, and those below that scale are targeted for sample surveys.

The CPBI and ASPBI, which are NSO establishment surveys, are complete surveys conducted on establishments with an ATE above a certain scale (10 employees for the CPBI and 100 for the ASPBI), while sample surveys are conducted on establishments below that scale. The QSPBI uses the sales volume rather than the ATE as a criterion, but similarly, complete surveys are conducted on establishments with a sales volume above a certain scale. For the MISSI, however, the criteria by which establishments are selected for inclusion in the survey are less clear than those of other surveys. Although this survey started out as a complete survey targeting establishments with production values above a certain scale, some establishments were eventually added to the survey from external enterprise lists, with the aim of including all principal establishments and not leaving any out. Subsequently, repeated substitutions of establishments were conducted due to response circumstances and for other reasons.

The purpose of the MSP is to disseminate absolute figures as well as indices. Establishing clearly defined criteria for selecting target establishments for surveying and strictly observing those criteria are necessary for all surveys in order to assure the credibility and continuity of the data. When the purpose of a survey is to disseminate absolute figures, however, the criteria for selecting target establishments for surveying

must be even more clearly defined and persuasive than those of surveys like the MISSI, which are designed only to disseminate indices.

It goes without saying that complete surveys are preferable when it comes to disseminating absolute figures, and trade statistics are one example of that. In terms of cost, as well as the time required for dissemination, however, it is not realistic to conduct complete surveys for the MSP. If complete surveys are not used, the absolute figures that are disseminated are those taken from only some of the establishments. If these surveys are to be effectively meaningful, they must have a coverage rate that makes it possible to easily estimate the absolute figures for all of the establishments. In order to assure a coverage rate that enables easy estimation of the absolute figures for all of the establishments, it is necessary to use, rather than sample surveys, complete surveys that target establishments above a certain scale set as the selection criterion. With the MSP, complete surveys are conducted targeting establishments from among those manufacturing the various types of commodities that are above a given scale, and this makes it possible to estimate the overall absolute figures.

When utilizing complete surveys of establishments above a given scale, meaning complete surveys with a specified cut-off line, for the MSP, there are two points that must be kept in mind.

1. Criteria for establishing the cut-off line

The criteria for establishing the cut-off line can include, in addition to the number of employees (ATE), parameters such as production values, value added, and sales values, but as a rule, they should be based on features of the establishment, such as the ATE and location. For the reasons outlined below, the ATE must be used for the MSP.

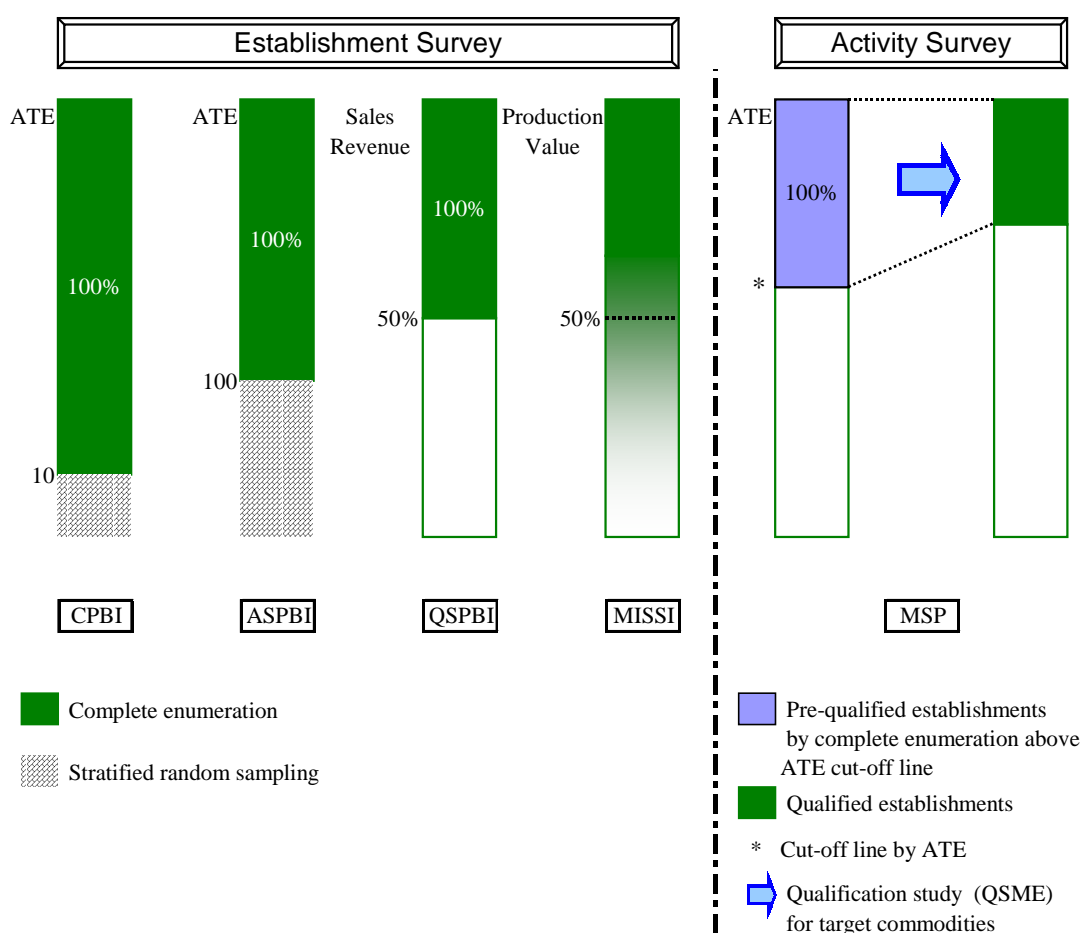
- a) Establishment data other than the ATE, such as production values, value added, and sales values, have to be taken from the aggregation and dissemination of the ASPBI or other surveys. In other words, in the usual case, the data that can be used is not the most recent available data.
- b) Although there are some exceptions, the production values and sales values for an establishment are basically proportional to the ATE. The ATE is an item for which responses can easily be obtained from establishments. In other words, if the ATE is used as the criterion for the cut-off line, the qualification of the

establishment can be monitored on an ongoing basis. This also makes it possible to decide immediately whether or not a newly created establishment must be included in the survey, whether establishments, where the scale has been cut back are to continue being included, as well as other questions.

- c) When absolute figures and indices are disseminated, descriptions such as “The survey targeted all establishments with an ATE of over 100 people, or over 200 people” are highly persuasive to users of statistics, and quality pertaining to errors in absolute figures and indices can be easily judged from an objective standpoint.

Figure 8-1 shows a comparison of the criteria used to select the establishments targeted by the various surveys.

Figure 8-1 Target Establishment Selection



2. Differentiating between establishments targeted by surveys and those not targeted

There is a sharp distinction between establishments that are targeted by surveys and those that are not. In other words, establishments that are non-cooperative to the survey cannot be replaced by other establishments in the survey. If there is a new establishment that is above the cut-off line, however, it is added to the survey target population. And if there is a bankrupt establishment or an establishment that has stopped production of target commodities, it is deleted. These factors themselves comprise sector trends, and must be reflected in the absolute figures and indices in order for the survey to be meaningful.

8.2 Sector Study

MSP is designed to provide statistical data that reflect the current state of manufacturing sectors in a timely manner so that they can be used as effective indices to measure the latest economic trends. To achieve the purpose, the MSP must be designed with proper understanding of manufacturing processes, major characteristics of products and raw materials, major markets for final products, industrial structure and recent trends, types of operation (subcontracting, etc.), other relevant factors for target sectors. Sector information obtained through interviews with sector specialists at government agencies, leading companies, and trade associations is summarized in the following sections. Figure 8-2 through 8-15 illustrate the current situation of each manufacturing sector. Figure 8-6 and Figure 8-11 are sketches of manufacturing process of petroleum and basic chemical products, and iron and steel products.

8.2.1 Food, Beverage and Dairy Products (Figure 8-2)

The food industry boasts the highest share in the manufacturing sector in the country, on a value added basis. It uses red meat (beef and pork), poultry, fish meat, fruits and vegetables as raw materials. Red meat is imported, whereas other materials are primarily produced locally. The food industry in the country is controlled by a few large companies, including foreign firms.

There are about 170 beverage makers in the country, according to industry sources. They use raw materials that are locally available. Again, the industry is dominated by a small number of companies. In particular, beers and soft drinks are monopolized by a few companies. So is bottled water, in which its market is rapidly growing, as well dairy products. Fresh milk used for production of dairy products is entirely imported.

Commodity-based production volume data are not available from the chamber or the trade associations.

8.2.2 Tobacco (Figure 8-3)

Leaf tobacco is one of the most important, and profitable farm products in the country. Their prices and production are controlled by the National Tobacco Association (NTA) under the supervision of the Department of Agriculture. NTA also provides technical assistance in tobacco growing and cultivation and is developing a new demand for leaf tobacco to maintain stable income sources for some 62,000 tobacco-growing farmers. Leaf tobacco is sold through 115 trading centers throughout the country, which are registered with NTA, to 8 tobacco manufacturers and exporters. Approximately 20% of tobacco leaf is imported, and 20% of tobacco products are exported.

NTA has the production data from 8 manufacturers, but only on an annual basis.

8.2.3 Garments (Figure 8-4)

The garment industry ranks second in value of exports by the country, following electronic parts and products, though by a large margin. 75% of garment exports go to the U.S. However, in recent years, garment products made in the country are losing price competitiveness in the global market. Export-oriented manufacturers are divided into two types, those registered with PEZA (Philippine Economic Zone Authority) and operating in the EPZ, and those operating outside the EPZ. All of them are registered with Garments and Textile Export Board (GTEB), totaling some 1,800 establishments. In addition, some companies operating outside the EPZ are registered with BOI. Most of the garment manufacturers operating in the EPZ are labor subcontractors receiving raw materials such as textiles and accessories from the customers and shipping the final products to them. There are cases where they use subcontractors for the specific jobs. Very few local materials are used for garments to export.

Local materials, such as fibers, yarns and fabrics/textiles, also account for small portions of garment products shipped to the domestic market. In particular, textiles are mostly imported. Many manufacturers outside the EPZ are also operating on a consignment basis.

No production volume data is available at PEZA, GTEB and CONGEP (Confederation of Garment Exporters of the Philippines).

8.2.4 Pulp and Paper Products (Figure 8-5)

There are 50-60 companies, which are divided into paper mills, pulp mills and integrated mills. Locally produced pulp materials are wood, bagasse from sugar cane and abaca from Manila hemp. Paper products consist of newsprint, printing and document paper, and corrugated fiberboard. Local demand for both pulp and paper products is met by domestic products and imports. Exports of newsprint have recently been on the rapid rise.

8.2.5 Petroleum Products (Figure 8-6, 8-7)

The petroleum refining industry in the country consists of three refineries that are operated by PETRON and two major oil companies each. Their total processing capacity is around 405,000 barrels per day and the average operating rate is 70% according to the Ministry of Energy as of 2000. The country imports unleaded gasoline in the amount equivalent approximately to 40% of domestic demand, diesel oil 15%, and LPG 60%. There were several unrealized plans for construction of a naphtha cracking plant (ethylene center) and now a new project is under planning. At present, naphtha produced at the three refineries is mostly exported, while naphtha as gasoline mixture is imported in small quantities.

DE has detailed production, inventory and operating rate data by product.

8.2.6 Basic Chemicals (Figure 8-6, 8-8)

Basic chemicals produced in the Philippines are PVC (polyvinyl chloride), PS (polystyrene), PP (polypropylene) and PE (polyethylene). There are three PVC plants, two PS plants, two PP plants, and one PE plant. A principal raw material, monomer, is entirely imported. Although these polymer plants have enough capacity to meet domestic demand, they are operated at far below capacity as their products have difficulty in maintaining price competitiveness against imports. At present, domestic demand for polymer is mostly met by imports.

8.2.7 Cement (Figure 8-9)

In the country, there are 19 cement mills that meet the local demand. All raw materials, except for a part of gypsum, are locally available. Principal products are Portland and Pozzolan cements, with a local demand for which is at a ratio of 75:25. Exports and imports by traders account for 10% of local production.

The trade association publishes the annual production volume data.

8.2.8 Iron and Steel Products (Figure 8-10, 8-11)

The country produces iron ores, but it does not have a blast furnace facility. Ores are entirely exported in the form of sinter. Most steel plants use electric furnaces to produce billets by using imported pig iron and scraps. Their production, however, is far from meeting demand by local steel product manufacturers that rely on imported billets. No manufacturer has a slab furnace and no slab is imported. The largest steel manufacturer in the country, National Steel Corporation (NSC), suspended operation in 1998. As NSC was the one and only company operating a hot rolling mill, HR coils and sheets are entirely imported at present.

In the country, the steel industry means limited portions of downstream segments, except for sinter production. A large number of small steel product makers manufacture a variety of steel products, which, together with imports, meet domestic demand.

About 130-150 companies are registered with the trade organization, which is facing difficulty in obtaining reliable data after the shutdown of NSC.

8.2.9 Domestic Electrical Appliances (Figure 8-12)

Local manufacturers, including foreign-owned ones, cater to the domestic market. Local content of the products including labor, material and utilities costs, taxes and profits is estimated around 50%.

8.2.10 Electronic Parts and Products (Figure 8-13)

The electronics industry in the country emerged in the 1970s when electronics companies from the industrialized countries constructed electronic parts assembly plants. It has rapidly grown to account for 50-60% of the country's exports and is now one of the major industries in the country. Starting from a simple operation like chip packaging, the industry now assembles and tests electronic parts and products for the global market. Nevertheless, the industry generally maintains its labor-intensive operation. Almost all manufacturers are registered with PEZA located in the EPZ and they are operating on a consignment basis. Importing or receiving parts and components to assemble from customers or parent companies, they ship products to them. Local content is around 30%, most of which is procured in the same EPZ.

There is little demand for electronic parts in the local market. The country imports electronic finished products to meet local demand.

8.2.11 Motor Vehicles and Auto Parts (Figure 8-14, 8-15)

Automobile assemblers in the country are mandated to participate in the Motor Vehicle Development Program (MVDP). They are classified into three categories under CDP (Car Development Program) and/or five categories under CVDP (Commercial Vehicle Development Program) following MVDP guidelines. They are registered with BOI. As of 1999, 21 assemblers were registered. By ownership, Japanese assemblers account for the highest percentage, together with Korean, European and the U.S. with only one assembler in the country. According to sales data in 1999 published by CAMPI (Chamber of Automotive Manufacturers of the Philippines), Japanese assemblers accounted for approximately 90%. Their production share is estimated around 80%. These assemblers are mainly engaged in CKD (completely knocked down kits) assembly operations. However, they face excess capacity that appears to be four times the current level of production, which is the problem commonly seen in ASEAN countries. Only one assembler from the U.S. is operating in the EPZ, and others have plants outside the EPZ and serve the domestic market.

There is no official production data on a unit basis, while CAMPI's sales data and vehicle registration data maintained by LTO (Local Transportation Office) are available. In estimating production volume, care should be taken to: 1) sales and registration of

motor vehicles, e.g., jeepny, assembled by local companies which do not participate in CAMPI or TMA and are not registered with CVDP; 2) imports of CBU (completely built-up); and 3) imports by overseas workers. In fact, the number of vehicles newly registered with LTO in 1999 reached around twice that were sold by BOI-registered assemblers.

The automotive parts market is divided into three segments, OEM, aftermarket and export. Manufacturers are operating in or outside the EPZ. Those operating in the EPZ export most of their products but supply some to local assemblers. Those operating outside the EPZ mostly supply OEM parts to domestic assemblers, with some portions going to exports and the aftermarket. Major auto parts manufactured locally are wire harnesses and car stereos.

On the other hand, large quantities of non-OEM replacement parts are imported mainly from Taiwan for the aftermarket. There are a large number of parts repair shops.

While there is a trade association for automotive parts manufacturers, statistical data on production volume is not available.

Figure 8-2 Food/Beverage/Dairy Products
(PSIC151·152·155)

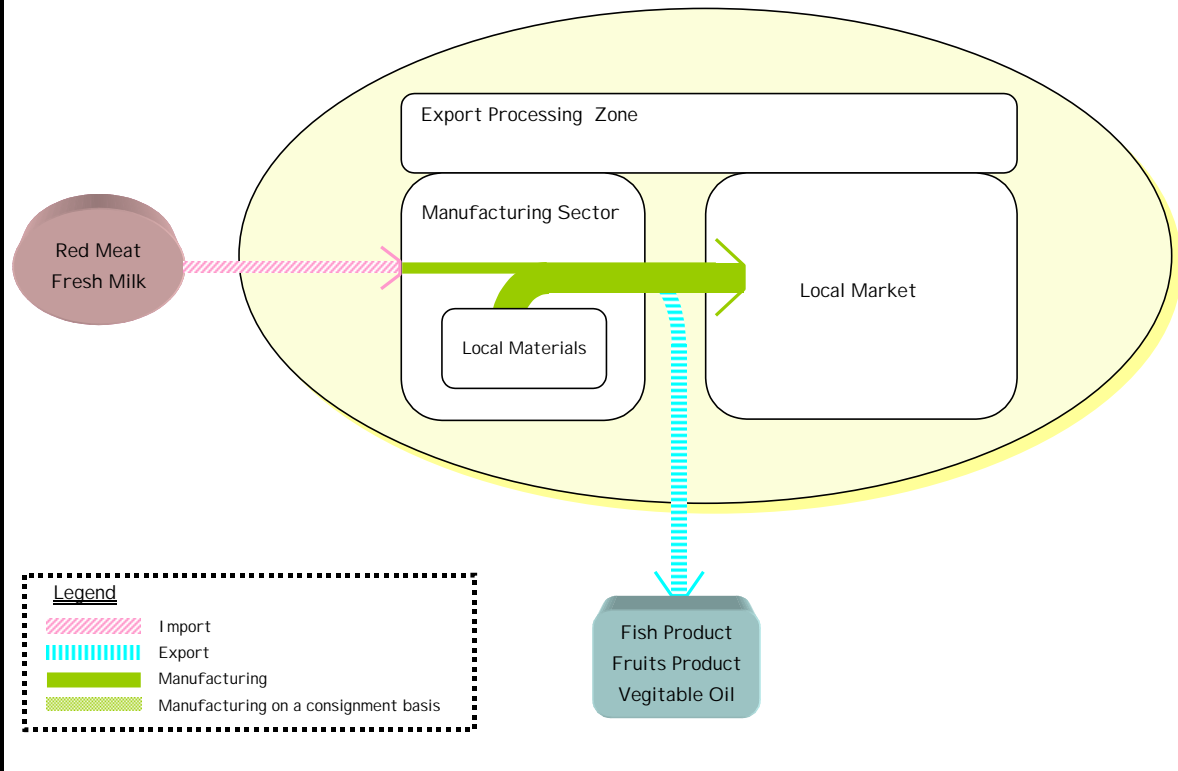


Figure 8-3 Tobacco
(PSIC160)

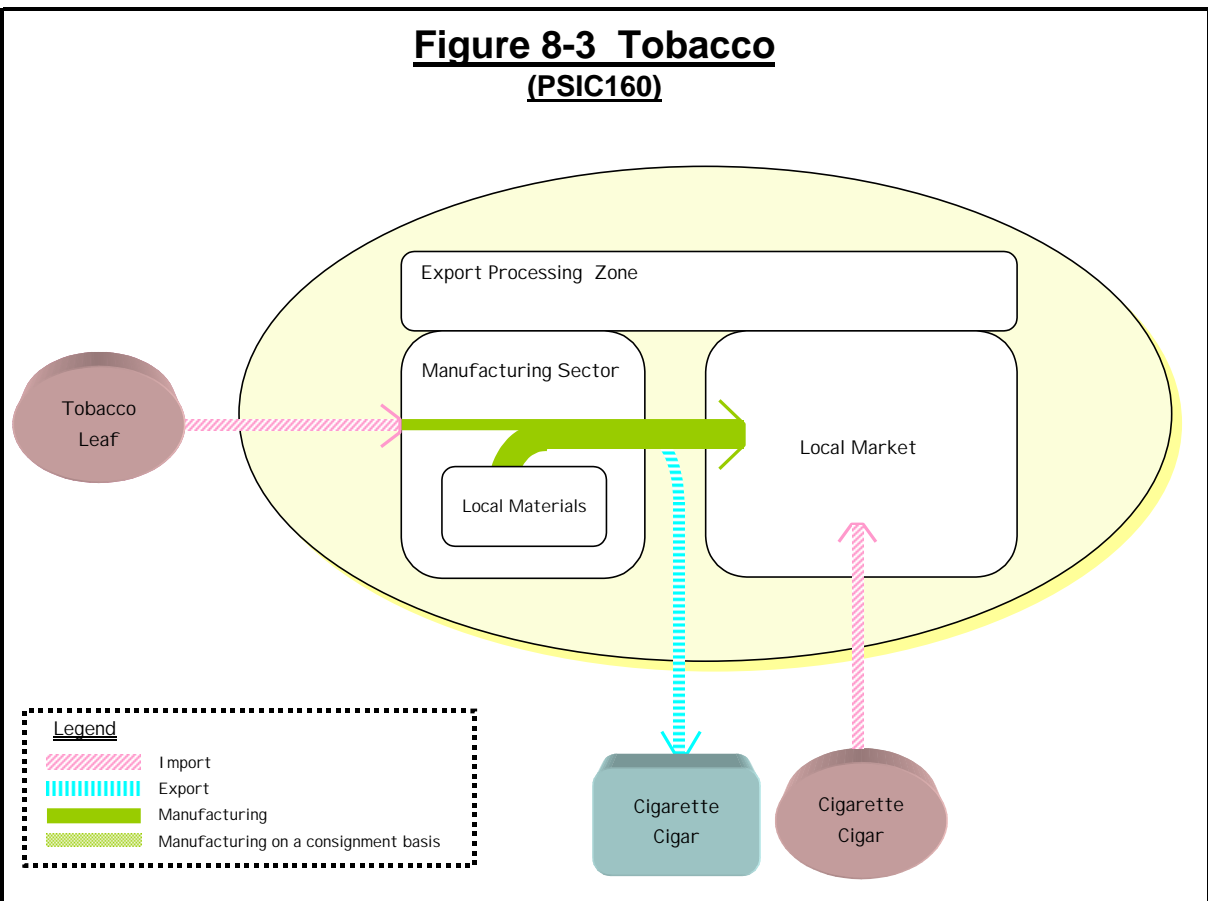


Figure 8-4 Garments
(PSIC181)

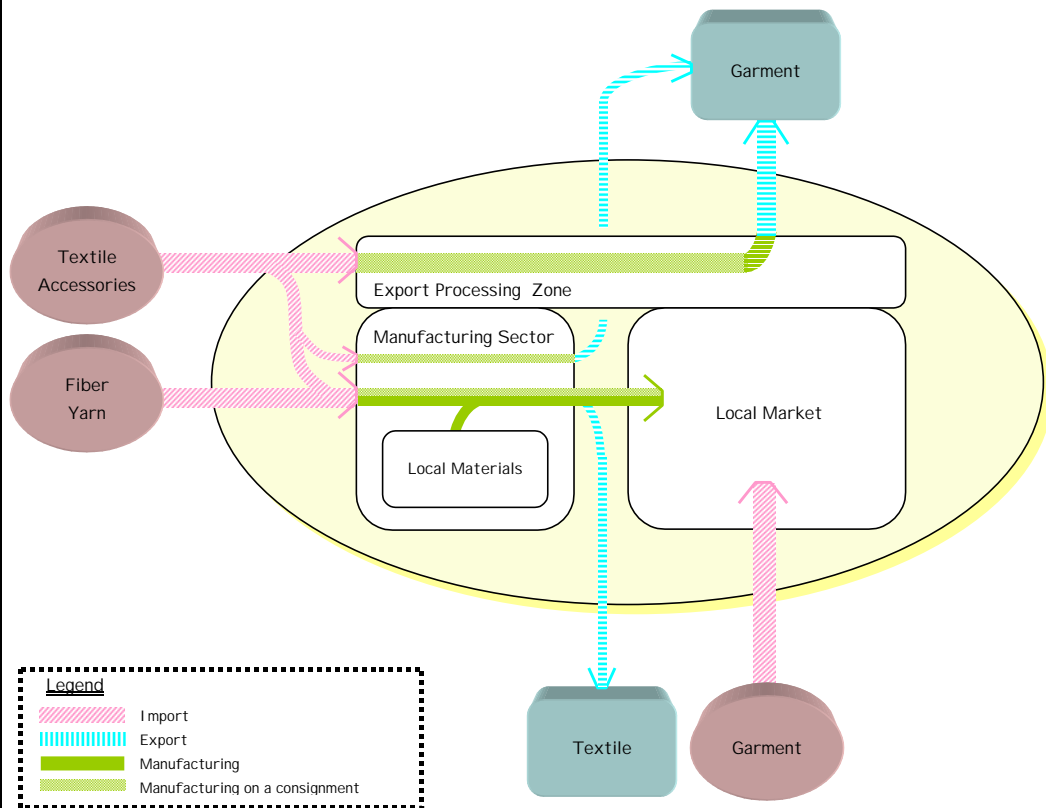


Figure 8-5 Pulp Paper Products
(PSIC210)

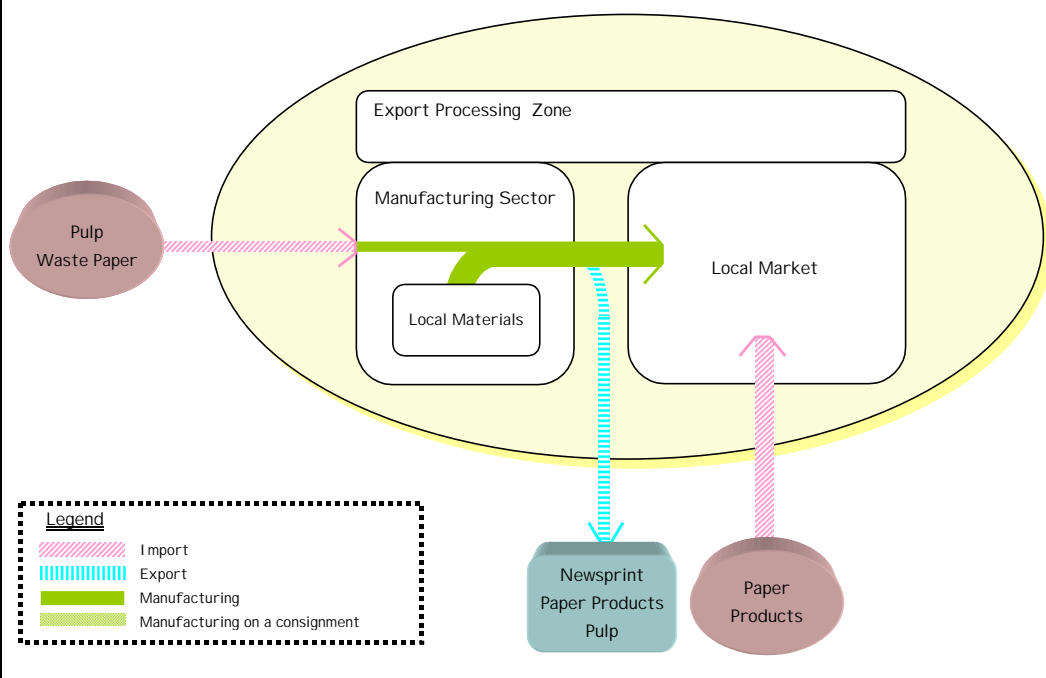


Figure 8-6 Petroleum / Chemical Products Process Flow

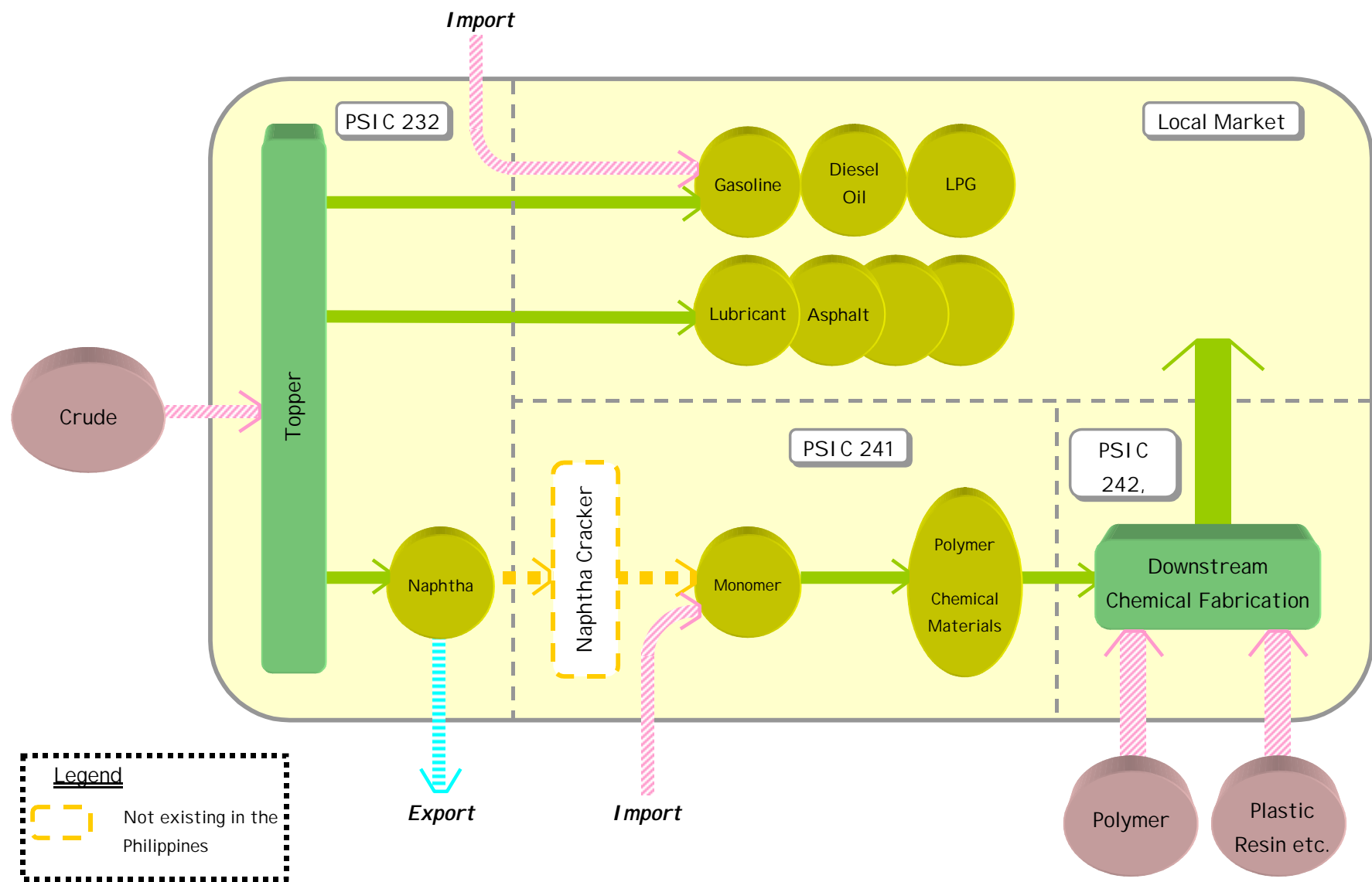


Figure 8-7 Refined Petroleum Products
(PSIC232)

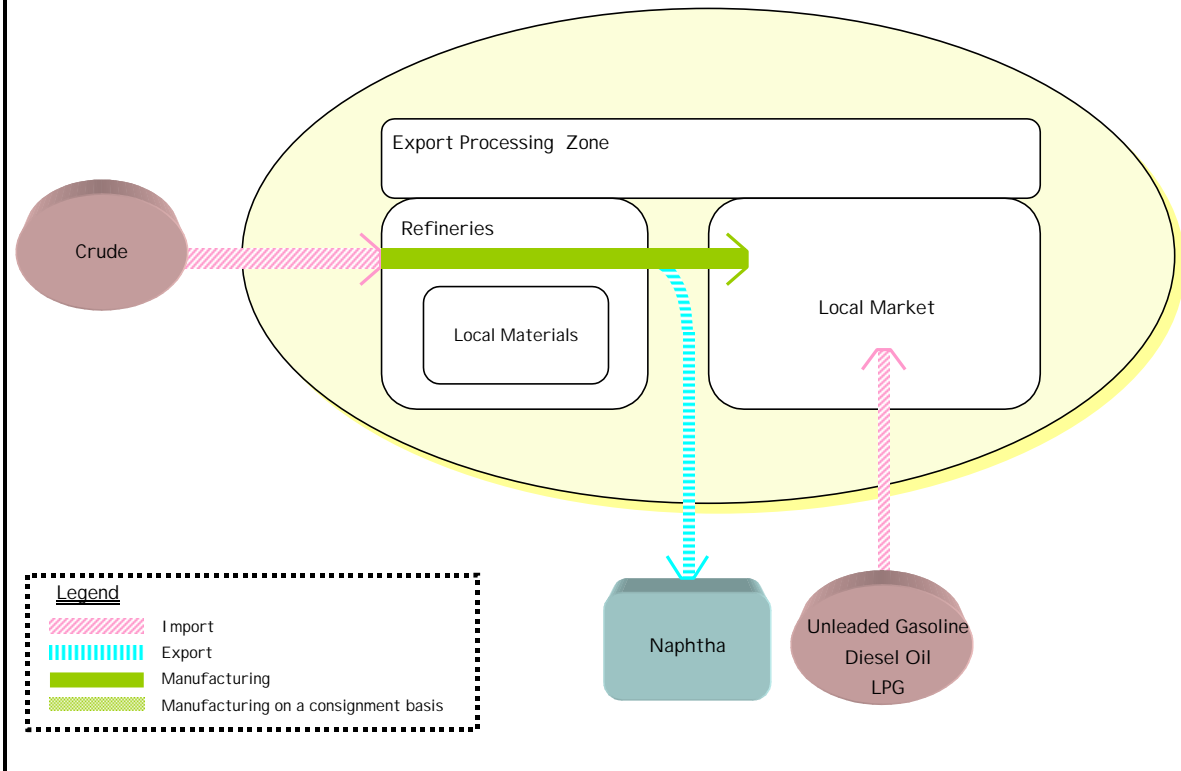


Figure 8-8 Basic Chemicals
(PSIC241)

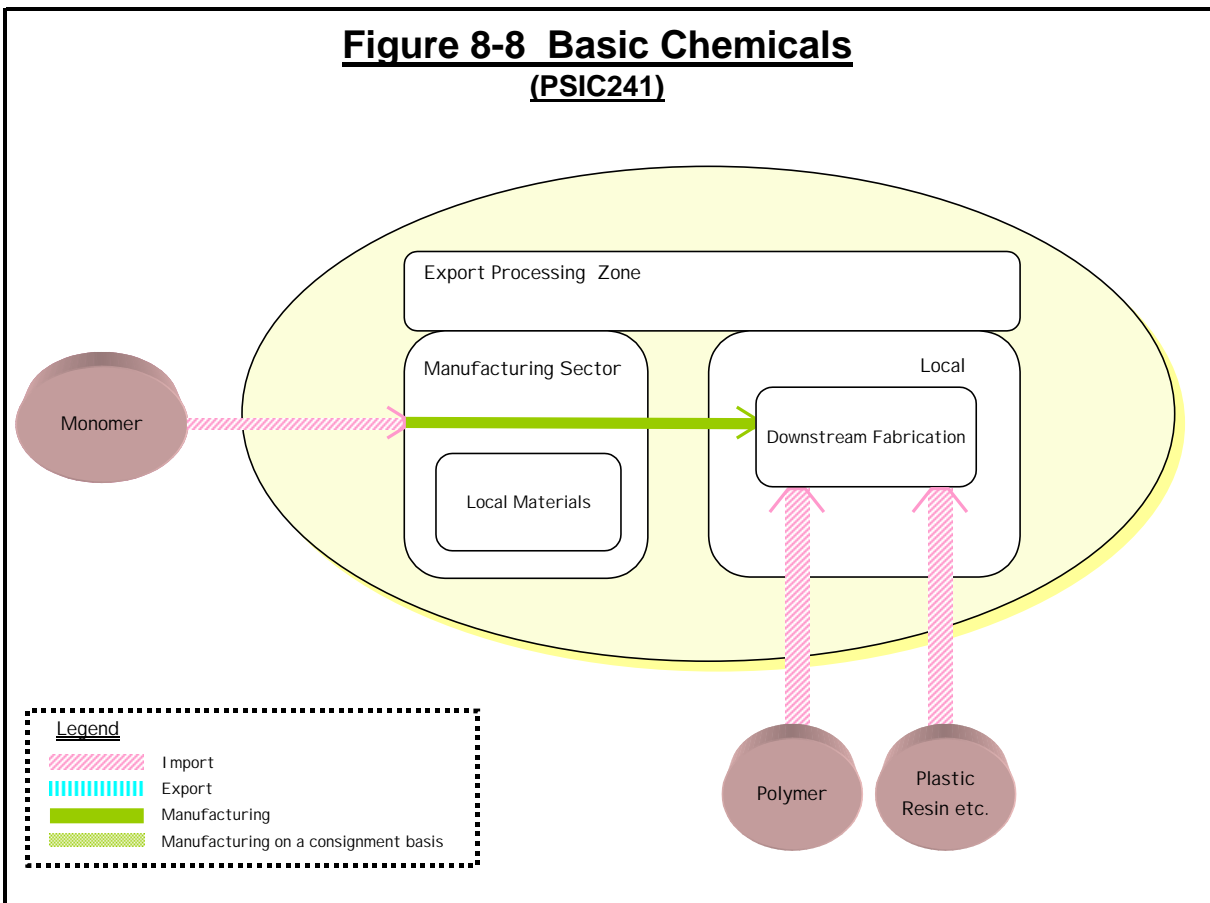


Figure 8-9 Cement
(PSIC262)

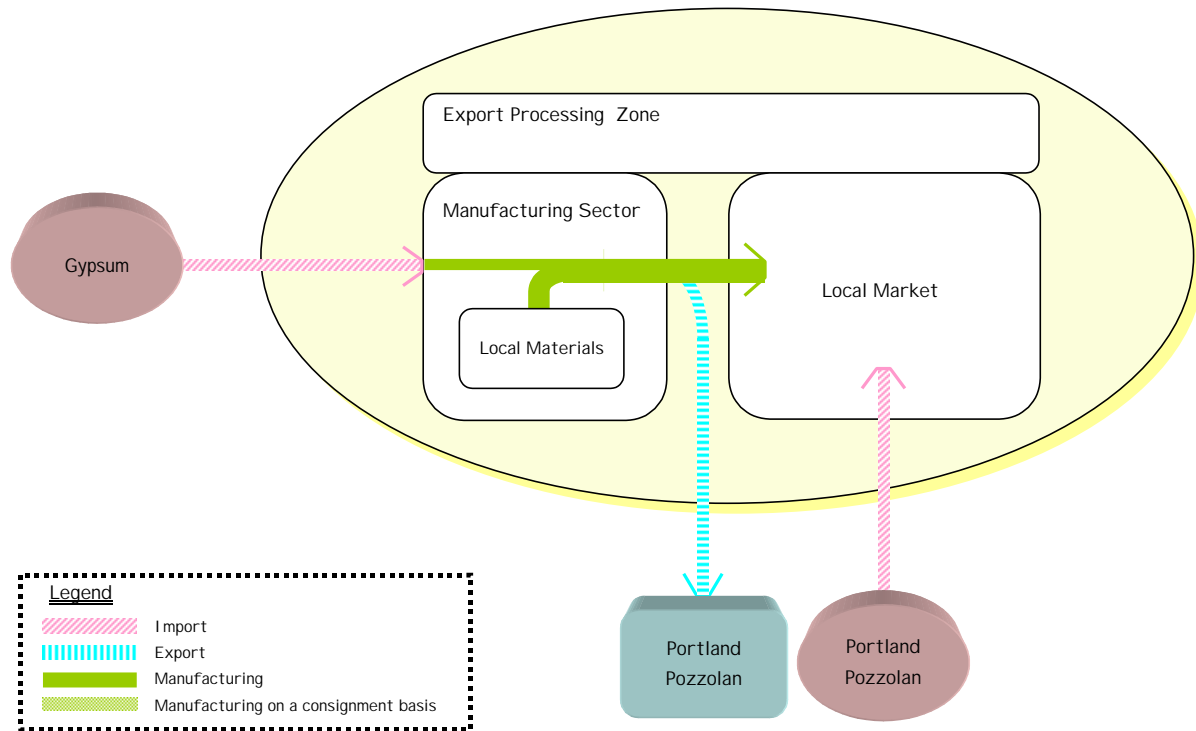


Figure 8-10 Iron / Steel
(PSIC271)

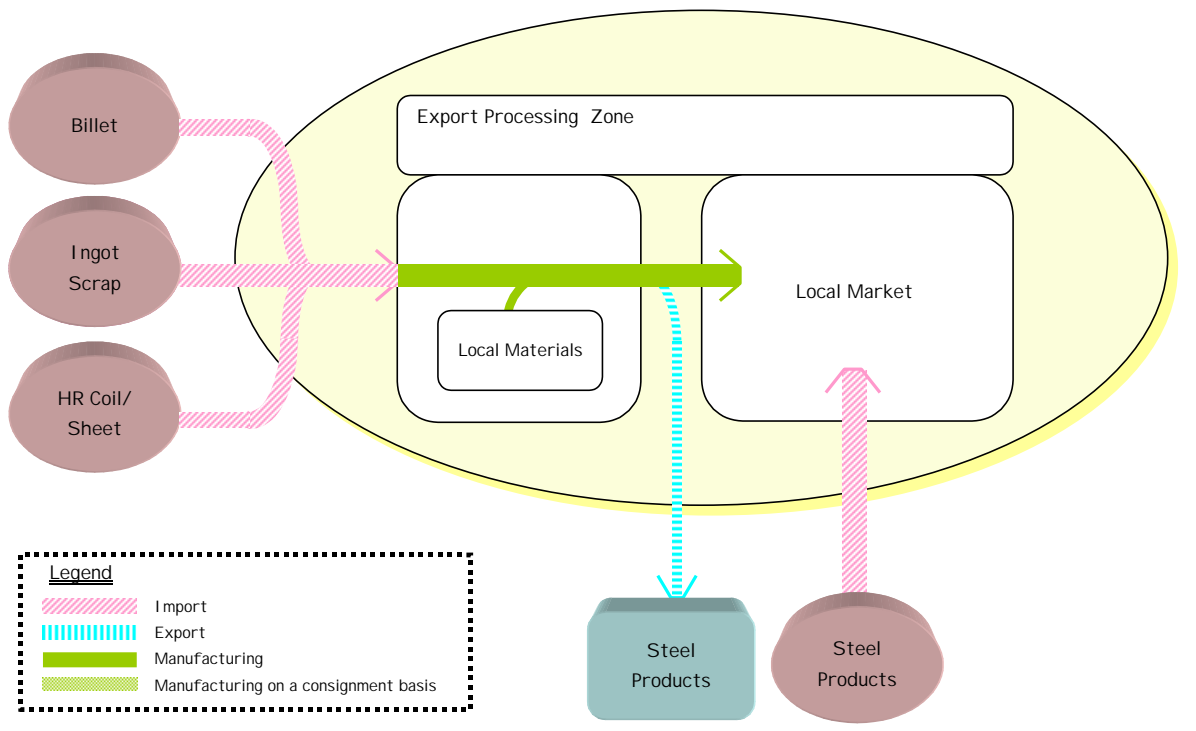


Figure 8-11 Iron and Steel Process Flow

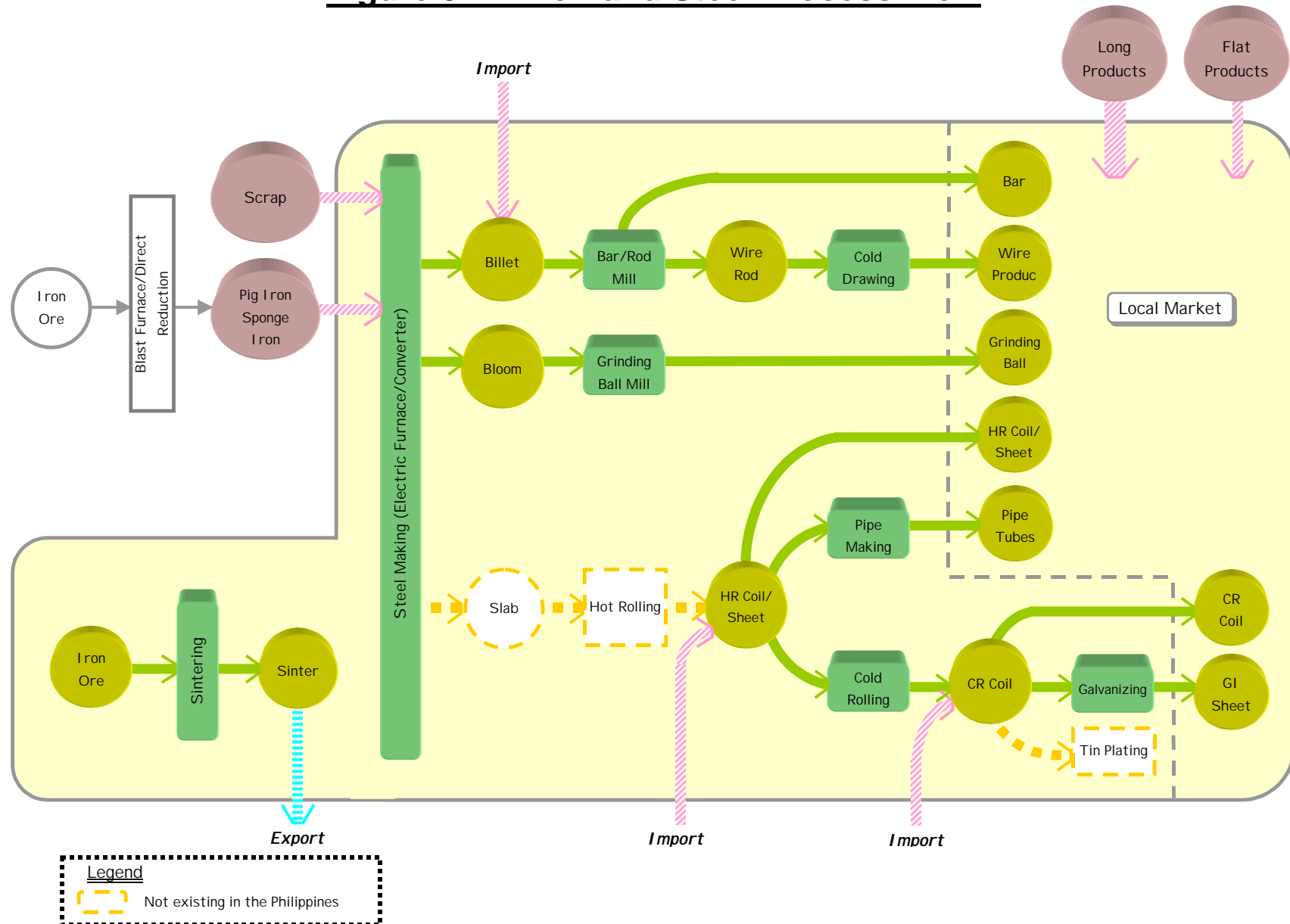


Figure 8-12 Domestic Electrical Appliances
(PSIC291-4)

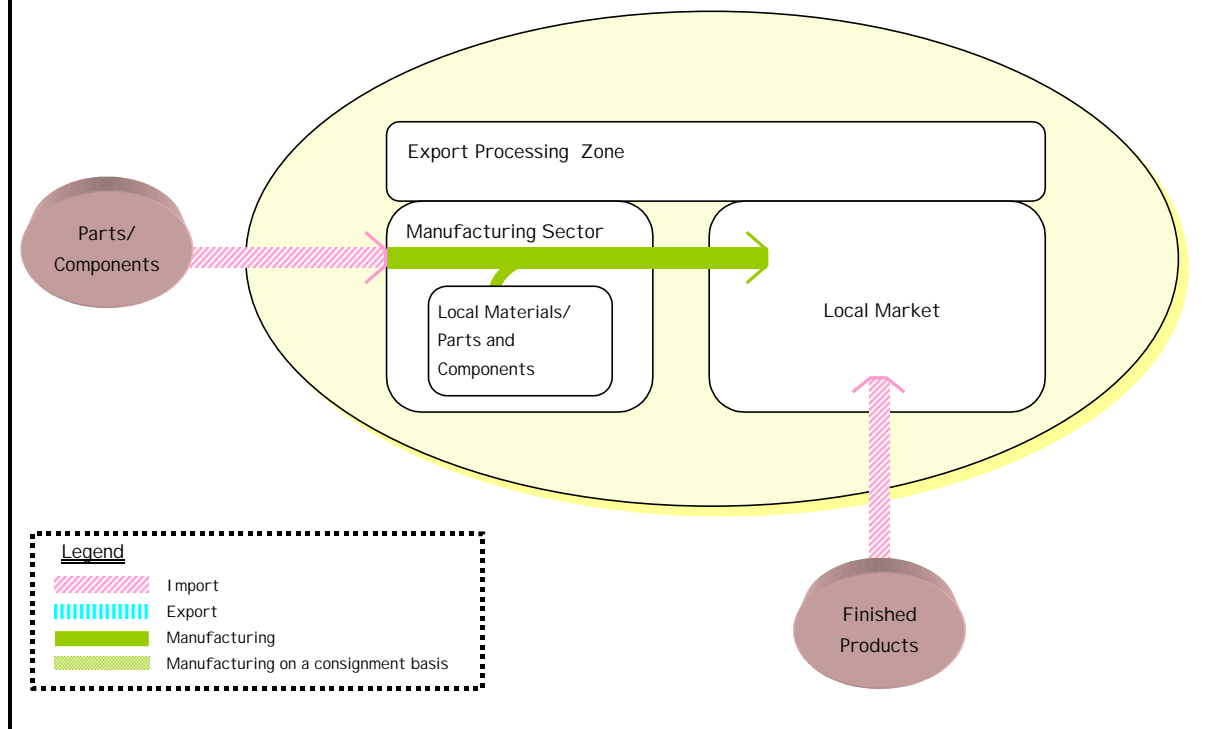


Figure 8-13 Electronics
(PSIC300-321-324)

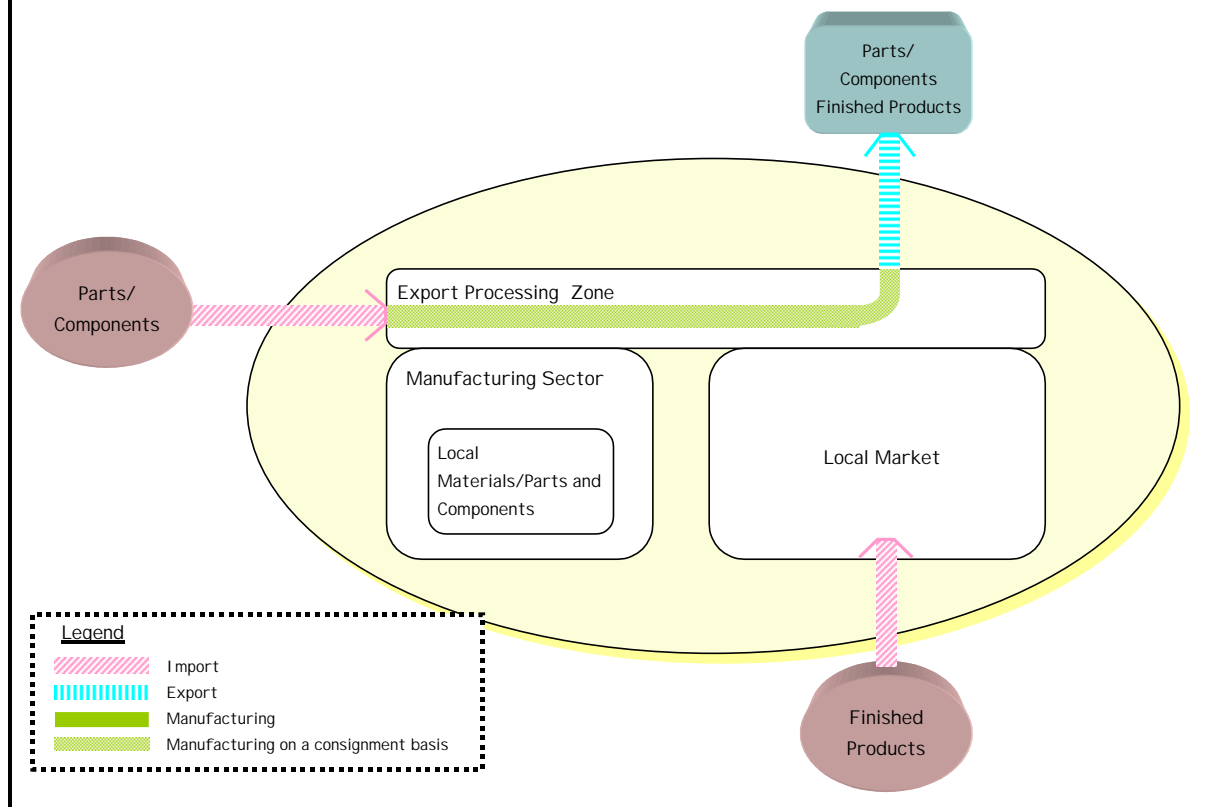


Figure 8-14 Motor Vehicles
(PSIC341)

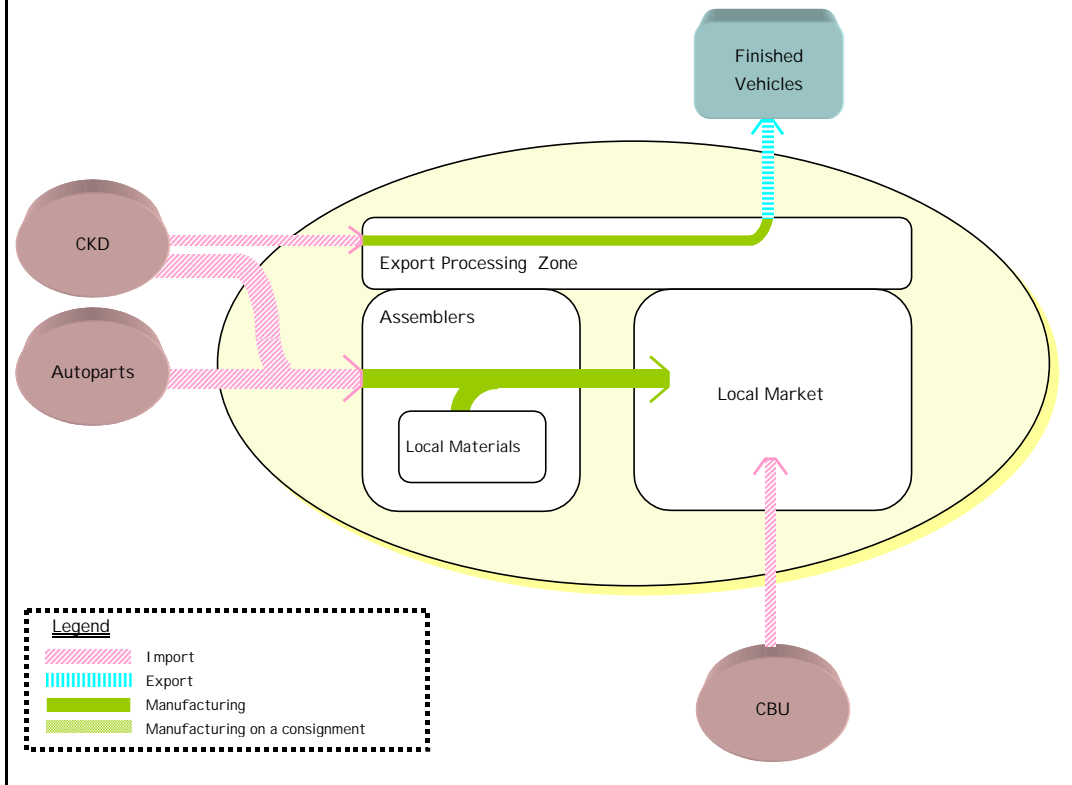
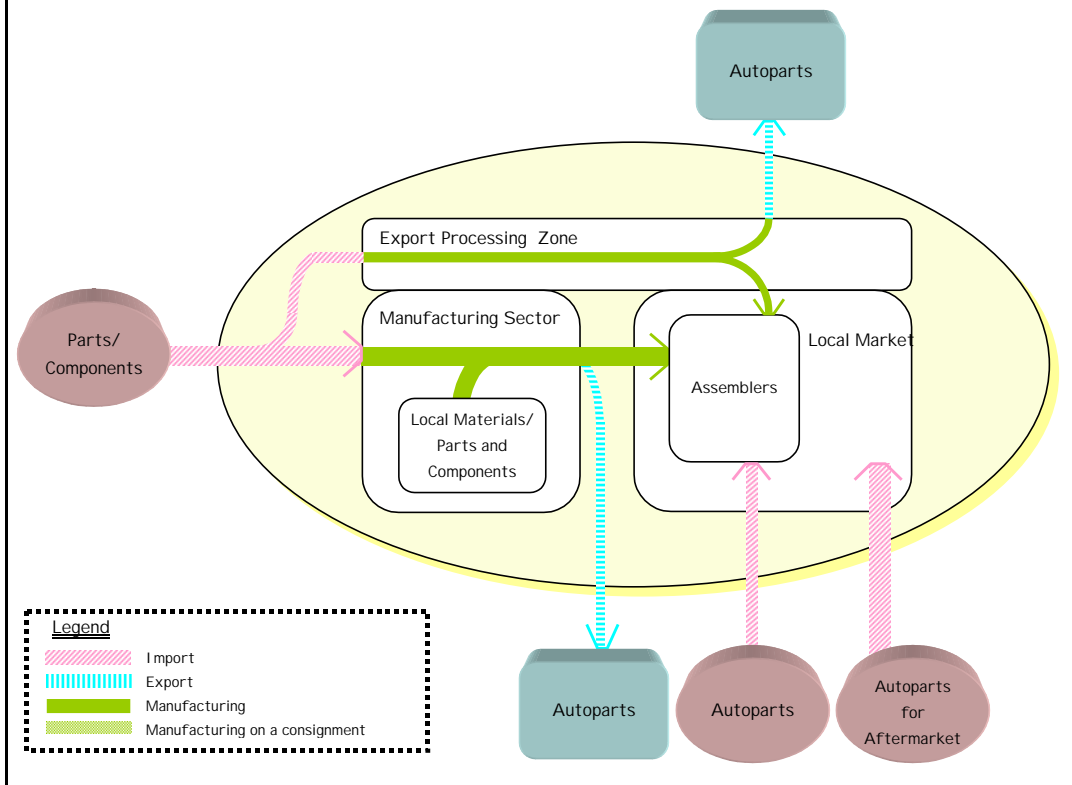


Figure 8-15 Parts and Accessories for Motor Vehicles
(PSIC343)



8.3 Target Sectors

8.3.1 Sectors Targeted for Pre-test Survey

The 22 sectors with the highest value added contributions, based on PSIC 3-digit classification, were selected as the target sectors in the MSP basic design. The coverage rate was 75.7%. For the pretest survey, these 22 sectors were subdivided into 13 sectors with the highest value added contributions and the other nine sectors, and the pretest survey was carried out on the 13 sectors on the same scale as when the full-scale MSP was conducted on the target establishments. For the remaining nine sectors, the target establishments were selected only from among MISSI samples. This was designed to keep the number of establishments targeted for the pretest survey within a given scale.

8.3.2 Final Selection of Target Sectors for MSP

The items described below were examined when the final selection was made of sectors targeted for the MSP, based on the configuration and features of the various sectors of the manufacturing industry as described in section 8.2.

1. Sectors comprising of mainly consignment processing establishments are not included in the MSP. The reasons are as follows:
 - a) Shipments from establishments on a consignment basis consist not only of finished products, but also of large quantities of semi-finished products. Even if the establishment was a pre-qualified establishment, in many cases it could not serve as a survey target because it did not produce target commodities of the MSP. Identification of target establishments requires significantly more time and higher costs than that of other sectors.
 - b) Sectors comprising mainly consignment processing establishments have complex industrial configurations and large numbers of establishments, and even if the survey is limited to production alone, it takes more time and is more costly to acquire an accurate grasp of the production volume of finished products than for other sectors.

- c) One reason why the MSP is so useful is because it surveys trends in production volumes, sales volumes, and inventory volumes, and the resulting figures can be used in making economic forecasts. This assumes, however, that the establishment or enterprise is watching the market and initiating its own control over production, sales, and inventory levels. With consignment operating establishments, in which production activities are carried out in response to instructions from a parent company or the client company, which may be either domestic or foreign, production control, sales control and inventory control are not carried out autonomously in many cases. As explained earlier, despite the fact that the application of MSP in sectors, where most of the establishments are labor subcontractors involves higher costs than in other sectors, the results do not yield the hoped-for benefits.

Example 1: Electronic components sector

Most of the establishments in the sector are engaged in consignment processing from overseas parent companies.

Example 2: Garments industry

Many of the establishments in this sector are engaged in consignment processing, and in many cases the shipments do not consist of finished products.

2. In sectors where the production activities in the EPZ consist mainly of production of commodities for export, using imported parts and materials, trends in the sector are not governed by the domestic economy in the Philippines, but rather by the business strategies of the parent company overseas. Because one objective of the MSP is to create indices for measuring domestic economic trends in the Philippines, these sectors are given a low priority as targets for the MSP.

Example 1: Electronic components sector

Most of the establishments are located in the EPZ, and almost all of the products are exported.

3. Sectors in which the principal commodities are judged inappropriate for the MSP are excluded as targets.

Example 1: Electronic components sector

Many diverse types of products are manufactured, and vast numbers of products having different types of specifications may be grouped under the same product name. Additionally, there are drastic fluctuations in product specifications and prices. It is not easy to maintain a grasp of volumes, and even if volumes can be tracked, the data is meaningless as a time series of quantitative data.

Example 2: Plastic products sector

There are many diverse product types, and fluctuations are drastic. Quantitative data obtained from this sector has little meaning as time series data.

4. Sectors necessary in terms of industrial policies, or to create SNA, are being added as target sectors for the current MISSI, even if they have a low value added contributions. For the same reason, the sectors listed below are being added to the MSP.

Animal feeds and grain milling
Coconut and vegetable oils
Sugar
Glass
Non-ferrous metals

Table 8-2 shows the 24 sectors ultimately chosen as target sectors for the MSP. According to ASE1997, the coverage rate of these 24 sectors in the manufacturing industry is 70.9%. Figure 8-16 shows a comparison of the 20 sectors targeted by the current MISSI and the 24 sectors targeted by the MSP, based on the PSIC. In the electronic components sector, garments sector, and plastic products sector, which were

included as targets for the pre-test survey but excluded from the MSP itself for the reasons noted in 1. to 3. above, economic trends will be surveyed by the indirect method, with volumes being estimated using production values and prices, even after the MSP pilot survey has been successfully concluded and the MSP and MISSI have been combined.

In the improvement scheme of the MISSI by the NSO when this Study was initiated, it was intended that the number of sectors targeted for the MSP would be gradually increased, while still keeping the number of target establishments within a realistic implementation range. Because of the policy of excluding sectors that are inappropriate for a commodity-based volume survey, however, the garments sector, which has the highest number of establishments, ended up being excluded from the MSP. Consequently, rather than shifting in a stepwise progression from the MISSI to the MSP, all of the sectors to which a commodity-based volume survey could be appropriately applied will be shifted to the MSP at the same time.

Table 8-2 MSP Final Target Sectors

Sector Code	Sector Title	Share in Total Value-added (%)
A. Food Manufacturing		(11.3)
151	Processed meat, fish, fruits and vegetables	7.0
158,15152	Coconut and vegetable oil (crude and refined)	
152	Dairy products	1.6
154	Animal feeds and grain milling	1.3
157	Milled and refined sugar	1.4
B. Beverage		(6.3)
155,15141	Beverage	6.3
C. Tobacco		(4.3)
160	Tobacco products	4.3
H. Paper and Paper Products		(1.9)
210	Paper and paper products	1.9
L. Chemical Products		(9.2)
241	Basic chemicals	1.8
242-3	Chemical products	7.4
M. Petroleum Products		(11.9)
232	Refined petroleum products	11.9
N. Non-Metallic Mineral Products		(3.5)
261	Glass products	0.7
262	Cements	2.8
O. Basic Metals		(4.0)
271	Basic iron and steel	3.0
272	Non-ferrous metals	1.0
P. Fabricated Metal Products		(1.6)
281,289	Fabricated metal products	1.6
R. Electrical Machinery		(9.9)
291-4	Domestic electric appliances	1.2
300	Office, accounting and computing machinery	1.5
314-5,319	Batteries and lighting equipment	1.9
321,323	Electronic valves, TV and radio transmitters, and line telephony	4.5
324	TV and radio receivers, and sound or video recording apparatus	0.8
S. Transport Equipment		(7.0)
341-2	Motor vehicles and bodies for motor vehicles	5.5
343	Parts and accessories for motor vehicles	
351-3,359	Motorcycles	1.5
TOTAL		70.9

Note: The sector code is based on PSIC 3-digit classification.

Figure 8-16 Target Sectors of MISSI and MSP

Current MISSI		MSP	
Major Sector / Sub-sector	PSIC Code Ver. 1994	Target Sector	
A. FOOD MANUFACTURING	15		
Bakery Products	156		
Manufacture of Prepared & Unprepared Animal Feeds	1542	154	
Grain Milling	1543		
Manufacture of Dairy Products	152	152	
Milled and Refined Sugar	157	157	
Manufacture of Desiccated Coconut	1593		
Processed Fruits and Vegetables	1514		
Processed Meat and Fish	1512	151	
	1513	(* Excluding oils.)	
Vegetable and Animal Oils (Crude / Refined)	1515	158, 15152	
	158	Refined coconut and other vegetable oil	
Miscellaneous Foods	159		
B. BEVERAGE	155	155, 15141	
C. TOBACCO	16	160	
D. TEXTILE	17		
Textile Products	171, 172		
Cordage, Rope & Twine	1723		
E. WEARING APPAREL & FOOTWEAR	18		
	174		
	192		
F. WOOD PRODUCTS	20		
Planing & Sawmill	2011		
Veneer & Plywood	2012		
Other Wood Products	2013		
G. FURNITURE & FIXTURES	360		
H. PAPER & PAPER PRODUCTS	21	210	
I. PUBLISHING & PRINTING	22		
J. LEATHER PRODUCTS	191		
K. RUBBER PRODUCTS	251		
L. CHEMICAL PRODUCTS	241, 242		
Basic Chemical & Industrial Gases	2411	241	
Fertilizers	2422	242-3	
Paints	2421		
Drugs and Medicines	2423		
Soap and Cleaning Preparations, Cosmetics & Toilets Preparations	2424	By indirect method	
Miscellaneous Chemicals	2425		
	2429		
	243		
Plastic and Plastic Products	252		
	2412		
M. PETROLEUM PRODUCTS	23		
Refined Petroleum Products	232	232	
Coke and Other Fuel Products	231, 239		
N. NON-METALLIC MINERAL PRODUCTS	26		
Glass and Glass Products	261	261	
Cement	262	262	
Miscellaneous Non-Metallic Mineral	269		
O. BASIC METALS	27		
Iron and Steel	271	271	
Non-ferrous Metal	272	272	
P. FABRICATED METAL PRODUCTS	28	281, 289	
Q. MACHINERY EXCLUDING ELECTRICAL	29		
	30		
R. ELECTRICAL MACHINERY	31		
	293	291-4	
	300	300	
Electrical Appliances & industrial machinery	311		
	323	321, 323	
	324	324	
Microcircuits	322		
Batteries	314	314-5, 319	
Electric Wires and Wiring Devices	312		
	313		
Electric Lamps & Fixtures	315		
	319		
S. TRANSPORT EQUIPMENT	34	341-2	
	35	343	
		351-3, 359	
T. MISCELLANEOUS MANUFACTURES	33, 36, 39		

MISSI 20 Major Sectors

24 Target Sectors

8.4 Target Commodities

8.4.1 Commodity Selection Policy

As a rule, just as with the basic design, commodities targeted for the MSP are: 1) finished products destined for the consumer market; or 2) intermediate input goods distributed in the market. In commodity selection of the basic design, PSIC 5-digit classifications accounting for at least 80% of the target sectors in terms of value added were first selected, and then specific commodity names were identified, referring to the commodities indicated in various NSO statistics. As the last step, any necessary corrections were made based on visits to and surveys of related organizations and enterprises, and a total of 168 commodities representing target sectors were selected.

The following points were considered when making the final selection.

1. Commodities are to be included for which volume data is necessary in order for government agencies to formulate industrial policies and accelerate investments, and in order for enterprises and industrial groups to promote their business.
2. Commodities are to be grouped in ways which make it easier for establishments to respond. A condition of the grouping is that it is possible to measure commodities in a group using the same unit.
3. The number of commodities is to be held within a manageable range by the NSO.

8.4.2 Final Selection of Target Commodities for MSP

When the final selection of the commodities and their measurement units had begun, information relating to commodity selection obtained in the pretest survey was organized to fit on one page per sector. Table 8-3 shows the chemical products sector as an example. Information consists of; 1) products for which no responses had been received from any establishments for a period of three months; 2) products for which an inappropriate measurement unit had been pointed out; 3) products claimed by an establishment for unclear definition, such as composite-type products; 4) products proposed for deletion or addition; and 5) products that were the principal products of an establishment classified in a wrong sector by mistake. The final selections for all of the sectors were made based on these tables. When necessary, inquiries were made to leading establishments, industrial groups, and other organizations.

Annex-2 contains the commodity lists for the pretest survey. Final commodity lists of the MSP are shown in Annex-4 “MSP Questionnaires”. The following two points are special items that were carried out when the final selection was implemented.

1. In order to group commodities in a way that makes it easier for establishments to provide responses:
 - a) The “Pure Fruit Juices” of PSIC 15141 were included in the 155 Beverage sector.
 - b) The “Refined Coconut” of PSIC 15152 was included in the 158 sector.
2. The following commodity groups were inappropriate for the MSP, and were not included as MSP targets.
 - a) Products too diverse for inclusion-1
Examples: Pharmaceuticals and cosmetics
Solution: These are one commodity item in the chemical products sector (PSIC 242-3) that is kept in the MSP as a target sector. The measurement unit for pharmaceuticals and cosmetics was changed to value.
 - d) Products too diverse for inclusion-2
Examples: Plastic products
Solution: The plastic products sector (PSIC 252) was left out of the MSP.
 - c) Products for which fluctuations in specifications and prices are extremely drastic
Examples: ICs and electronic components
Solution: The electronic components sector (PSIC 322) was left out of the MSP.

Table 8-3 Commodity Final Selection Work Sheet

242 Manufacture of other chemical products

Finished Products covered by Pre-test Survey

Code	Name	Description	Units	No Entry	Suggested for Deletion	No. of Answers	Unit of Measurement			Delete?	Confirmed Unit
							Suggested for Correction	Recommended Unit	No. of Answers		
101	Fertilizers and nitrogen compounds	Includes: mixed or composite fertilizers (perfect gro or 14-14-14, 18-46-0, 16-20-0, ammosol or 21-0-0), ammonium nitrate and ammonium sulfate	Ton								
102	Drugs and medicines	Includes: antibiotics (penicillin, sulfonamides, tetracycline's, streptomycin, chloromphenicols and other antibiotics combinations), vitamins (vitamin A, D, and E, vitamin B and B complex, vitamin C, multivitamin w/ or w/o minerals, iron preparations, pre and post natal vitamins, vitamin drops, vitamin powder, appetite stimulants and other nutritional preparations) and analgesic and antipyretics	Ton				○	SPU (Standard Production Unit)	1		Million Pesos
103	Soap and detergents	Includes: toilet soap (including medicated) and laundry soap (detergent bars and detergent powder)	Ton								
104	Other toilet preparations (inc. glycerin, shampoo, etc.)	Includes: glycerin (crude or refined), skin lotions, shampoo and body powder (baby powder)	Ton								

Finished Products suggested for inclusion

Name	No. of Answers	Unit	Main Raw Materials	Include?	Unit of Measurement
Commercial Empty Bottles	1	Piece	Glass		
Epoxy Adhesive (*)	1	Kilogram	Resiners		
Paint (*)	1	---	---	○	Ton
House Paint (*)	1	---	---		
Mighty Bond (*)	1	Kilogram	Polythelene		
Thinner (*)	2	---	---		
Varnish (*)	1	---	---		
Polythelene (*)	1	Kilogram	---		

(*) Suggestion from disqualified establishments (status 4).

Products of "Status 4" establishments

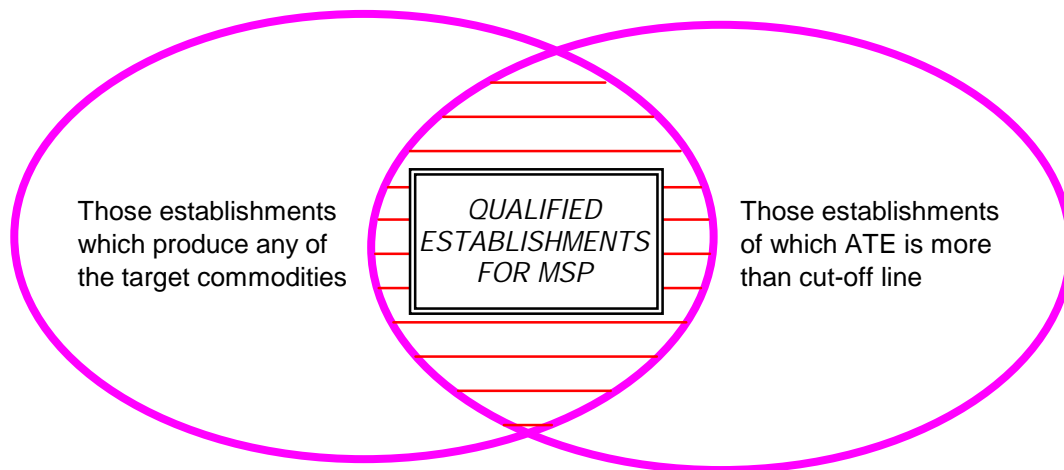
Name	No. of Answers	PSIC 5-digit	Include?	Unit of Measurement
Insecticide	1	242-20		
Poultry prod (*)	1	242-20		
Pesticides	1	242-20		
Paint (*)	8	242-31	○	Ton
Varnish	1	242-32		
Solvents	1	242-33		
Natural fulatine (*)	1	242-34		
Turco rust conver (*)	1	242-34		
Coating (*)	1	242-39		
Veterinary medicines (*)	2	242-41		
Vaccine (*)	1	242-41		
Toilet cleaner (*)	1	242-52		
Air freshener (*)	1	242-54		
Anfo (pexpo) (*)	1	242-91		
Power gel (*)	1	242-91		
Booster (*)	1	242-91		
Excel (*)	1	242-91		
Adhesive (*)	1	242-94		
Sealants (*)	1	242-94		
Carbon (*)	1	242-95		

(*) Products of disqualified MISSI samples.

8.5 Target Establishments

As shown in Figure 8-17, there are two conditions for an establishment being selected as an MSP target: 1) it must be producing any of the target commodities; and 2) it must have ATE above the cut-off line specified for each sector.

Figure 8-17 Qualification of MSP Target Establishments



8.5.1 Selection Flow for Target Establishments

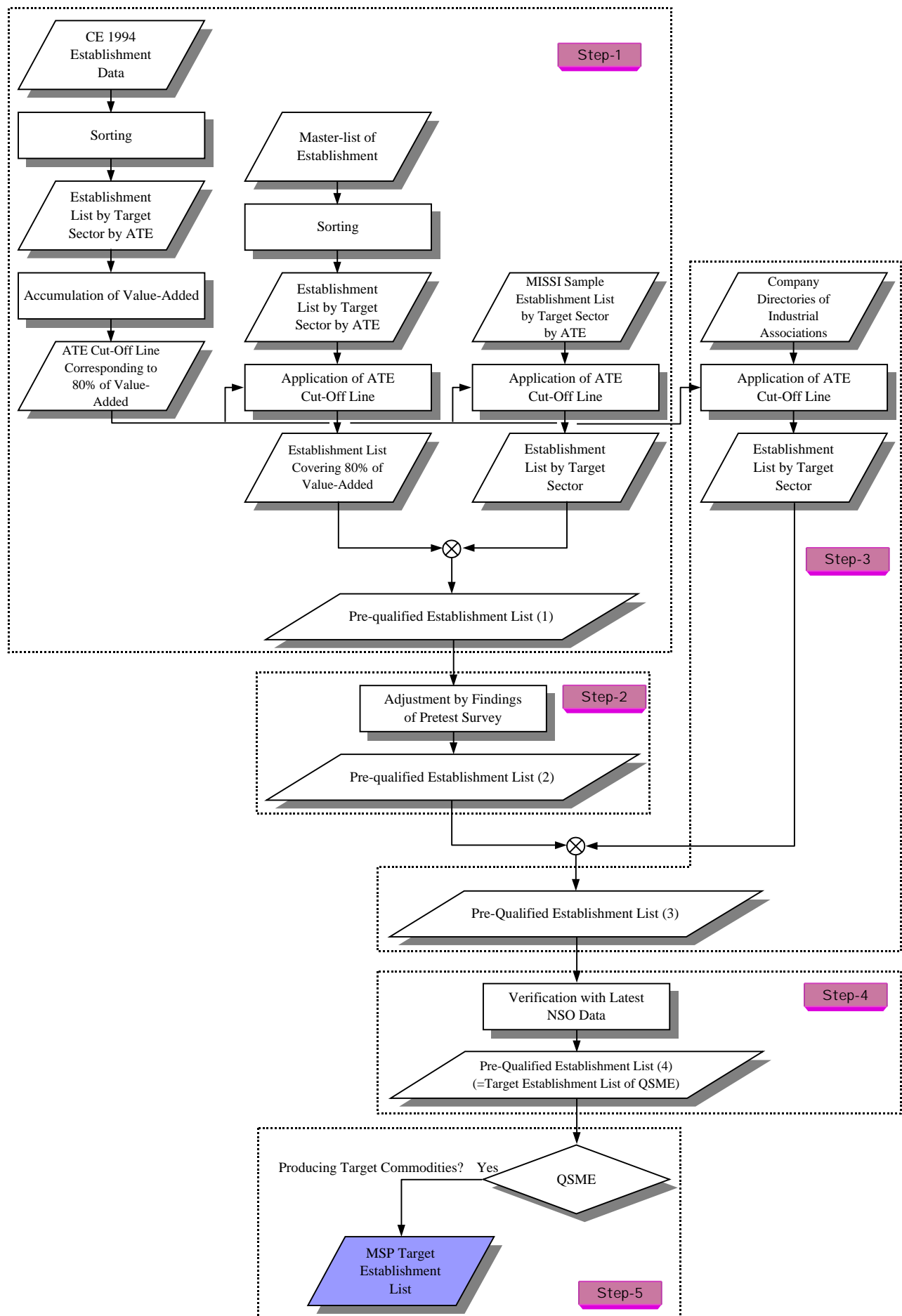
Figure 8-18 shows the selection flow of the target establishments for the MSP. The pretest survey targeted only Metro Manila and Calabarzon, but the MSP targets establishments from all over the country. Because the target region was expanded, and because the sectors and commodities were reviewed after the pretest survey, it was necessary to go through the establishment selection process once again, starting with the step of selecting establishments based on the ATE cut-off line from the Master List of Establishments. However, the list was completely revised to re-classify those establishments identified to have been classified in a wrong sector and to eliminate those that were confirmed not to exist any more, such as bankrupt establishments, in the course of the pretest survey.

Selection of the target establishments consists of the following five steps.

- Step 1 An ATE cut-off line equivalent to value added of 80% is established for each target sector using the 1994 census, and this cut-off line is applied to the Master List of Establishments and the MISSI sample list.

- Step 2 Corrections on establishment classifications etc. are made based on the pretest survey results.
- Step 3 Establishments from the lists of the industrial associations are added after screening by the ATE cut-off line. Adjustments are made as necessary based on the information of the associations.
- Step 4 The list is verified with the latest information available from the NSO.
- Step 5 A Qualification Study for Manufacturing Establishments (QSME) is carried out to identify those establishments actually producing the target commodities.

Figure 8-18 Selection Flow of MSP Target Establishments



8.5.2 Final Selection of Target Establishments for QSME

Table 8-4 shows the results of Steps 1 to 4. As for Steps 1 to 3, special items are noted in Table 8-5.

8.5.3 Qualification Study for Manufacturing Establishments (QSME)

The QSME was conducted as the final step (Step 5) in selecting the target establishments for the MSP. The 705 establishments on the pre-qualified establishments list obtained as a result of Step 4 were targeted for the survey. Twenty-four types of questionnaires for each of the 24 target sectors specifying the target commodities were prepared. Annex-3 is a sample QSME questionnaire. If there was a possibility that an establishment was producing commodities that are classified in multiple sectors, more than one questionnaire was prepared for the establishment.

Rather than distributing the questionnaires to the establishments, enumerators took the questionnaires with them when they visited the establishments, and have them filled out. The main purpose was to confirm that the establishment produces the target commodity, but in cases where it was confirmed that the establishment is not producing any of the target commodities, the enumerators asked for the name of the commodity actually being produced. If the commodity happens to be one targeted for a different sector, and the ATE of that particular establishment is above the cut-off line, that establishment will become a target in the sector for the MSP. Enumerators obtained not only information on the commodities from the establishments, but also other information necessary in order to conduct the MSP, such as ATE, survey routes, and the names of contact persons.

Table 8-6 is the result of the QSME. The number of target establishments for the MSP is 432. The regional distribution of the 432 establishments is shown in Table 8-7.

Table 8-4 Four-Step Selection of Pre-Qualified Target Establishments for MSP

(Unit: Establishment)

Major Sector / Secor		STEP-1		STEP-2		STEP-3		STEP-4		ATE Cut-Off Line
		Total	MISSI	Total	MISSI	Total	MISSI	Total	MISSI	
A. Food Manufacturing										
151	Processed meat, fish, fruits and vegetables	139	40	121	38	121	38	89	24	100
158,15152	Coconut and vegetable oil (crude and refined)							17	3	100
152	Dairy products	16	8	15	7	16	8	9	3	200
154	Animal feeds and grain milling	36	23	35	21	35	21	29	15	100
157	Milled and refined sugar	15	12	15	12	15	12	14	12	500
B. Beverage										
155,15141	Beverage	48	10	51	11	52	12	52	11	200
C. Tobacco										
160	Tobacco products	12	11	11	10	11	10	6	6	200
H. Paper and Paper Products										
210	Paper and paper products	67	19	66	17	66	17	57	14	100
L. Chemical Products										
241	Basic chemicals	63	21	65	30	65	30	32	9	100
242-3	Chemical products	71	45	44	29	44	29	34	19	200
M. Petroleum Products										
232	Refined petroleum products	6	6	6	6	6	6	3	3	200
N. Non-Metallic Mineral Products										
261	Glass products	11	6	12	6	12	6	9	4	200
262	Cements	19	10	18	10	22	10	15	9	200
O. Basic Metals										
271	Basic iron and steel	52	29	39	22	41	22	22	10	200
272	Non-ferrous metals	7	7	7	7	7	7	4	4	1000
P. Fabricated Metal Products										
281,289	Fabricated metal products	90	8	97	13	96	13	80	12	100
R. Electrical Machinery										
291-4	Domestic electric appliances	77	18	79	21	90	21	84	15	50
300	Office, accounting and computing machinery	44	24	41	24	43	24	32	14	1000
314-5,319	Batteries and lighting equipment	43	10	40	7	40	7	35	5	100
321,323	Electronic valves, TV and radio transmitters, and line telephony	24	8	17	7	17	7	14	4	100
324	TV and radio receivers, and sound or video recording apparatus	18	8	15	7	18	8	12	4	500
S. Transport Equipment										
341-2	Motor vehicles and bodies for motor vehicles	12	8	11	7	15	7	17	5	100
343	Parts and accessories for motor vehicles	26	5	24	5	36	10	34	9	100
351-3,359	Motorcycles	31	7	30	6	5	4	5	4	All
TOTAL		927	343	859	323	873	329	705	218	

Note: 1. Nominal basis.

2. Procedures of each step are as follows:

Step-1: Selection of establishments from Master List of Establishments and MISSI's sample list, based on ATE cut-off line that corresponds to at least 70% of sectoral value-added.

Step-2: Correction of classification and replacement/deletion of establishments, based on the information obtained from the Pretest Survey.

Step-3: Addition of establishments from member lists of major industrial associations.

Step-4: Verification referring to the results of ASE 1998 etc.

Table 8-5 Notes on Step 1-3 of Target Establishment Selection (1/2)

- Step-1: Selection of establishments from Master List of Establishments and MISSI's sample list, based on ATE cut-off line that corresponds to at least 70% of sectoral value-added.
- Step-2: Correction of classification and replacement/deletion of establishments, based on the information obtained from the Pretest Survey.
- Step-3: Addition of establishments from member lists of major industrial associations.
- Step-4: Verification referring to the results of ASE 1998 etc.

Sector (PSIC 3-Digit)	Sector Title	Notes	
151 158	Processing of meat, fish, fruit and oils	Step - 3 <i>Note</i>	Confirmed that establishments of leading companies (San Miguel, RFM, Purefoods, Delmonte, Century) are included. <i>Questionnaire of pretest survey did not include commodities of PSIC 158.</i>
152	Dairy products	Step - 3	Confirmed that establishments of leading companies are included.
154	Animal feeds / Grain milling		
155	Beverages	Step - 2 Step - 3	"Fruit juice" is listed on PSIC 155 questionnaire though PSIC classification is 151. Rectified errors found in pretest survey. Confirmed that establishments of leading companies (San Miguel, Asian Brewery, LTDI, Cosmos, Delmonte, Coca Cola, Pepsi) are included.
157	Sugar	Step - 3 <i>Note</i>	Confirmed that all the mills covered by SRA survey are included with the exception of three small ones. <i>Sales and inventory data are not available from SRA.</i>
160	Tobacco	Step - 3	Checked against NTA directory (8 manufacturers).
210	Pulp, paper and paperboard	Step - 3	Checked against TAPPI directory (38 mills).
232	Refined petroleum	<i>Note</i>	<i>DE has monthly production, sales and inventory data from three refineries.</i>
241	Basic chemicals	Step - 3	Confirmed that seven polymer plants (PE, PP, PVC, PS) are included.
242-3	Chemical products		
261	Glass and glass products		
262	Cements	Step - 3	Checked against PCMC directory (18 manufacturers), and added four establishments with ATE above cut-off line.
271	Iron and steel	Step - 3	Checked against AISIF directory 2001 (140 manufacturers), and added three establishments with ATE above cut-off line.

Table 8-5 Notes on Step 1-3 of Target Establishment Selection (2/2)

Sector (PSIC 3-Digit)	Sector Title	Notes	
272	Non-ferrous metal		
281 289	Structural metal products		
291-4	Domestic electric appliances	Step - 1 Step - 3 Step - 3	Selection was done only from 291 and 293. Checked against AHAM directory (18 manufacturers) and CHEF directory (10 manufacturers), and added eight establishments with ATE above cut-off line. Added two establishments of "car air-conditioner" from MVPMAP directory.
300	Office & Computing machinery	Step - 1,2 Step - 3	Selection (Step -1 and 2) was done from both PSIC 300 and 322 with cut-off line of ATE 1000 because "disk drives" are products of establishments of PSIC 322. Checked against SEIPI directory 2001 for "disk drives" manufacturers and added two establishments with ATE above cut-off line.
314-5 319	Cell, Lighting equipment, etc.		
321 323	Electric valves, TV transmitters		
324	TV & Radio receivers, etc.	Step - 3 Step - 3	Checked against CEPMA directory (17 manufacturers), and added three establishments with ATE above cut-off line. Confirmed that CLARION, which is the leading "car-stereo" manufacturer, is included.
341-2	Motor vehicles	Step - 2 Step - 3	Transferred KAWASAKI to 359. Checked against CAMPI and TMA directories and added four assemblers with ATE above cut-off line.
343	Parts for automobiles	Step - 3 Step - 3	Checked against all manufacturers from MVPMAP directory which produce target commodities and added one with ATE above cut-off line. Added all the assemblers listed CAMPI and TMA directories.
351-3 359	Motorcycles (& Bicycles)	Step - 3	Deleted "Bicycle" from the questionnaire. Maintained only five motorcycle manufacturers confirmed by MDPPA.

Table 8-6 MSP Target Establishments (Results of QSME)

(Unit: Establishments)

Major Sector / Sector		Pre-qualified Establishments					Re-classification	Final Number
		Total	Status a	b	c	n.a.		
A. Food Manufacturing								
151	Processed meat, fish, fruits and vegetables	89	66	15	1	7	0	66
158,15152	Coconut and vegetable oil (crude and refined)	17	13	4	0	0	4	17
152	Dairy products	9	7	1	0	1	1	8
154	Animal feeds and grain milling	29	26	3	0	0	3	29
157	Milled and refined sugar	14	14	0	0	0	0	14
B. Beverage								
155,15141	Beverage	52	43	6	1	2	1	44
C. Tobacco								
160	Tobacco products	6	6	0	0	0	0	6
H. Paper and Paper Products								
210	Paper and paper products	57	35	12	2	8	0	35
L. Chemical Products								
241	Basic chemicals	32	17	12	0	3	0	17
242-3	Chemical products	34	26	3	3	2	0	26
M. Petroleum Products								
232	Refined petroleum products	3	3	0	0	0	0	3
N. Non-Metallic Mineral Products								
261	Glass products	9	6	3	0	0	0	6
262	Cements	15	13	0	0	2	0	13
O. Basic Metals								
271	Basic iron and steel	22	9	8	0	5	2	11
272	Non-ferrous metals	4	2	2	0	0	0	2
P. Fabricated Metal Products								
281,289	Fabricated metal products	80	32	33	6	9	1	33
R. Electrical Machinery								
291-4	Domestic electric appliances	84	29	39	4	12	0	29
300	Office, accounting and computing machinery	32	10	20	0	2	2	12
314-5,319	Batteries and lighting equipment	35	8	18	0	9	1	9
321,323	Electronic valves, TV and radio transmitters, and line telephony	14	3	11	0	0	1	4
324	TV and radio receivers, and sound or video recording apparatus	12	6	4	0	2	4	10
S. Transport Equipment								
341-2	Motor vehicles and bodies for motor vehicles	17	16	0	1	0	0	16
343	Parts and accessories for motor vehicles	34	15	16	1	2	2	17
351-3,359	Motorcycles	5	5	0	0	0	0	5
TOTAL		705	410	210	19	66	22	432

- Note :
1. Nominal basis
 2. "Statuses" mean as follows:
 - a: The establishment is producing the commodities listed in the questionnaire.
 - b: The establishment is not producing the commodities listed in the questionnaire but is producing other commodities.
 - c: The establishment is not engaged in manufacturing but is engaged in recycling, repairing, selling or other activities.
 - n.a.: The establishment is permanently closed, or cannot be located etc.
 3. "Re-classification" means re-classifying the "Status b" establishments into proper sectors.
 4. "Final Number" = "Status a" + "Re-classification"

Table 8-7 Number of MSP Target Establishments
by Region, Province and Municipality

Reg.	Prov.	Mun.	Description of Region/Province/Municipality	Number of Establishments
Total			PHILIPPINES	432
01			Ilocos Region	10
01	28		Ilocos Norte	2
01	28	20	San Nicolas	1
01	28	21	Sarrat	1
01	29		Ilocos Sur	1
01	29	22	Santa	1
01	33		La Union	5
01	33	03	Bacnotan	1
01	33	13	Rosario	3
01	33	14	San Fernando (Capital)	1
01	55		Pangasinan	2
01	55	17	Calasiao	1
01	55	46	Urdaneta	1
02			Cagayan Valley	2
02	31		Isabela	2
02	31	08	Cauayan	1
02	31	14	Iligan (Capital)	1
03			Central Luzon	32
03	08		Bataan	2
03	08	07	Mariveles	1
03	08	12	Samal	1
03	14		Bulacan	15
03	14	04	Bocaue	1
03	14	07	Calumpit	1
03	14	08	Guiguinto	1
03	14	10	Malolos (Capital)	1
03	14	11	Marilao	3
03	14	12	Meycauayan	1
03	14	13	Norzagaray	1
03	14	14	Obando	1
03	14	18	Pulilan	3
03	14	20	San Jose Del Monte	1
03	14	23	Santa Maria	1
03	54		Pampanga	11
03	54	01	Angeles City	2
03	54	02	Apalit	1
03	54	09	Mabalacat	1
03	54	11	Magalang	1
03	54	16	San Fernando (Capital)	6
03	69		Tarlac	1
03	69	16	Tarlac (Capital)	1
03	71		Zambales	3
03	71	07	Olongapo City	3
04			Southern Tagalog	103
04	10		Batangas	8
04	10	03	Balayan	1
04	10	06	Bauan	1
04	10	14	Lipa City	3
04	10	16	Mabini	1
04	10	19	Nasugbu	1
04	10	32	Taysan	1
04	21		Cavite	29
04	21	04	Carmona	2
04	21	06	Dasmarinas	6

Reg.	Prov.	Mun.	Description of Region/Province/Municipality	Number of Establishments
04	21	08	General Trias	3
04	21	09	Imus (Capital)	1
04	21	15	Naic	1
04	21	17	Rosario	12
04	21	18	Silang	1
04	21	20	Tanza	1
04	21	22	Trece Martires City	2
04	34		Laguna	52
04	34	03	Binan	9
04	34	04	Cabuyao	15
04	34	05	Calamba	11
04	34	25	San Pedro	2
04	34	28	Santa Rosa	15
04	53		Palawan	1
04	53	16	Puerto Princesa City	1
04	56		Quezon	1
04	56	24	Lucena City (Capital)	1
04	58		Rizal	12
04	58	02	Antipolo	2
04	58	05	Cainta	6
04	58	10	Pililla	1
04	58	13	Taytay	2
04	58	14	Teresa	1
05			Bicol Region	5
05	05		Albay	2
05	05	08	Ligao	1
05	05	17	Tabaco	1
05	16		Camarines Norte	1
05	16	05	Jose Panganiban	1
05	17		Camarines Sur	2
05	17	24	Naga City	2
06			Western Visayas	17
06	19		Capiz	2
06	19	10	Panitan	1
06	19	14	Roxas City (Capital)	1
06	30		Iloilo	6
06	30	22	Iloilo City (Capital)	1
06	30	36	Pavia	2
06	30	39	San Enrique	1
06	30	41	San Miguel	1
06	30	47	Zarraga	1
06	45		Negros Occidental	9
06	45	01	Bacolod City (Capital)	2
06	45	03	Binalbagan	1
06	45	09	Escalante	1
06	45	16	La Carlota City	1
06	45	23	Sagay	1
06	45	26	Silay City	1
06	45	28	Talisay	1
06	45	31	Victorias	1
07			Central Visayas	24
07	12		Bohol	1
07	12	42	Tagbilaran City (Capital)	1
07	22		Cebu	22
07	22	17	Cebu City (Capital)	3
07	22	18	Compostela	1
07	22	19	Consolacion	1
07	22	23	Danao City	2
07	22	26	Lapu-Lapu City (Opon)	1

Reg.	Prov.	Mun.	Description of Region/Province/Municipality	Number of Establishments
07	22	30	Mandaue City	12
07	22	32	Minglanilla	1
07	22	51	Toledo City	1
07	46		Negros Oriental	1
07	46	15	Manjuyod	1
08			Eastern Visayas	3
08	37		Leyte	3
08	37	22	Isabel	1
08	37	47	Tacloban City (Capital)	1
08	37	48	Tanauan	1
09			Western Mindanao	3
09	73		Zamboanga Del Sur	3
09	73	32	Zamboanga City	3
10			Northern Mindanao	14
10	13		Bukidnon	1
10	13	17	Quezon	1
10	35		Lanao Del Norte	1
10	35	04	Iligan City (Capital)	1
10	42		Misamis Occidental	1
10	42	10	Ozamis City	1
10	43		Misamis Oriental	11
10	43	05	Cagayan De Oro City	6
10	43	08	Gingoog City	1
10	43	11	Jasaan	1
10	43	16	Lugait	1
10	43	24	Tagoloan	2
11			Southern Mindanao	14
11	23		Davao	1
11	23	03	Carmen	1
11	24		Davao Del Sur	12
11	24	02	Davao City	11
11	24	04	Hagonoy	1
11	25		Davao Oriental	1
11	25	09	Mati (Capital)	1
12			Central Mindanao	6
12	63		South Cotabato	6
12	63	03	General Santos City	5
12	63	13	Surallah	1
13			National Capital Region	193
13	01		Manila	11
13	01	00	Manila	11
13	02		NCR Dist II	30
13	02	04	Quezon City	30
13	03		NCR Dist III	51
13	03	01	City of Mandaluyong	18
13	03	02	Marikina	2
13	03	03	City of Pasig	30
13	03	05	San Juan	1
13	04		NCR Dist IV	36
13	04	01	Kalookan City	9
13	04	02	Malabon	10
13	04	03	Navotas	4
13	04	04	Valenzuela	13
13	05		NCR Dist V	31
13	05	02	City of Makati	26
13	05	07	Taguig	5
13	06		NCR Dist VI	34
13	06	01	Las Pinas	3
13	06	03	City of Muntinlupa	11

Reg.	Prov.	Mun.	Description of Region/Province/Municipality	Number of Establishments
13	06	04	Paranaque	16
13	06	05	Pasay City	4
14			Cordillera Administrative Region	1
14	11		Benguet	1
14	11	02	Baguio City	1
15			Autonomous Region of Muslim Mindanao	1
15	38		Maguindanao	1
15	38	12	Sultan Kudarat (Nuling)	1
16			Caraga	4
16	02		Agusan Del Norte	1
16	02	02	Butuan City (Capital)	1
16	03		Agusan Del Sur	1
16	03	08	San Francisco	1
16	67		Surigao Del Norte	1
16	67	24	Surigao City (Capital)	1
16	68		Surigao Del Sur	1
16	68	03	Bislig	1

8.6 Questionnaires

8.6.1 Questionnaire Sections

The pretest survey questionnaires consisted of three sections: Finished Products, Raw Materials, and Production Capacity. The response rates for the three sections were 95%, 47%, and 69%, with the rate for the Raw Materials section being the lowest. Also enumerators found out that most of establishments did not have an accurate grasp of the monthly inventory levels of raw materials. The MSP is a new type of survey in the Philippines in that its prime objective is to survey the production, sales, and inventory volumes of each of the target finished products. In comparison with establishment surveys, the costs involved in the field works and data process up to the dissemination of statistics and indices of the MSP are rather high. Taking the above circumstances into consideration, it was decided to leave the Raw Materials section out of the MSP.

Production Capacity section is maintained only to the sectors where production capacity is easily defined so that the questions will not pose additional burden on the respondents. The ATE section was added for the purpose of monitoring the qualifications of the establishments on an ongoing basis.

8.6.2 Definitions of Survey Items

This section discusses definitions of the survey items and the filling instructions for the establishments, which are included in the enumerator's manual.

(A) Inventory volume at the beginning of reference month

The volume reported in "Inventory volume at the end of reference month" for the previous month's questionnaire is entered.

(B) Production volume

The volume of production at the establishment during the reference month is filled in, using the specified measurement unit. The volume of work-in process and the volume of products repaired or fixed are not included.

The establishment that has actually manufactured must report the production volume. It is called the principle of origin of commodities. Labor subcontractors

should report their products as long as they ship the target commodities whether they sold the products to the client company, or they were paid only the costs of labor. Conversely, products purchased or received from subcontractors cannot be included.

(C) Purchased, imported, or received volume

Volume of products purchased (including those imported), or received from other establishments (whether or not in the same enterprise) or from subcontractors, during the reference month is filled in, using the specified measurement unit.

(D) Internal consumption volume

Volume of products used in the succeeding manufacturing process as materials or components within the same establishment, and converted to another product, during the reference month is filled in, using the specified measurement unit. One example is the clinkers consumed for cement production in the same establishment.

(E) Domestic sales volume

Volume of products sold to the domestic market, either directly or through an intermediary, is filled in, using the specified measurement unit.

(F) Export volume

Volume of products exported, either directly or through an intermediary, is filled in, using the specified measurement unit.

(G) Transfer volume

Volume of products that were transferred rather than sold is filled in, using the specified measurement unit. Examples include products transferred to another establishment in the same enterprise, and those delivered to a client company in case of labor subcontractors. Production machinery used for internal production lines is another example.

(H) Inventory volume at the end of reference month

The volume of inventory as of the end of the reference month is entered, using the specified measurement unit. Work-in-process should not be included.

Note) The formula $(H) = (A) + (B) + (C) - (D) - (E) - (F) - (G)$ must be true for the entered figures.

(I) Production value

The production value as determined at the producer's price (production volume x producer's price) is filled in. Producer's price (Ex-factory price) includes indirect taxes and packing expenses, but does not include transportation expenses and insurance. If all of the products were transferred, they should be valued at the producer's price as though sold. It must be noted that the definition of the production value in the MSP differs from that used in other NSO surveys.

(J) Number of employees

The total number of employees as of the end of the reference month is filled in.

(K) Plant production capacity

The monthly production capacity of the establishment for the specified product is filled in, using the specified measurement unit.

The "production capacity" refers to the "maximum volume of production possible using the normal staff and existing equipment". The normal downtime required for maintenance is taken into consideration, but equipment that has been unused for a long period of time for overhauling is not considered as a part of existing equipment.

Questionnaires of some sectors stipulate the operation time that serves as the standard for calculating the production capacity.

8.6.3 Questionnaire Type

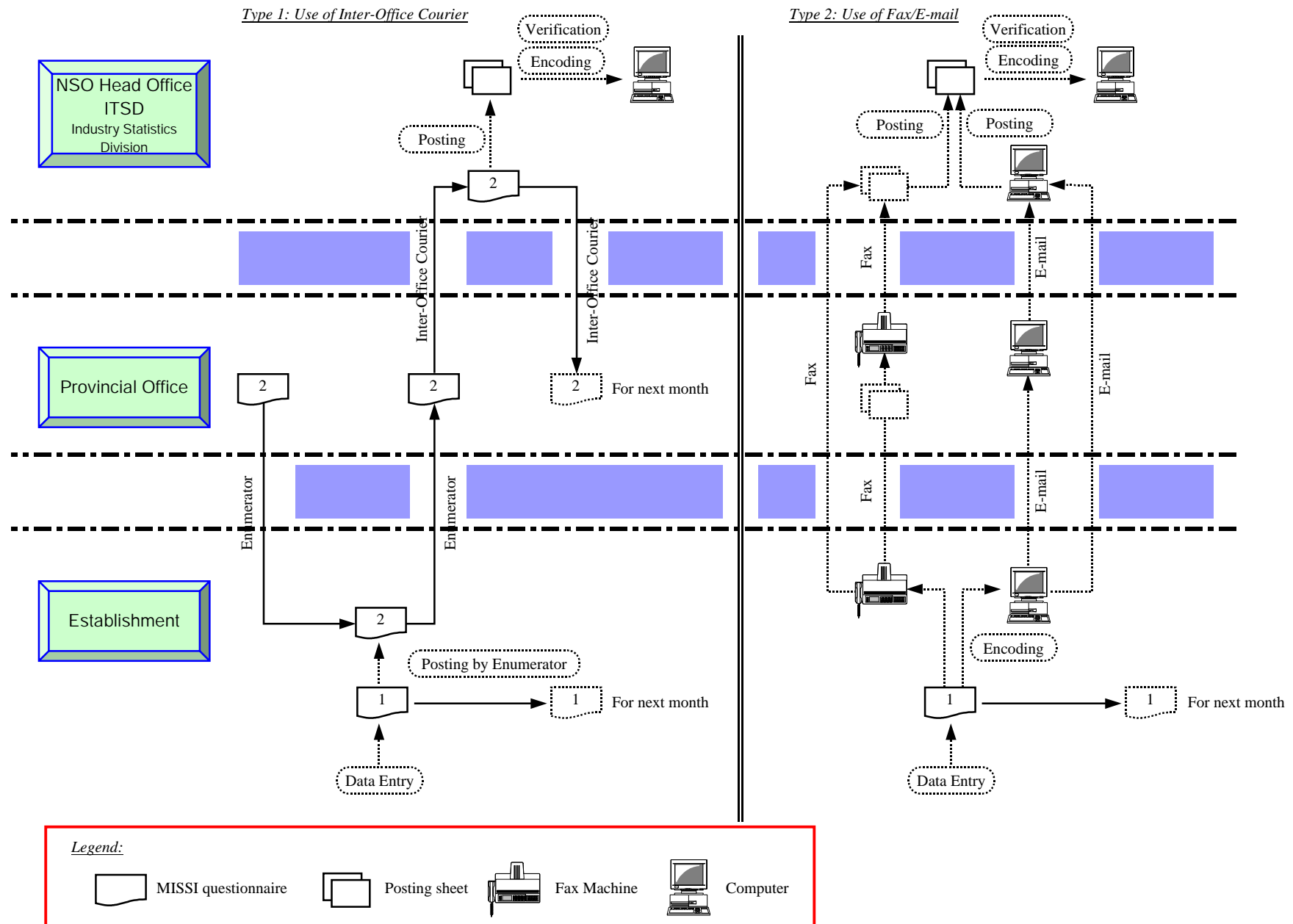
A "shuttle-type questionnaire" of single sheet type for twelve months' entries is used in the current MISSI. Two questionnaires are prepared for each establishment, with one being kept by the establishment throughout the year. The enumerator visits the establishment once a month with the other questionnaire, and copies data from the

questionnaire kept by the establishment. Following that, the filled-out questionnaires are sent from the local offices to the head office. At the head office, the data is copied to four types of posting sheets, and the questionnaires are immediately sent back to the local offices. The data examination is done with the posting sheets. After the examination has been completed, the posting sheets are used for data encoding.

There are some cases in which data is sent from the establishment to the local office or the head office by means of facsimile or electronic mail. Even in this case, the posting sheets are used for data examination.

Figure 8-19 shows the flow followed by the MISSI questionnaires described above. Advantages and drawbacks of the MISSI questionnaires and its operation flow are as follows.

Figure 8-19 Questionnaire Collection Flow of MISSI



<Advantages>

- Columns are provided for twelve months of entries on one sheet. The respondent can check the entries for the previous month at a glance.
- Large, thick paper is used for the questionnaires, assuring that they will not easily be lost.

<Drawbacks>

- The reported figures on the questionnaires are copied manually by the enumerator, and sent to the head office. No matter how carefully the transcription may be done, the possibility of the unforced errors cannot be denied. Any error, if it may happen, damages the accuracy of the results.
- The original data (= original questionnaire) for each month are not kept in the NSO head office. At the end of the year, the NSO collects the filled-in original questionnaires from the establishments, and then the respondents can no longer keep the original.

The MSP deals with far more survey items than the MISSI, making it problematic to arrange space of twelve months' entry columns on a single-sheet questionnaire. Also, it is preferable that entry data not be copied manually by enumerators or posted by the head office staff, in order to prevent unforced errors. The originals of the questionnaires must be kept not only at the establishment, but also at the head office and at the local offices, on an ongoing basis. The purpose of this is to facilitate prompt transactions on inquiries and confirmations likely to be made among the head office, local offices, and establishments concerning the entry data.

The MSP uses a questionnaire of a single sheet type for each month. In order to prevent possible errors in data transcription and posting, three originals are prepared for each month. Three originals are distributed to the establishment. The establishment uses carbon paper to fill out all of the three, and then keeps one, while the enumerator takes the other two. The enumerator sends one of those two originals to the head office, and the remaining original is kept at the local office.

Annex-4 contains one set of MSP Questionnaires for the 24 target sectors.

8.7 Manual

Annex-5 contains Enumerator's Manual, and Annex-6 Editing Manual. Filling instructions of questionnaire to be distributed to the establishments together with the questionnaire are included in Annex-5.

Chapter 9 New MISSI and Development of Industrial Indices

Chapter 9 New MISSI and Development of Industrial Indices

9.1 New MISSI

The final design package of the MSP is compiled in Chapter 8. As discussed in the chapter, there are sectors that occupy the important positions in the manufacturing industry in the Philippines but are not covered by the MSP for the reason of inadequacy to the commodity-based and volume-based survey. The future monthly survey for the manufacturing industry, therefore, will be a combination of the MSP and a part of the current MISSI that maintains the indirect method. In this report, the future monthly survey for the manufacturing industry is tentatively called “New MISSI”.

Figure 9-1 shows the concept of the new MISSI. Out of 20 “major sectors” covered by the current MISSI, 11 major sectors will be converted to the MSP. “Apparel & Footwear” continues to be covered by the indirect method. And it is proposed to drop the remaining 8 major sectors from the monthly survey because: 1) their value-added contributions are low; and 2) they may be a hindrance in meeting one of the key requisites of the survey, timeliness.

Major sectors comprise “sectors” or “sub-sectors”. Figure 9-2 compares the sub-sectors under the major sectors of the current MISSI with the sectors under the major sectors of the new MISSI. On the left side of this figure (underneath the title of “Current MISSI”), the current MISSI’s 20 major sectors and the sub-sectors that compose each major sector are listed. On the right side (under the title of “MSP”), there are sectors covered by the MSP and the corresponding relationship with the sub-sectors of the current MISSI. The MSP covers 24 sectors based on the PSIC 3-digit industrial classification.

Furthermore, under the title of “New MISSI (Starting in 2003)” on the right hand side, the scheme and index system of the new MISSI are shown. The sector level indices are integrated into each major sector to which they pertain, and become 11 series of the major sector level index. At this major sector level, the major sector level index of “Apparel & Footwear” is computed by the indirect method. In addition to the above-mentioned 24 sectors, “Plastic products” and “Microcircuits” covered by the indirect method due to the characteristics of the products are integrated into the MSP major sector indices.

This chapter offers detailed proposals regarding the development of “Industrial Indices” produced from data obtained by the MSP and new indices by the new MISSI. This chapter will also make reference to the relationship of the new MISSI indices and the current MISSI indices, as well as to the aggregation of both indices.

Although not specified in Figure 9-2, the index series of the major sector level are furthermore integrated into one as the index corresponding to the total manufacturing industry. Needless to say, this index represents the overall trend of the Philippine manufacturing industry. In the sense that it derives from a combination of the MSP indices by direct method and the current MISSI index by indirect method, it is totally different from that in the past. The development of industrial indices for the new MISSI scheme is completed when the computation of the index for the total manufacturing industry has been achieved.

Figure 9-1 Concept of New MISSI
Target Major Sectors

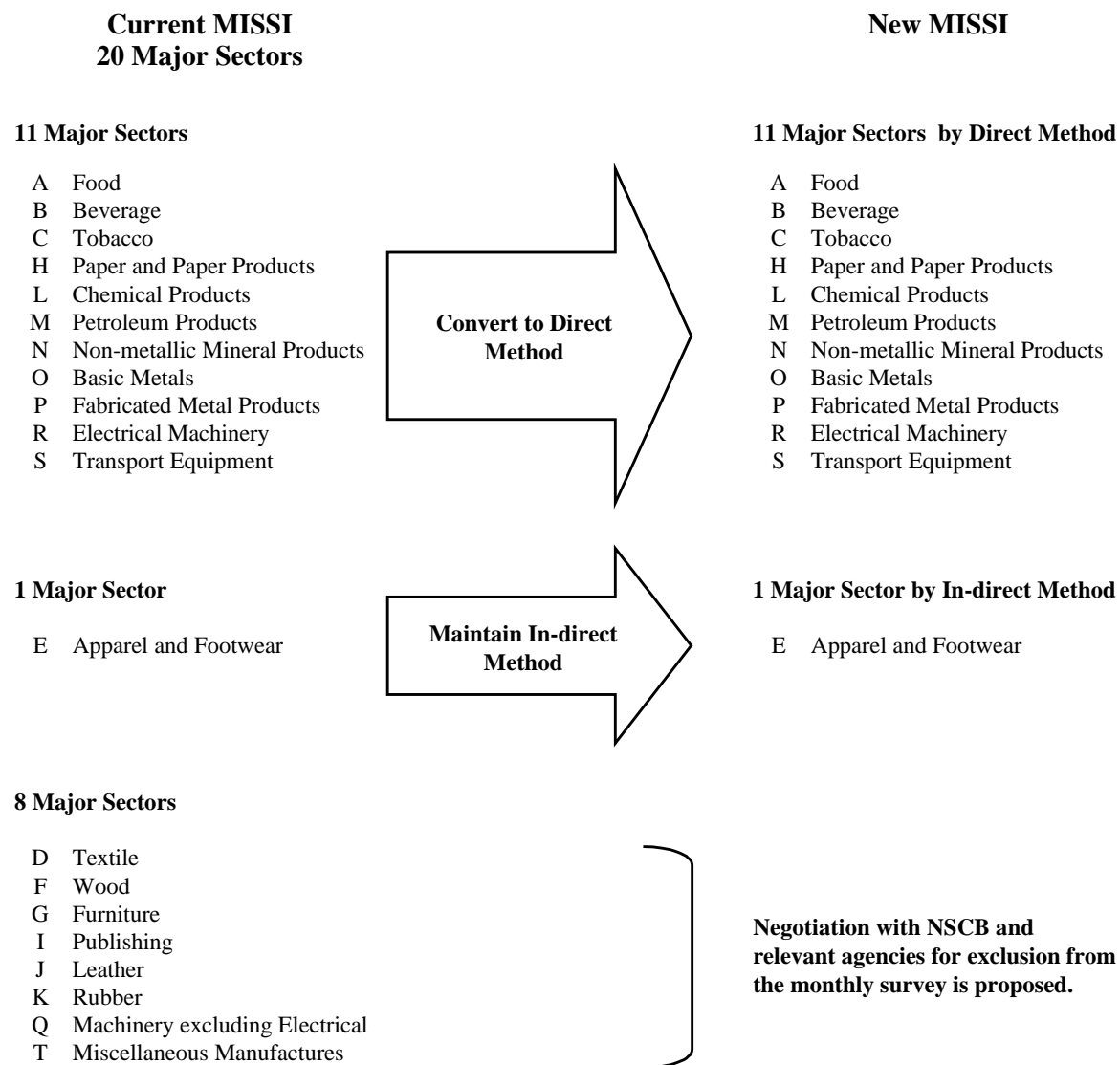
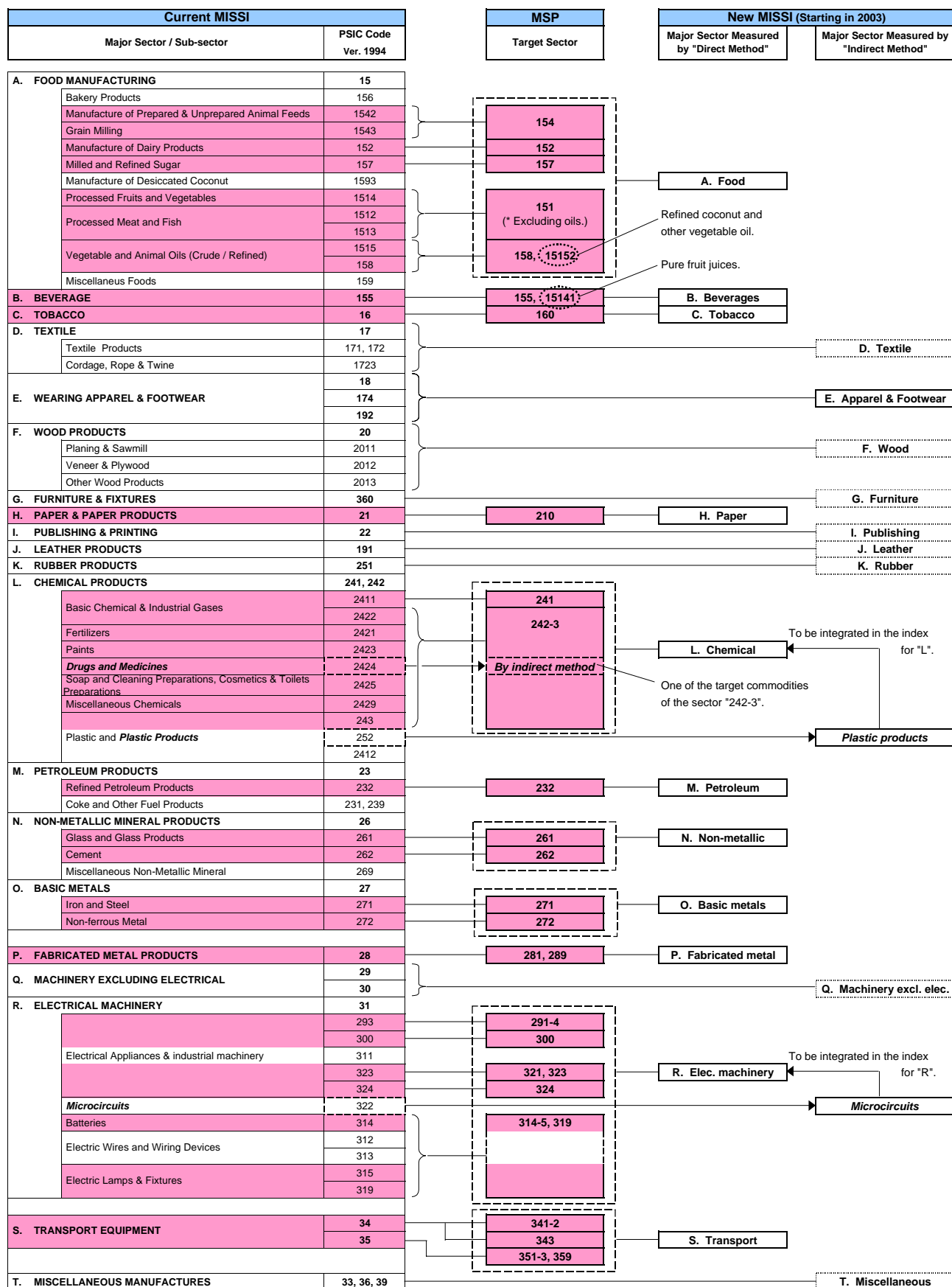


Figure 9-2 Scheme of New MISSI



A.-T.: MISSI's 20 Major Sectors

24 Target Sectors

11 Major Sectors

< NOTE >

Sectors proposed to negotiate with NSCB for deletion from the improved MISSI.

9.2 Basic Guidelines for Development of MSP Industrial Indices

9.2.1 What Are Industrial Indices?

Industrial indices are economic statistical indicators composed of multiple indices that express the general trend of production activities in the manufacturing industry of a country (or region). Although there are many types of economic indicators, the industrial indices are originally flash indicators that show the short-term changes in production, sales and inventory of the manufacturing industry in terms of volume. They are absolutely necessary in order to be able to grasp the business trends in real time. The industrial indices are provided in most countries in the world, as the indices are the basic statistics used in various processed statistics such as national income statistics.

“Index”, needless to say, expresses the relative differences in ratios between statistic numerical figures of the same type. For example, indicators that show in what percentage the income level of a household is higher (or lower) in comparison to another household or indicators that express the percentage increase (or decrease) in the automobile production volume in a country are called indices.

Though indices can be used to compare different regions and different periods of time, it is generally used for time-series comparison by calculating the ratio of the base period versus another period, whereas the base time figure is usually referred to as 100.

The industrial indices are also made with the purpose of grasping the time-series changes in production activities in the manufacturing industry.

Besides the industrial indices, the MSP generates “absolute figures” as a main statistical item. The industrial indices are statistical indicators of a volume basis, as they are calculated from the absolute figures related to each target commodity. However, although an absolute figure expresses an absolute level of production activity of the manufacturing industry, an industrial index shows the change in time and the relative level of a certain period of time in comparison to the base period (=100).

9.2.2 Index Items

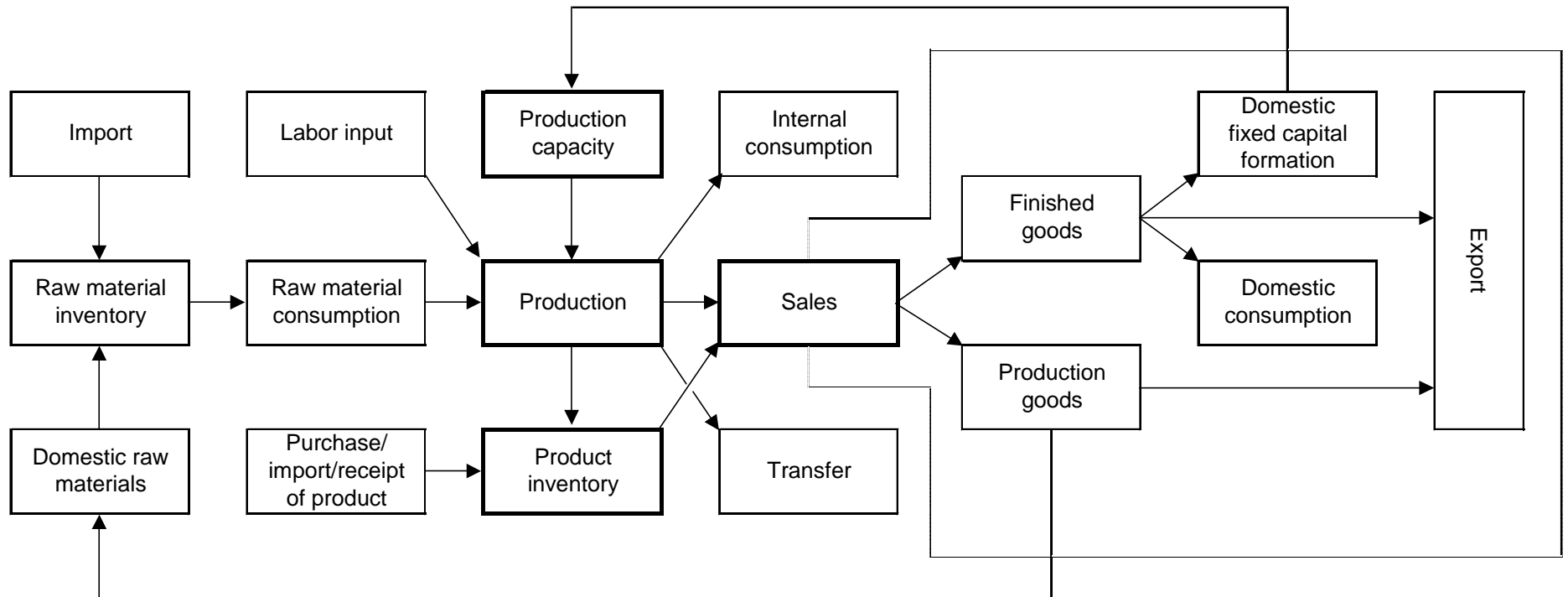
(1) Production activity process of the manufacturing industry

Manufacturing establishments produce a wide variety of industrial commodities by making use of various raw materials and operating manufacturing equipment, and sell the products to their clients by controlling the inventories.

Figure 9-3 shows the general process of production activity of the manufacturing industry, including production, sales and inventory. The manufactured commodities are sold to bodies that demand them while a part remains in the manufacturing establishment as inventory. The sold products are grossly classified in production goods and finished goods that will be provided to end-users. A part of the final goods will be consumed in households apart from the manufacturing process, while the rest will be assigned to the fixed capital formation including equipment investments and construction investments. There are cases that both of the production goods and finished goods are exported to satisfy demands in foreign countries.

The industrial indices provided by the MSP basically needs to be a statistics package composed of various indicators that express the trends of these kinds of production activity process in a versatile way. Therefore, the industrial indices must be made of various index items related to such main elements of production activity as “production”, “sales” and “inventory”.

Figure 9-3 Production Activity Process of Manufacturing Industry



(2) Major index items

In this section, the main items for the industrial indices that respond to the various aspects related to the production activity of the manufacturing industry, which are shown in Figure 9-3, are listed. All of them are volume indices that are calculated based on the direct method, where the index is calculated from an absolute figure of individual commodity. Thus, the VaPI and PPI used in MISSI's indirect method, where the real value index is obtained by deflating each commodity value by the price index, are not required.

<Basic indices>

The original purpose of the industrial indices is to provide a group of indicators that serve as a common measure to assess the economic situation to statistics users. In particular, in order to grasp the general comprehension about the condition of manufacturing industry in a country, the industrial indices have to cover the following three items related to the production activities.

- Production : Trends of the supply side
- Sales : Trends of the demand side
- Inventory : The gap between supply and demand

Therefore, the following 4 index items can be listed as basic ones for the industrial indices.

a) Production index

Purpose: Indicate the production trend of manufactured products.

Individual index formula: $\frac{q_{it}}{q_{i0}} \times 100$

q : Volume of production,

0: Base period, t : Current period,

i : Selected commodities ($i = 1, 2, 3, \dots, n$)

Interpretation: Increase of this index implies that the product supply has been activated.

b) Sales index

Purpose: Indicate the trend of demand for manufactured products.

Individual index formula: Same as the production index mentioned above.
(Calculated from the sales volume data.)

Interpretation: Increase in this index implies that the product demand has been growing.

c) Finished product inventory index

Purpose: Indicate the trend of product stock level that has not yet been sold (shipped) from establishments.

Individual index formula: Same as the production index mentioned above.
(Calculated from the volume data of finished product inventory.)

Interpretation: Increase in this index can imply either of the following two situations:

- When the index rises due to the fact that the sales have not increased as much as the production, it predicts a future business slowdown.
--- Unintentional inventory increase.
- When the index rises due to the fact that establishments are increasing their stock of products based on expectation of a growth in the demand, it predicts a future business improvement.
--- Intentional inventory accumulation.

d) Finished product inventory ratio index

Purpose: Express whether the supply-demand relationship is getting tense or not, by observing the ratio of the product inventory to the sales.

Individual index formula: $\frac{q_{it}^I / q_{it}^S}{q_{i0}^I / q_{i0}^S} \times 100 = \frac{r_{it}}{r_{i0}} \times 100$

q^I : Volume of inventory, q^S : Volume of sales,

r : Ratio of inventory to sales

Interpretation: Increase in this index implies that the supply-demand relationship in the market is easing down.

<Other industrial indices>

Indices other than the basic indices are related mainly to production capacity, raw materials or labor input. Providers of the industrial indices must select the necessary items from these additional indices taking into consideration the needs of statistics users as well as restrictions of manpower and budget, among others.

a) Production capacity index

Purpose: Indicate the production capacity level of manufacturing equipment of industrial products

Individual index formula: Same as the production index mentioned above. (Calculated from the volume data of production capacity.)

Interpretation: Increase in this index implies that the production capacity is being increased and reinforced.

b) Capacity utilization index

Purpose: Indicate how much of the production capacity of manufacturing equipment is being used for producing the industrial products.

Individual index formula:
$$\frac{q_{it}^P / q_{it}^C}{q_{i0}^P / q_{i0}^C} \times 100 = \frac{cu_{it}}{cu_{i0}} \times 100$$

q^P : Volume of production,

q^C : Volume of capacity,

cu : Capacity utilization ratio

Interpretation: Increase in this index implies that the production capacity of production equipment is being further used for a wider number of industrial products.

c) Labor input index

Purpose: Indicate the level of labor input to produce the industrial products

Individual index formula: Same as the production index mentioned above. (Calculated from the man-hour based labor input data.)

Interpretation: Increase in this index shows a growth of labor input for production.

d) Labor productivity index

Purpose: Indicate the efficiency of labor for production of the industrial products.

Individual index formula: $\frac{q_{it}^P / l_{it}}{q_{i0}^P / l_{i0}} \times 100 = \frac{lp_{it}}{lp_{i0}} \times 100$

q^P : Volume of production, l : Labor input,

lp : Labor productivity

Interpretation: Increase in this index indicates an improvement in the efficiency of labor for production.

e) Raw material inventory index

Purpose: Indicate the trend of raw material stock level that has not yet been invested to the production activities.

Individual index formula: Same as the production index mentioned above. (Calculated from the volume data of raw material inventory.)

Interpretation: Increase in this index can imply either of the following two situations:

- When the index grows due to the fact that the production of industrial products has not increased as much as the procurement of raw materials, it predicts an economic slowdown.
--- Unintentional stock increase.
- When the index grows due to the fact that establishments are increasing their stock for raw materials based on expectation of growth in the production of products, it predicts a future economic recovery.
--- Intentional stock accumulation.

f) Raw material consumption index

Purpose: Indicates the consumption trend of raw materials put into the production activity.

Individual index formula: Same as the production index mentioned above. (Calculated from the volume data of raw material consumption.)

Interpretation: Increase in this index implies that the establishments are investing more raw materials to increase the production.

g) Raw material inventory ratio index

Purpose: Express whether the raw material stock is impending or not, by watching the ratio of the consumed raw materials to the raw material inventory.

Individual index formula:
$$\frac{q_{it}^{RI} / q_{it}^{RC}}{q_{i0}^{RI} / q_{i0}^{RC}} \times 100 = \frac{rm_{it}}{rm_{i0}} \times 100$$

q^{RI} : Volume of raw material inventory,

q^{RC} : Volume of raw material consumption,

rm : Ratio of inventory to consumption of raw material

Interpretation: Increase in this index implies that the raw material stock is growing against the volume needed for production.

(3) Index items for the MSP

Index items that are actually selected for the MSP from the total 11 mentioned in above (2) should be judged in accordance with the followings.

a) Adoption of basic indices

To begin with, the basic four index items should be adopted. This is the indispensable premise for the MSP to be able to provide the statistics users with industrial indices with minimum required information.

b) Items to be adopted other than the basic indices

The items to be adopted for the MSP aside from the basic four indices depend on the type of absolute figures that the MSP encloses. The MSP defines the following data items as objects of the survey.

<Section I: Finished Products>

(Survey items in terms of volume)

- (A) Inventory at the end of the previous month
- (B) Production
- (C) Purchased/Imported/Received
- (D) Internal consumption
- (E) Domestic sales
- (F) Export
- (G) Transfers
- (H) Inventory at the end of the month

(Survey item in terms of value)

- (I) Production --- valued by producer's price

<Section II: Number of Employees>

- (J) Number of employees (=ATE) at the end of the month

<Section III: Monthly Production Capacity>

- (K) Monthly production capacity

* The monthly production capacity is surveyed exclusively in those sectors that are considered possible to measure.

According to the above-mentioned data items covered in the MSP, the items that the MSP will be able to provide are the followings:

- 1) Production index
- 2) Sales index
- 3) Finished product inventory index
- 4) Finished product inventory ratio index
- 5) Production capacity index
- 6) Capacity utilization index

9.2.3 Major Formulas for Volume Index and Adoption of the Laspeyres Formula

- (1) Major formulas for volume index: The Laspeyres formula and the Paasche formula

In order to understand the general situation of production activities in a country, observing the production change of individual commodities is not enough, since a wide and diverse variety of commodities are manufactured in the country. Therefore, instead of concentrating in individual commodities, the needs of making an index that expresses the general trend of production activities arises. This can be accomplished by choosing the major commodities manufactured in the country and aggregating in some way the individual indices that respond to each of those chosen.

When making this kind of general index, the following two points must be considered: a) how to aggregate the production volume of individual commodities measured in different units; and b) how to eliminate the influence of price change from the change in the nominal production value.

- a) How to aggregate the production volume of individual commodities measured in different units

The simplest method to aggregate the production volume in different measurement units is to convert the volume to the common monetary value (in Pesos, for example). In order to do so, the volume of each commodity should only be multiplied by the unit price of each commodity.

$$\text{Production value} = \text{Production volume} \times \text{Unit price} \quad \text{--- [1]}$$

If all the units are unified into Pesos, they can be simply added up. In this way, if the total value of all of the target commodities is calculated at each period of time including the base period, it is possible to calculate the general index in the sense of monetary value.

- b) How to eliminate the influence of price change from the change in the nominal production value

The method explained in a) above is still insufficient in order to grasp the general production trend based on the volume concept. The reason is that the unit price may change according to the calculation timing so that if the unit price at each period of time is used, an element other than the production volume (i.e., price

change) will affect the changes in the value that is calculated by the above-mentioned formula [1].

In general, this problem can be solved by applying the unit price at a certain period of time (for example, the base time). If the unit price is fixed, it becomes neutral to the changes in production value and there will be no problem even if the production volume is converted to the value according to formula [1]. In other words, using a fixed unit price enables to handle the volume in the forms of monetary value.

The calculation method for the general index described above can be expressed by the following formula.

$$Q_t^L = \frac{\sum_{i=1}^n p_{i0} q_{it}}{\sum_{i=1}^n p_{i0} q_{i0}} \times 100 \quad \text{--- [2]}$$

Q : Aggregated index, q : Volume, p : Price, 0: Base period,
 t : Current period, i : Selected commodities ($i = 1, 2, 3, \dots, n$)

The formula [2] uses the unit price at the base period (p_{i0}) when calculating the volume in monetary value and is called “Laspeyres” formula. This formula is used most commonly to calculate the general index in terms of volume.

Regarding the Laspeyres formula, it has been pointed out that an upward bias arises due to use of the unit price of the base period. Generally, prices of commodities that are growing in production volume decreases due to the scale economy, while those of commodities that are declining either increase or become rigid. When commodities of these two different types are calculated in monetary value, based on the fixed unit price of the base period for a long time, the growing commodities will be over-valuated while the deteriorating commodities will be sub-valuated. As a result, the general index that is obtained by integrating the indices of each commodity throws out an upward bias.

There is another formula called the “Paasche” formula which is as shown in the following [3], it uses the unit price at the current period (p_{it}) instead of the base period as the fixed price.

$$Q_t^P = \frac{\sum_{i=1}^n p_{it} q_{it}}{\sum_{i=1}^n p_{it} q_{i0}} \times 100 \quad \text{--- [3]}$$

The Paasche formula, like the Lapeyres formula, is not totally free from the bias since it uses a fixed price. Since the Paasche formula uses the price at the compared time instead of the base time to calculate the monetary value from the volume, it tends to throw out a downward bias in the other direction, like the Lapeyres formula.

A “chain index” can be used as a method to solve the bias problem both the Paasche and Lapeyres formula have. The chain index moves the base period every time so that the base period will be at just one period previous to the current period, thus preventing the unit price to be fixed for a long time and the bias to arise. However, calculation for the chain index is very time-consuming, and therefore inevitably makes it a big disadvantage for the industrial indices that require promptness and timeliness. (Chapter 11 describes the calculating method of chain index).

(2) Adoption of the Laspeyres formula for the MSP

What is the statistical difference between the index calculated by the Lapeyres method and the Paasche method? That becomes clear when calculating the ratio of a random compared time t with the previous period $t-1$.

In the case of the Lapeyres formula, this ratio is:

$$Q_t^L / Q_{t-1}^L = \frac{\sum_{i=1}^n p_{i0} q_{it}}{\sum_{i=1}^n p_{i0} q_{i0}} / \frac{\sum_{i=1}^n p_{i0} q_{it-1}}{\sum_{i=1}^n p_{i0} q_{i0}} = \frac{\sum_{i=1}^n p_{i0} q_{it}}{\sum_{i=1}^n p_{i0} q_{it-1}}$$

where the volume for t and $t-1$ are both calculated into monetary value by the fixed unit price of the base period and thus the meaning of index is very definitive and easy to understand.

In comparison to this, the ratio in the Paasche formula is:

$$Q_t^P / Q_{t-1}^P = \frac{\sum_{i=1}^n p_{it} q_{it}}{\sum_{i=1}^n p_{it} q_{i0}} / \frac{\sum_{i=1}^n p_{it-1} q_{it-1}}{\sum_{i=1}^n p_{it-1} q_{i0}}$$

and it cannot be abbreviated any further. Since the Paasche formula converts the volume for each period into monetary value using different unit prices, it cannot help the price change from affecting the variations in the index number.

Taking into account the characteristics of the Lapeyres and Paasche formulas mentioned above, it is more appropriate to use the Lapeyres formula from the viewpoint of precision and comprehension of the index. Besides, the Laspeyres formula has the following advantages: 1) it has no need to revise the “weight” that will be mentioned later; and 2) it is friendly to computer-systematization due to its structural simplicity. As a matter of fact, many countries, including Japan, have adopted the Lapeyres formula in the calculations of their industrial indices.

Due to this, the Study Team recommends that the Lapeyres formula be used in the MSP industrial indices.

9.2.4 Index Aggregation

(1) Individual index and aggregated index

The industrial indices can be divided broadly into two types from the viewpoint of industrial classification: individual index and aggregated index.

The individual index indicates the trend of each target commodity and it responds to the most detailed level of industrial classification. On the other hand, aggregated index indicates the trend at a level of wider sense such as “sub-sector” or “major sector”. Needless to say, the aggregated index corresponding to the highest level of industrial classification is the index at the “total manufacturing industry” (Figure 9-4).

Figure 9-4 Index Aggregation

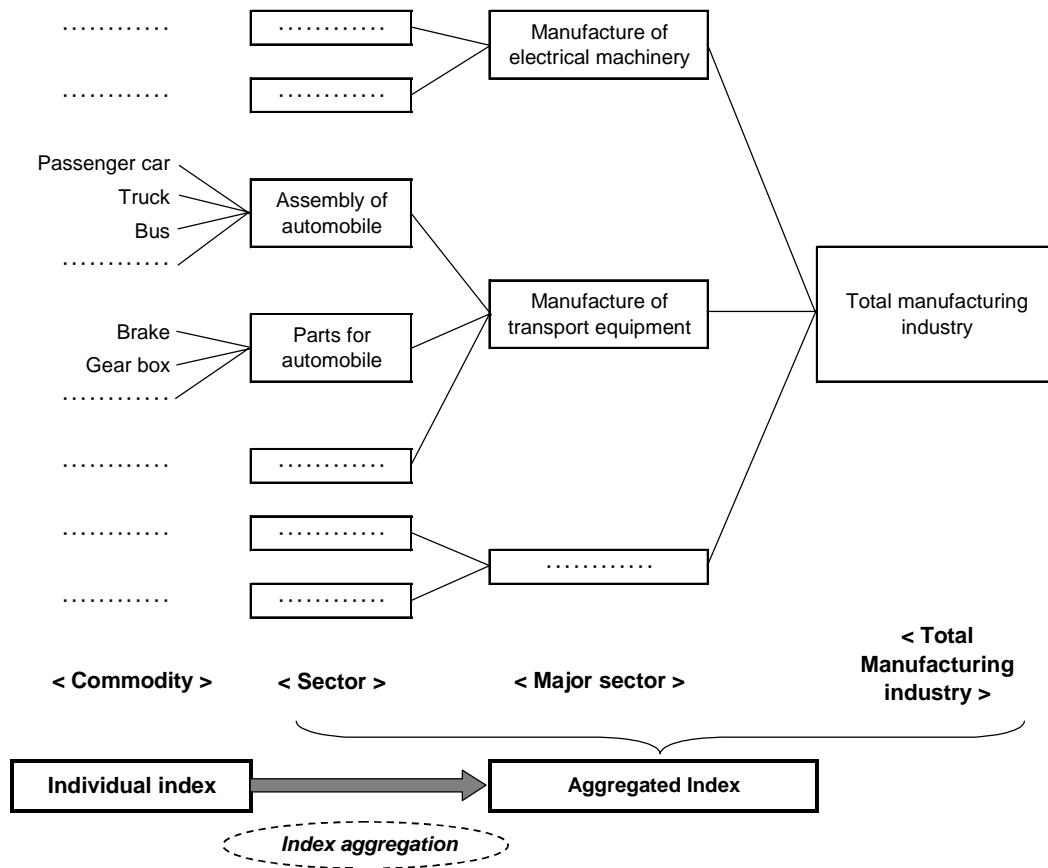
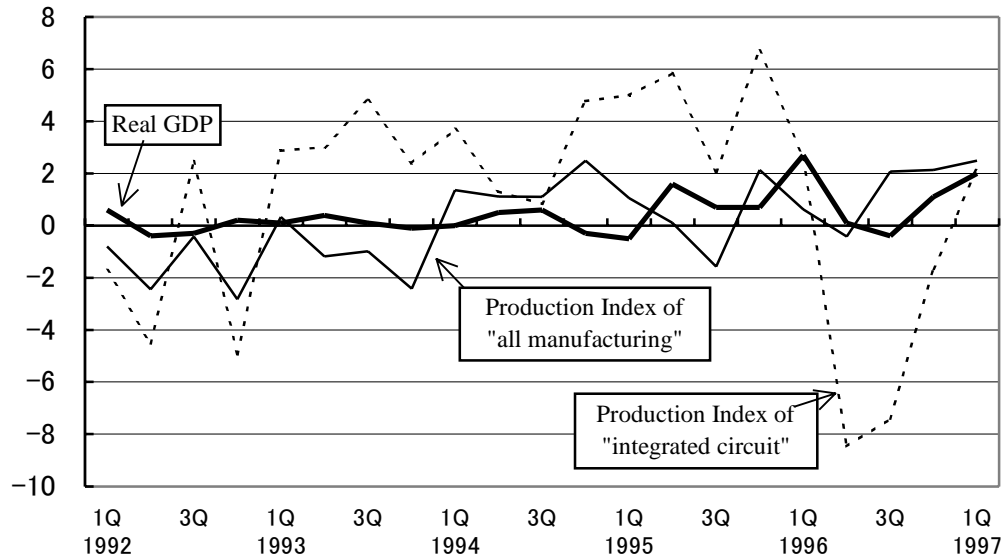


Figure 9-5 shows the past changes in the production index and the real GDP of Japan. The production index of “integrated circuits”, in comparison to the changes in real GDP” is fluctuating widely. On the other hand, the production index of the “all manufacturing” is following a more or less similar route as the real GDP with a lesser range of fluctuation. This means that the aggregated index is essentially required in order to have an overall assessment of the business condition in a country.

Figure 9-5 Real GDP and Production Index of Japan

(Growth rate to the previous quarter, %, seasonally adjusted)



Sources: Ministry of International Trade and Industry of Japan, Yearbook of Indices of Industrial Production 1997: 1990 Base Year.

Economic Planning Agency of Japan, Annual Report on National Accounts 1998: 1990 Base Year.

(2) Calculation of aggregated index by using individual index and weight

The Lapeyres formula mentioned above as [2] can be transformed as follows:

$$Q_t^L = \frac{\sum_{i=1}^n p_{i0} q_{it}}{\sum_{i=1}^n p_{i0} q_{i0}} \times 100 = \frac{\sum_{i=1}^n p_{i0} q_{i0} \times \left(\frac{q_{it}}{q_{i0}} \times 100 \right)}{\sum_{i=1}^n p_{i0} q_{i0}} = \sum_{i=1}^n \frac{p_{i0} q_{i0}}{\sum_{i=1}^n p_{i0} q_{i0}} \times \left(\frac{q_{it}}{q_{i0}} \times 100 \right)$$

(i)
(ii)
(iii)

(iv)

Q : Aggregated index, q : Volume, p : Price,
 0 : Base period, t : Current period,
 i : Selected commodities ($i = 1, 2, 3, \dots, n$)

Of the two parts surrounded by a dotted line, (i) is the original form of the Lapeyres formula where the fixed unit price is multiplied with the volume of each commodity and the total amount is derived by adding up the value of all commodities.

Whereas (ii) first calculates the “individual index” based on the volume of each commodity and then uses the “weight” of each commodity to add up the individual indices.

The “individual index” mentioned in regard to (ii) is the part that is pointed out as (iii) and it is the index obtained by calculating the ratio of the volume at the current period versus the volume at the base period for each individual item. On the other hand, the “weight” is pointed out as (iv) and it expresses the share per item (relative size versus total value) based on the amount valued by the unit price of individual commodity at the base period.

The weight is expressed as $\frac{P_{i0}Q_{i0}}{\sum_{i=1}^n P_{i0}Q_{i0}}$, but if it is rewritten to $\frac{w_{i0}}{\sum_{i=1}^n w_{i0}}$ supposing

“ $w_{i0} = p_{i0} \times q_{i0}$ ”, it will probably be more understandable. Since w_{i0} is the basic numeric value for calculating the weight by commodity, it is called “standard value for weight”.

Needless to say, the results of (i) and (ii) above are theoretically congruent. Though, in reality, from such standpoints as ease of handling necessary data, simplicity in index calculation and applicability to computer systematizing process, method (ii) is more commonly used in calculating the volume index based on the Lapeyres method. (It is adopted in Japan too.) Taking this into consideration, the MSP industrial indices should also use the method (ii). Since this method weight-averages and adds up the individual indices by using the weight per commodity, it is called “weighted average method” in Japan so as to differentiate it from (i).

The weighted average method absolutely requires the individual index and the weight. The aggregated index can be obtained by integrating the individual indices through weighted average using the weight. In other words, as long as these two items are prepared adequately, it is possible to quickly calculate reliable industrial indices.

(3) Levels of index aggregation for the MSP

For the MSP industrial indices, three levels of index aggregation are established, as shown in Table 9-1. If including the individual index that corresponds to each target commodity, the MSP has four levels for its industrial indices in total.

Table 9-1 Three Levels of Index Aggregation in MSP

Aggregation Level	Index Name	Basis
1) Total manufacturing industry	Total manufacturing index	---
2) Major sector	Major sector index	Current MISSI's "Major sector"
3) Sector	Sector index	PSIC 3-digit classification
<hr/>		
Commodity	Commodity index	Commodity specified in the MSP questionnaire

Note: 1), 2) and 3) are the three levels of index aggregation in the MSP. The index at the commodity level is not an aggregated index, but if it is included, there are four levels of indices.

a) Aggregation level-1: Total manufacturing industry

This is an aggregated index that corresponds to the broadest industrial level. It shows the overall trend of the Philippine manufacturing industry.

In the MSP, this index is called "total manufacturing index".

b) Aggregation level-2: Major sector

This aggregated index is the second general index after the total manufacturing industry. This belongs to the same category as the major sector that the current MISSI adopts. Although there are some exceptions, basically it corresponds to the 2-digit classification of PSIC. The MSP covers 11 major sectors.

In the MSP, this index is called "major sector index".

c) Aggregation level-3: Sector

This index follows the "major sector index" in its extensiveness. It differs with the "sub-sector" adopted in the current MISSI indices and it is a category based on the 3-digit classification of PSIC. The MSP covers 24 sectors.

To avoid confusion with sub-sectors of the MISSI, in the MSP this index shall be called “sector index”.

d) Commodity

This index corresponds to the individual commodities that are the most detailed level before any levels of the index aggregation in the MSP. The “commodity” mentioned in this case refers to each of the target commodities that are specified in the MSP questionnaires.

This index is generally called the individual index but in the MSP it will be named “commodity index”.

(4) Index aggregation process that includes a sector applying the indirect method

In order to understand the details regarding the index aggregation method, Table 9-2 and Table 9-3 show an example. It is Table 9-3 that expresses an actual index aggregation process, while Table 9-2 explains the items (volume and value by commodity, weight by sector, etc.) shown in Table 9-3.

In these tables, a, b and c are the only existing sectors and in each sector it assumes that i number of commodities are subject of the survey. In this example, for simplicity, the “sector” and “sub-sector”, which are the index aggregation levels established for the MSP, are summarized in one, and shown a case based only on the following three classifications: Commodity – Sector – Total manufacturing industry.

In addition, regarding the sector c, it is assumed that its sector index be made with the indirect method instead of the direct method, which is the most remarkable characteristic of the MSP. The reason for this is that even after the MSP has been launched, in some major sectors such as apparel, the indices would be made by the indirect method and expected to be included in the aggregated index of the New MISSI. Table 9-2 and 9-3 explain the method for the aggregated index, which includes such major sectors as calculated through the indirect method ($= I_{mfg,t}$ shown in the last row of Table 9-3).

Table 9-2 Data Items Required for Direct and Indirect Method

Sector		Sector - a (By "Direct" Method)		Sector - b (By "Direct" Method)		Sector - c (By "Indirect" Method)	
Sector Weight		w_a		w_b		w_c	
Volume / Value		Volume	Value	Volume	Value	Volume	Value
Base Year (0)	Commodity-1	$Q_{a1,0}$	$V_{a1,0}$	$Q_{b1,0}$	$V_{b1,0}$		
	Commodity-2	$Q_{a2,0}$	$V_{a2,0}$	$Q_{b2,0}$	$V_{b2,0}$		
	-----	-----	-----	-----	-----		
	Commodity- <i>i</i>	$Q_{ai,0}$	$V_{ai,0}$	$Q_{bi,0}$	$V_{bi,0}$		
	Total Value						$V_{c,0}$
Reference Month (<i>t</i>)	Commodity-1	$Q_{a1,t}$	$V_{a1,t}$	$Q_{b1,t}$	$V_{b1,t}$		
	Commodity-2	$Q_{a2,t}$	$V_{a2,t}$	$Q_{b2,t}$	$V_{b2,t}$		
	-----	-----	-----	-----	-----		
	Commodity- <i>i</i>	$Q_{ai,t}$	$V_{ai,t}$	$Q_{bi,t}$	$V_{bi,t}$		
	Total Value						$V_{c,t}$

Table 9-3 Process of Index Aggregation

Sector	Sector - a (By "Direct" Method)	Sector - b (By "Direct" Method)	Sector - c (By "Indirect" Method)
Absolute Figure of Production, Sales and Inventory by Commodity	(0) $Q_{a1,0}, Q_{a2,0}, \dots, Q_{ai,0}$	(0) $Q_{b1,0}, Q_{b2,0}, \dots, Q_{bi,0}$	
	(t) $Q_{a1,t}, Q_{a2,t}, \dots, Q_{ai,t}$	(t) $Q_{b1,t}, Q_{b2,t}, \dots, Q_{bi,t}$	
Commodity Index	$I_{ai,t} = Q_{ai,t} / Q_{ai,0} \times 100$	$I_{bi,t} = Q_{bi,t} / Q_{bi,0} \times 100$	
Sector Index	$I_{a,t} = I_{a1,t} \times w_{a1} +$ $I_{a2,t} \times w_{a2} + \dots +$ $I_{ai,t} \times w_{ai}$ <p>where,</p> $w_{ai} = \frac{V_{ai,0}}{V_{a1,0} + V_{a2,0} + \dots + V_{ai,0}}$	$I_{b,t} = I_{b1,t} \times w_{b1} +$ $I_{b2,t} \times w_{b2} + \dots +$ $I_{bi,t} \times w_{bi}$ <p>where,</p> $w_{bi} = \frac{V_{bi,0}}{V_{b1,0} + V_{b2,0} + \dots + V_{bi,0}}$	$I_{c,t} = VoPI_{c,t}$ <p>where,</p> $VoPI_{c,t} = VaPI_{c,t} / PPI_{c,t}$ $VaPI_{c,t} = \frac{V_{c,t}}{V_{c,t-1}} \times VaPI_{c,t-1}$
Total Manufacturing Index	$I_{mfg,t} = I_{a,t} \times w_a + I_{b,t} \times w_b + I_{c,t} \times w_c$		

9.2.5 Types and Levels of Weight and Its Relation to Survey Coverage

(1) Weight types by index item

For the aggregation of the MSP industrial indices, different types of weights are applied according to the index items as shown in Table 9-4.

Table 9-4 Weight Types by Index Item

Index item	Weight type
Basic indices on finished products	
Production index	a) Value-added weight b) Production value weight
Sales index	Sales value weight
Inventory index	Inventory value weight
Inventory ratio index	Inventory value weight
Other indices	
Production capacity index	Production value weight
Capacity utilization index	Production value weight

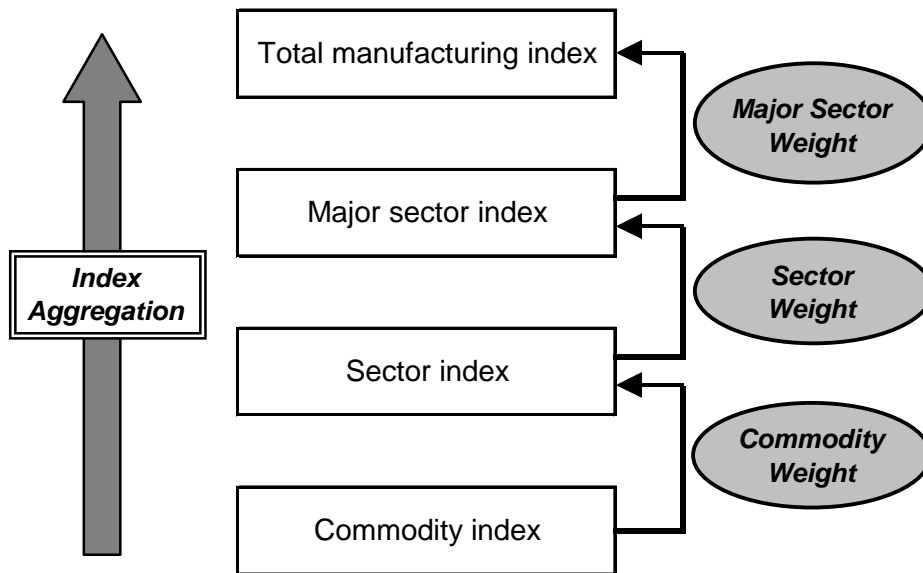
Among the four basic indices, the production index uses either of the two types of weights: value-added and production value. Usually, the so-called “production index” means the production index aggregated with the value-added weight. However in the Philippines, calculation of the value-added weight that corresponds to individual commodities is difficult because of the lack of related data and therefore, the production value weight will be used for the time being.

As mentioned above, the basic value that is needed to calculate the weight by index item like the production value for the production index is called “standard value for weight”. Table 9-4 shows that in the MSP, the following three types of standard values for weight are necessary: production value, sales value and inventory value.

(2) Weight levels

As shown in Table 9-1 above, the MSP industrial indices have three aggregation levels that are “sector”, “major sector” and “total manufacturing industry”. This implies, as shown in Figure 9-6, that three weight levels “commodity weight”, “sector weight” and “major sector weight” are needed for each index item.

Figure 9-6 Weight Level and Index Aggregation



When calculating the weight, the standard values for weight for each of the six index items listed in Table 9-4 have to be prepared. It should be noted that the standard values for weight have to be obtained for each of the three levels indicated in Figure 9-6 --- commodity weight, sector weight and major sector weight. (See the example of the production index shown below.)

[Example]

Standard value for weight for “production index” = Production value

- Standard value for “major sector weight” calculation (production value at major sector level)
- Standard value for “sector weight” calculation (production value at sector level)
- Standard value for “commodity weight” calculation (production value at commodity level)

* Also, for the index items other than the production index, three levels of standard values for weight should be prepared.

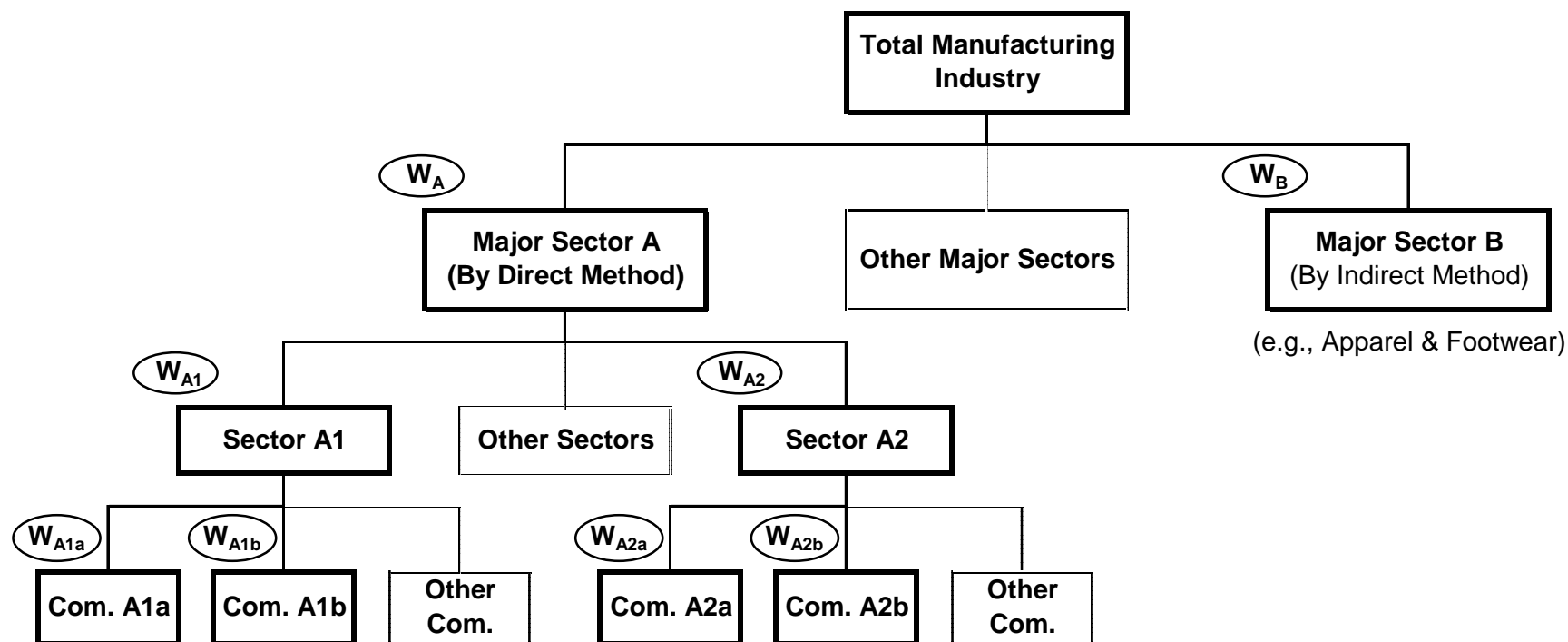
(3) Weight and survey coverage of the MSP

In a certain sector, there are a wide variety of commodities produced, however the MSP restricts its target commodities within major products in each target sector. This means that a sector level index of the MSP is figured out by aggregating the

indices of some particular commodities instead of all belonging ones. This is based on the principle that in order to grasp the general trend of a sector, it is not necessary to cover all the commodities pertaining to it but it will be enough to grasp the representing commodities that satisfy a certain level of coverage. In other words, unrepresentative commodities are negligible for the MSP. The same thing can be said not only between the commodity and the sector, but also between the sector and the major sector as well as the major sector and the total manufacturing industry.

Figure 9-7 shows this principle conceptually. It is essential that the totals of the weights of each target commodity, sector and major sector are 1 (= 100%) respectively, as explained in the footnotes. This is, needless to say, based on the principle of the MSP that the general trend of the manufacturing industry can be expressed by only grasping the representative portion that satisfy a certain level of coverage.

Figure 9-7 Conceptual Chart of Weight and Survey Coverage



Assumption about coverages :

- **Major Sectors A and B** represent **Total Manufacturing Industry**. $W_A + W_B = 1$ in the weight calculation for major sector.
- **Sectors A1 and A2** represent **Major Sector A**. $W_{A1} + W_{A2} = 1$ in the weight calculation for sector.
- **Commodities A1a and A1b** represent **Sector A1**. $W_{A1a} + W_{A1b} = 1$ in the weight calculation for commodity.

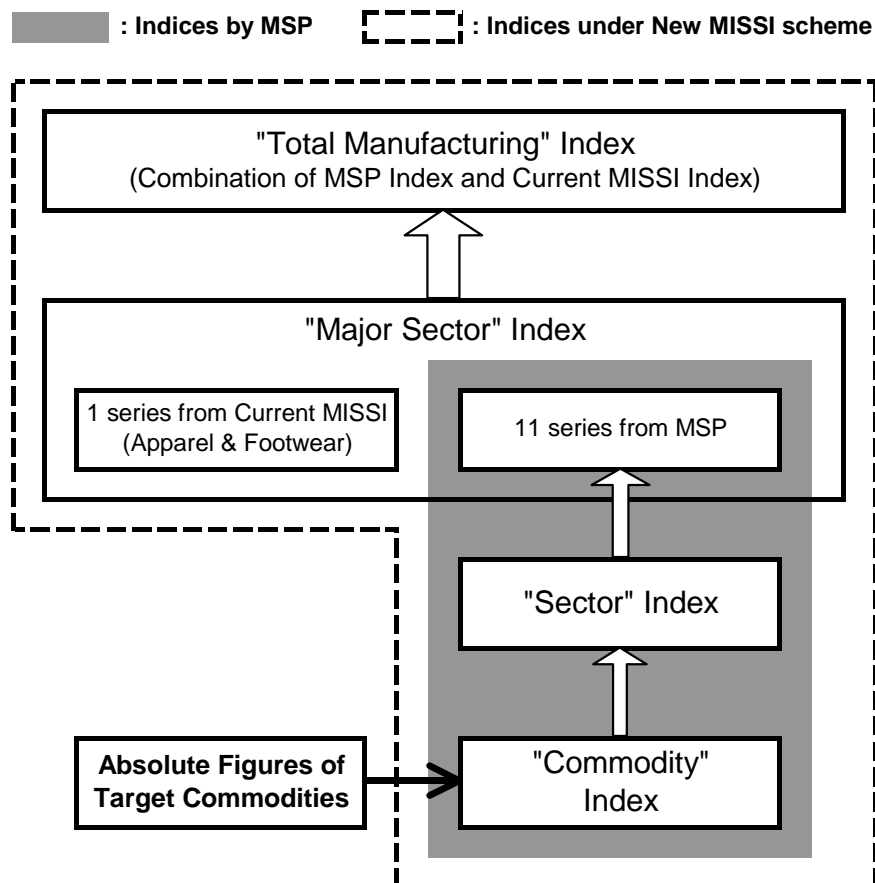
9.3 Practical Method to Compute New MISSI Industrial Indices

9.3.1 Index System under New MISSI Scheme --- Combination of Current MISSI Index and MSP Index

As regards to the computation of the New MISSI industrial indices, it is particularly necessary to take into consideration that the indices are made by combination of the MSP index and the current MISSI index.

As shown in Figure 9-8, the MSP generates its own indices at the commodity and sector levels. Whereas, when it comes up to the major sector level, there are eleven major sectors from the MSP, which are indexed by the direct method, and one major sector (Apparel and Footwear) from the MISSI, which is indexed by the indirect method. Therefore, the total manufacturing index for the New MISSI is calculated by incorporating the eleven major sector indices by the MSP and the one by the current MISSI.

Figure 9-8 Relation of MSP Index and Current MISSI Index under New MISSI Scheme



9.3.2 Adjustment of Base Year and Weight Calculation Year for New MISSI Industrial Indices

As mentioned above, the major sector index and the total manufacturing index under the New MISSI scheme are generated by combination of the MSP index and the current MISSI index. This requires a little complicated adjustment for the base year and the weight calculation year (hereinafter referred to as “weight year”) for the New MISSI industrial indices.

That is as summarized in Figure 9-9. This chart shows the base year and the weight year for each level of New MISSI industrial indices in comparison to the current MISSI.

For the current MISSI, both of the base year and the weight year are set in 1994 for every level of index aggregation.

On the other hand, under the New MISSI, the base year and the weight year for the commodity and sector levels are set in 2002, whereas, for the major sector and total manufacturing levels they need to be set in 1994, as explained later.

Figure 9-9 Basis of Index Computation under New MISSI Scheme

() Number of target sectors

Current MISSI				
	<i>Base Year:</i>	1994	1994	1994
	<i>Weight Year:</i>	1994	1994	
New MISSI	MSP (Direct Method)			
	<i>Base Year:</i>	2002	2002	2002→1994
	<i>Weight Year:</i>	2002	2002	1994
	MISSI (Indirect Method)			
	<i>Base Year:</i>	1994	1994	
	<i>Weight Year:</i>	1994	1994	

The reason why the base year and the weight year for the commodity and sector levels of the MSP are set in 2002 is simply because the MSP starts in 2002.

Why then, are the base year and the weight year for the major sector and total manufacturing industry levels in 1994? There are two very specific reasons as follows. These reasons are at the same time, important premises for the computation of the New MISSI industrial indices.

1. For the “major sector” and “total manufacturing” indices, the base year should be **1994** which is the official base/reference year established for major economic/industrial statistics, including MISSI, in the Philippines
2. According to the definition of Laspeyres formula, the **base year** and the **weight calculation year** must be agreed with each other.

Reason 1 is to agree with the official base/reference year of the other major statistics in order to secure consistency in the Philippine statistical system, and reason 2 is related to the definition of Laspeyres formula that is applied for index computation.

Based on these premises, for the major sector and total manufacturing indices, the base year should be set in 1994 as an official one and accordingly, the weight year should also be set in 1994.

9.3.3 Procedures to Compute New MISSI Industrial Indices

(1) Technical problem for index computation

If the New MISSI has two different base years --- 1994 and 2002 --- in the process of index computation as shown in Figure 9-9, one technical problem will be raised. That is how the eleven series of MSP major sector indices, which are calculated with the base year 2002 first, can be converted to those with the base year 1994. The MSP major sector indices are originally 2002-based, as they are computed by aggregating the 2002-based sector indices. Accordingly, they need to be converted to 1994-based indices by some means.

In order to solve this problem, the Study Team proposes to use the “base year conversion coefficient”. In the next section, the concrete procedures to compute the

New MISSI industrial indices are explained, including how to make the base year conversion coefficient and necessary weights.

(2) Index computation procedures at each aggregation level

In this section, the index computation procedures at each aggregation level from commodity to total manufacturing industry are shown.

Note that the abbreviations with suffixes used in the formulas in the following explanations are referring to Figure 9-7 (Conceptual Chart of Weight and Survey Coverage).

<Step-1: Computation of Commodity Index>

Base year: 2002 (MSP's starting year)

Index formula: Index for commodity-A1a (I_{A1a}) is computed as follows. Q is volume of commodity obtained by the MSP.

$$I_{A1a,t} = \frac{Q_{A1a,t}}{Q_{A1a,0}} \times 100$$

Weight year: 2002 (in accordance with the base year)

Weight formula: Weight for commodity-A1a (W_{A1a}) is calculated as follows. V is value of commodity obtained by the MSP.

$$W_{A1a} = \frac{V_{A1a,0}}{V_{A1a,0} + V_{A1b,0}}$$

(Standard value for commodity weight calculation)

Officially disseminated statistical data on production, sales and inventory of each MSP's target commodity is not produced in the Philippines. Therefore, there is no method other than self-estimation of the standard value for weight at the commodity level. This estimation is to be done according to the following:

Standard value for weight

at the commodity level = Commodity volume x Commodity unit price --- [x]

$$\frac{\text{Commodity production value}}{\text{Commodity production volume}} = \text{Estimated commodity unit price} \quad \text{--- [y]}$$

↑

The commodity unit price, as indicated in the formula [y], can be estimated by dividing the commodity production value by the commodity production volume. The production value of each commodity reported from each target establishment is evaluated by the producer's price.

The estimated commodity unit price shall be multiplied respectively by production, sales and inventory (formula [x]), in order to obtain the standard value for weight at the commodity level.

It should be noted that in principle, the several types of commodity data used in formula [x] and [y] should be the 12-month total of the base year or the monthly average instead of the monthly data. This is because the base period for the MSP industrial indices is not a particular month but the monthly average of the year established as the base.

Furthermore, the standard value for weight can only be completely prepared once the commodity data for 12 months has been obtained. This means that the commodity weight will not be fixed in one year after starting the MSP. Accordingly, for the year 2002 when the MSP is initiated, the most important issue will be to accumulate reliable commodity data for 12 months by attaining high and stable questionnaire collection rates in each target sector.

(If any of the target commodities are being selected from different sectors and aggregated in a certain category established freely, it is convenient to prepare a standardized weight by commodity, such as a ratio of 1/1,000 or 1/10,000 to the total manufacturing industry.)

<Step-2: Computation of Sector Index>

Base year: 2002 (MSP's starting year)

Index formula: Index for sector-A1 (I_{A1}) is computed as follows.

$$I_{A1,t} = I_{A1a,t} \times W_{A1a} + I_{A1b,t} \times W_{A1b}$$

Weight year: 2002 (in accordance with the base year)

Weight formula: Weight for sector-A1 (W_{A1}) is calculated as follows.

$$W_{A1} = \frac{V_{A1,0}}{V_{A1,0} + V_{A2,0}} = \frac{V_{A1a,0} + V_{A1b,0}}{V_{A1a,0} + V_{A1b,0} + V_{A2a,0} + V_{A2b,0}}$$

(Standard value for sector weight calculation)

There are two ways to prepare the standard value for weight calculation at the sector level: (1) aggregating the commodity value data obtained from the MSP by sector; and (2) using the sector value data for production, sales and inventory from the results of CPBI (former CE) or ASPBI (former ASE).

Whereas, the year for sector weight calculation should be 2002 as mentioned above. However, as the latest results of CPBI and ASPBI are for 1994 and 1997 respectively, the standard value as of 2002 cannot be obtained from CPBI and ASPBI at present.

Consequently, in order to calculate the sector weight as of 2002, the standard value for commodity weight as of 2002 obtained from the MSP shall be aggregated in each target sector. However, if it is found impossible to obtain an appropriate sector weight through this way, the sector weight shall be calculated from the latest CPBI results, namely the results of 1994 Census of Establishments (CE). (In this case, disagreement between the base year of the sector index and the weight year shall be ignored.)

<Step-3: Computation of Major Sector Index>

Base year: 1994 (Official base/reference year for major economic/industrial statistics in the Philippines)

Index formula: The major sector indices are computed according to the following a) and b).

a) The MSP major sector indices, which are computed by the direct method, need to be calculated with the base year 2002 first, and then converted to those with the base year 1994, as mentioned above. This shall be according to the followings.

1) Index for major sector-A with the base year 2002 (I_{A-02}) is computed as follows.

$$I_{A-02,t} = I_{A1,t} \times W_{A1} + I_{A2,t} \times W_{A2}$$

2) Index for major sector-A of which the base year is converted to 1994 (I_{A-94}) is obtained by multiplying the base year conversion coefficient (CC) to I_{A-02} .

$$I_{A-94,t} = I_{A-02,t} \times CC$$

(Base year conversion using the base year conversion coefficient)

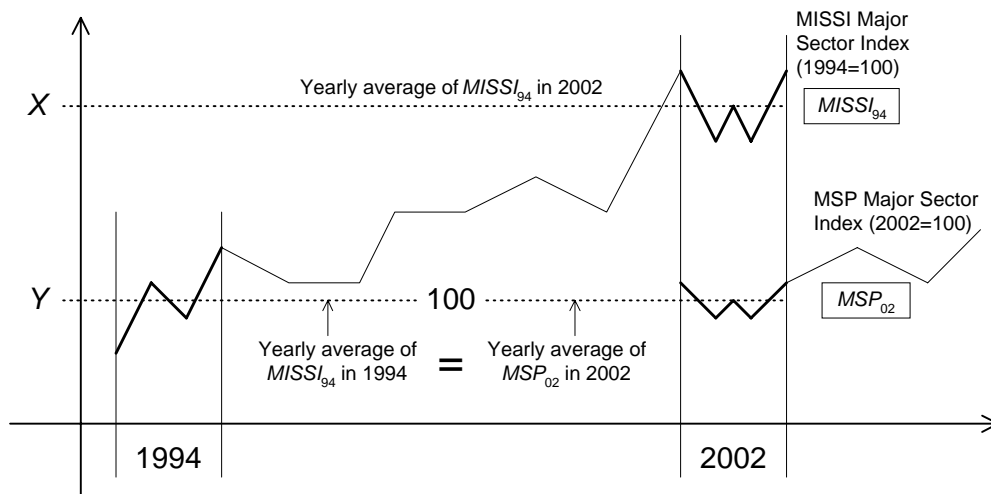
Regarding the base year conversion method using the base year conversion coefficient (CC), see Figure 9-10.

The major sector is a common category between the MSP and the current MISSI. Therefore, for a particular major sector, there will be two index series: one is from the MSP with the base year 2002 (MSP_{02}), and the other is from the MISSI with the base year 1994 ($MISSI_{94}$). These two index series will be overlapped during 2002.

The ratio of the yearly average of $MISSI_{94}$ in 2002 ($= X$) against the yearly average in 1994 ($= Y$) is then calculated. This ratio is the CC . By multiplying the CC to MSP_{02} , an estimated series of 1994-based MSP index (MSP_{94}) can be obtained.

Although this would rather be a simplified method, there would be no option other than this in order to unify the base year in some way.

Figure 9-10 Base Year Conversion of MSP Major Sector Index



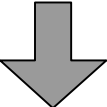
MISSI Major Sector Index (1994=100) : $MISSI_{94}$

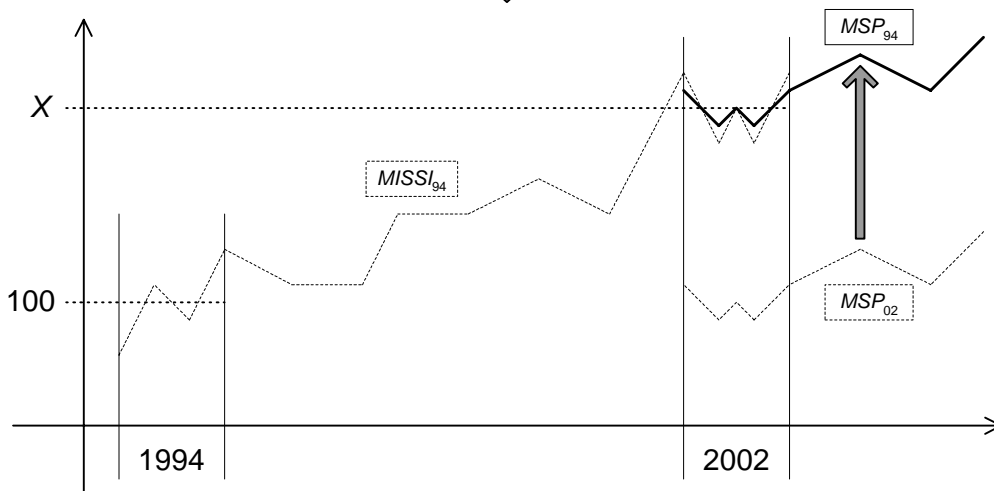
MSP Major Sector Index (2002=100) : MSP_{02}

MSP Major Sector Index after Base Year Conversion (1994=100) : MSP_{94}

Base Year Conversion Coefficient (2002 to 1994) (CC) = $\frac{X}{Y} = \frac{X}{100}$

$$MSP_{94} = MSP_{02} \times CC = MSP_{02} \times \frac{X}{100}$$

After  Conversion



- b) Index for major sector-B, which is corresponding to “Apparel and Footwear” and computed by the direct method, is *VoPI* of 1994-base that is generated by the current MISSI.

$$I_{B-94,t} = VoPI_{B-94,t}$$

Weight year: 1994 (in accordance with the base year)

Weight formula: Weight for major sector-A (W_A) is calculated as follows. V is value of major sector obtained from the results of CPBI.

$$W_A = \frac{V_{A,0}}{V_{A,0} + V_{B,0}}$$

(Standard value for major sector weight calculation)

The major sector, although with some exceptions, basically is based on the 2-digit classification category of PSIC. Therefore, the standard value for weight can be obtained from the results of CPBI published by NSO for production, sales and inventory.

As the calculation year for the major sector weight should be 1994, the standard value shall be obtained from the results of 1994 CE. Thus, the major sector weight will be calculated from the same standard value that is being used in the current MISSI.

Once the results of 2000 CPBI have been disseminated, it will be possible to newly calculate the sector and major sector weights based on them. However, whether or not the weight as of the new base year (1999) is actually introduced to New MISSI shall be determined considering the following points: until when the MISSI will continue adopting the current 1994 weight; and what the next base year for New MISSI will be. Thus, as regards these points, considerations shall start as soon as the dissemination timing for 2000 CPBI is made clear.

<Step-4: Computation of Total Manufacturing Index>

Base year: 1994 (Official base/reference year for major economic/industrial statistics in the Philippines)

Index formula: Index for total manufacturing industry (I_{mfg}) is computed as follows.

$$I_{mfg,t} = I_{A,t} \times W_A + I_{B,t} \times W_B$$

By following the procedures mentioned above, the New MISSI industrial indices at each aggregation level are computed. Under the New MISSI scheme, two base years are used according to the aggregation level: 2002 for the commodity and sector indices, and 1994 for the major sector and total manufacturing indices.

9.3.4 How to Incorporate “Plastic Products” and “Microcircuits”

In New MISSI, “Plastic products” and “Microcircuits” are exceptional categories, which are not corresponding to the “major sector” level but similar to the “sub-sector” level of the current MISSI.

Under the New MISSI scheme, both categories are treated as follows:

- Category “Plastic products” is a sector corresponding to the current MISSI’s sub-sector “Plastic and plastic products” which covers PSIC 243, 252 and 2412.
- Category “Microcircuits” is a sector corresponding to the current MISSI’s sub-sector “Microcircuits” which covers PSIC 322.

Base year for the sector indices of “Plastic products” and “Microcircuits” is 2002. Both indices are computed as follows:

- Index for “Plastic products” is the current MISSI’s *VoPI* for the sub-sector “Plastic and plastic products” of which base year is converted from 1994 to 2002.
- Index for “Microcircuits” is the current MISSI’s *VoPI* for the sub-sector “Microcircuits” of which base year is converted from 1994 to 2002.

The index for “Plastic products” is integrated in the major sector index for “Chemical products,” and the index for “Microcircuits” is integrated in the major sector index for “Electrical machinery.”

Weights of “Plastic products” and “Microcircuits” are treated as sector weights under the New MISSI Scheme. Year for weight calculation is 2002.

Both weights are calculated based on the values obtained by MISSI during 2002. Assuming they were composed of only one target commodity, their sector weights will be calculated together with the other commodity values obtained by the MSP, according to the method mentioned above in <Step-2: Computation of Sector Index> in 9.3.3.

9.3.5 How to Compute the Index for “Drug and Medicines”

In New MISSI, “Drugs and medicines” are treated as a target commodity included in sector “242-3: Chemical products”.

Though this target commodity is listed in the MSP questionnaire, it is indexed not by the direct method but the indirect method, using the nominal value data obtained by MSP and corresponding price index (*PPI* or *WPI*). Namely, as shown below, the same index computation method as *VoPI* of the current MISSI will be applied.

$$\begin{aligned}\text{Real value of “Drugs and medicines” at } t &= \frac{\text{Nominal value at } t}{\text{Price index (2002-base) at } t} \\ \text{Real value index (= volume index) for “Drugs and medicines” at } t &= \frac{\text{Real value at } t}{\text{Real value at base year (2002)}}\end{aligned}$$

9.4 Base Year Revision and Index Linkage

The industrial indices need periodical revisions of its base year. In addition to this, in order to make a long time-series, indices with different base years have to be linked.

It is necessary to understand the relation of the index linkage to the base year conversion, which is mentioned in above 9.3.3. It is explained in 9.4.3 below.

9.4.1 Base Year Revision

(1) Necessity of base year revision

a) Eliminating upward bias

The most essential characteristic of the Lapeyres formula is that it multiplies the volume and the unit price of the base period to convert the volume to the monetary value. By doing this, all the commodities that have been measured in different units can be aggregated without the effect of price change. However, the Lapeyres formula has a tendency towards an upward bias because it uses the fixed unit price at the base period for the aggregation, as mentioned above. If the base period is fixed for a significantly long time, the bias can grow so much that it will be impossible to ignore it. That is why the base period has to properly be moved to a latter point of time.

b) Inspection and revision of target commodities

Due to manpower and budget limitations, it is very difficult or even impossible to take all the products manufactured in the Philippines within a survey of production. Therefore, the MSP takes the major commodities that represent the overall trend of the manufacturing industry as targets.

The main commodities can vary depending on the changes in the industrial structure, technology progress and new product developments. Therefore, it will be necessary to periodically inspect to what extent each commodity explains the general trend and revise the target commodities to be indexed with adequate timing.

In case a significant change is recognized in the structure of the representative commodities in the Philippines, obsolete commodities should be eliminated and those products getting more important should be added. Once the new target commodities has been added, it will be necessary to establish a new base period in order to calculate all the commodities under the same base period.

(2) Guideline for the base year revision

a) 5-year revision cycle

The base year should be revised based on considerations on the change in the economic circumstances and particularly changes in the above-mentioned relative unit price and the composition of main commodities. Although the economic circumstances are always changing, revising the base year requires so much time and manpower that it is difficult to carry it out frequently.

In Japan, the base year revision is carried out in a 5-year cycle. This is based on the idea that a 5-year cycle will not significantly affect the reliability of the industrial indices, and it allows carrying out the revision work within given resources. In case that a new base year is established in 1995, the 1995 based index series starts in 1993. This is because tracing back by two years from the base year is a fixed rule in Japan for reasons such as seasonal adjustments.

The introduction of the same 5-year revision cycle as in Japan is recommended for the New MISSI. However, there might be situations in which the new base year falls on a period of peculiar or irregular economic circumstances such as the Asian currency crisis in the late 1990's. In those cases, certain flexibility will be required so as to consider setting the base year on a comparatively normal year.

b) Monthly average

Since the MSP industrial indices are of a monthly basis, the base period should be monthly based, too. However, it is desirable that the base period is a monthly average of a particular year that is designated as the base, instead of a particular month.

In particular, before introducing the seasonal adjustment system, it will have the advantage of leveling the seasonal changes throughout the year by the monthly average.

c) Time agreeability with other important statistics

In order to maintain compatibility with other related statistics, the base year of the industrial indices of the New MISSI should preferably agree with the base year or the reference year for other main economic/industrial statistics existing in the Philippines. In light of this, it will be important indeed that the first base year revision of the New MISSI shall securely agrees with CPBI's reference year.

9.4.2 General method of index linkage

Fixing the base period for a long period of time is not desirable from the standpoint of avoiding bias accumulation. On the other hand, however, it is also true that there are certain user's needs to analyze the long-term industrial trend through a 10-year or even longer time-series of index. In order to respond to these needs, indices with different base years have to be linked in some way to make a long time-series.

In this part, a method to link two different index series – A with a 1995 base year and B with a 2000 base year – is explained. Of course, these two series have to be indices related to the same commodity, (major) sector, or total manufacturing industry.

(Index series-A --- Base year: 1995)

Aug 1999	Sep	Oct	Nov	Dec	Jan 2000	Feb
.....	105.3	102.9	108.7	106.1		

(Index series-B --- Base year: 2000)

Aug 1999	Sep	Oct	Nov	Dec	Jan 2000	Feb
				97.7	100.5

Series-A, which is an old series has ended in December 1999 with 106.1, while a new series-B starts in January 2000 with 100.5. However, the index number or the previous month has been calculated too. As shown in this example, to make indices with different base years overlapping in a certain month (in this case it is December 1999) is an important point for the index linkage.

The ratio of series-B to A in December 1999 can be calculated as follows:

$$97.7/106.1 = 0.921 \quad \text{--- [z]}$$

If the obtained ratio [z] --- this is called “link coefficient” --- is multiplied to the whole of series- A, both series will throw out the same number (97.7) for December 1999. Therefore in this month, one index series that strides across a base year revision can then be obtained by linking series-A with B.

(Index series-A after multiplied by the ratio [z])

Aug 1999	Sep	Oct	Nov	Dec	Jan 2000	Feb
.....	97.0	94.8	100.1	97.7		

(Index series-B)

Aug 1999	Sep	Oct	Nov	Dec	Jan 2000	Feb
				97.7	100.5

In Japan, when the above ratio [z] is being determined, the period by which the new and old series are overlapped is three months. If the overlapping period is set to one month or one year, there is more likelihood of significant errors. Therefore, an intermediate period of three months is adopted.

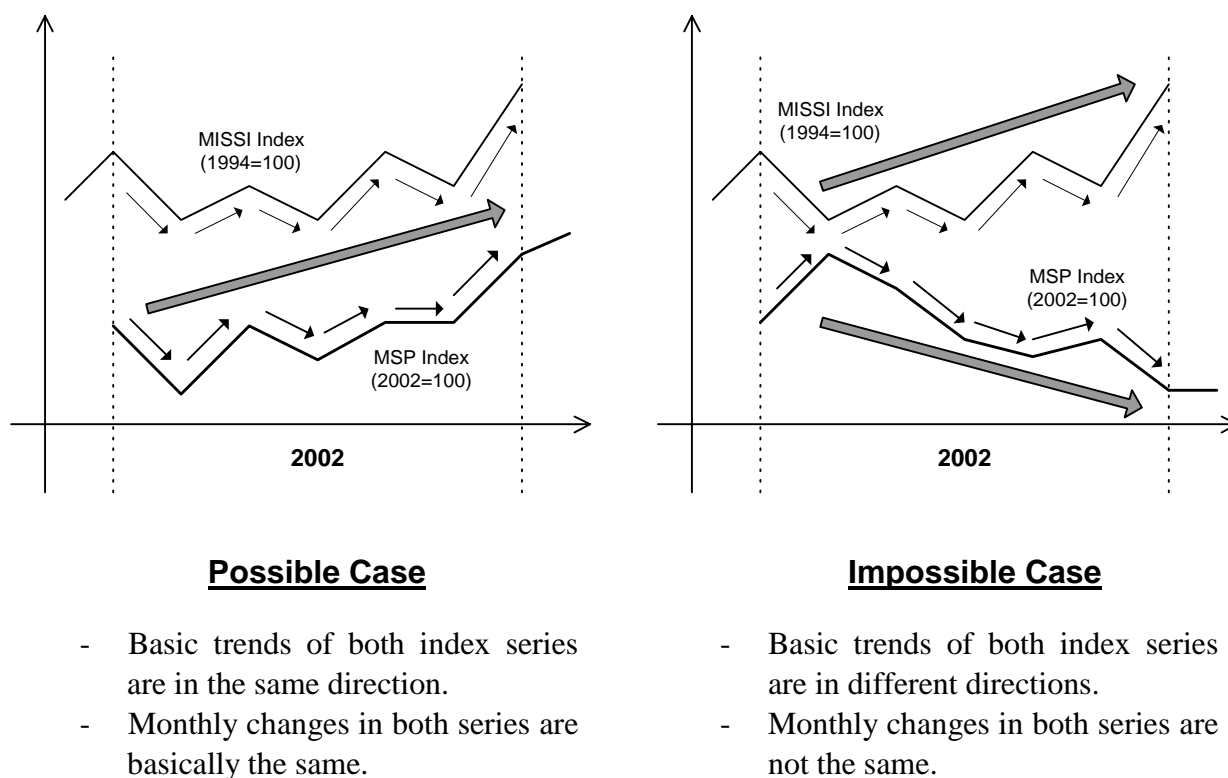
9.4.3 Linkage of MISSI index and MSP index

As explained previously, the major sector level is a common category for both of the MISSI and MSP. Therefore, linkage between the MISSI and MSP indices is considered possible at the major sector and total manufacturing industry level. Since the MISSI index is the series based on the old base year while the MSP index is the series based on the new base year, their linkage can be done through the method explained previously in **9.4.2**.

However, it should be noted that the MISSI and MSP indices differ from each other in the basic parts such as the calculation method (direct versus indirect), the range or number of establishments, or number of (sub-) sectors included in each major sector. Accordingly, the index linkage is considered possible only if the trends of two index series are similar to each other.

Concretely speaking, the changes in both indices during the overlapping 12 months in 2002 should be compared from the viewpoints of basic trend and monthly changes, as shown in Figure 9-11.

Figure 9-11 Comparison of MISSI and MSP Indices in 2002



As a result, if both show a significantly different trend, as illustrated in the “Impossible Case” of Figure 9-11, the linkage should be avoided and the possible causes of the differences should be made clear. Depending on the conclusions on the causes, it might be possible that the MISSI and MSP indices are not linked in some major sectors. On the other hand, if the trends of both indices are basically found to be the same, the linkage should be carried out, and the dissemination of the linked series should be considered as well.

Linking both indices and disseminating it without careful examination would cause unnecessary confusion among the statistic users.

The method for linkage of the MISSI index and the MSP index is basically the same as the base year conversion method that is explained previously in **9.3.3**. This is because the link coefficient used for index linkage is the same as the base year conversion coefficient.

It should be noted that even if the index linkage is found impossible for a particular major sector, the base year conversion of the eleven series of MSP major sector index must be executed in order to compute the total manufacturing index of New MISSI.

The base year conversion is regardless of the monthly changes in index and it pays attention only to the yearly index average in 1994 and 2002. On the other hand, the index linkage is subject to the results of comparison of the MSP index and the MISSI index, and it is the monthly changes in index that are particularly paid attention to, not the yearly average.

9.5 Schedule of Conversion from Current MISSI to New MISSI

The Study Team proposes the schedule of conversion from the current MISSI to the New MISSI as shown in Figure 9-12. Periods are roughly divided as described below and necessary preparatory works should be implemented anticipatively according to each period.

(1) Up to the end of 2002

In this period, the field operation of the MSP pilot survey shall be conducted steadily as well as “preparatory works-1”.

The preparatory works-1 include the following:

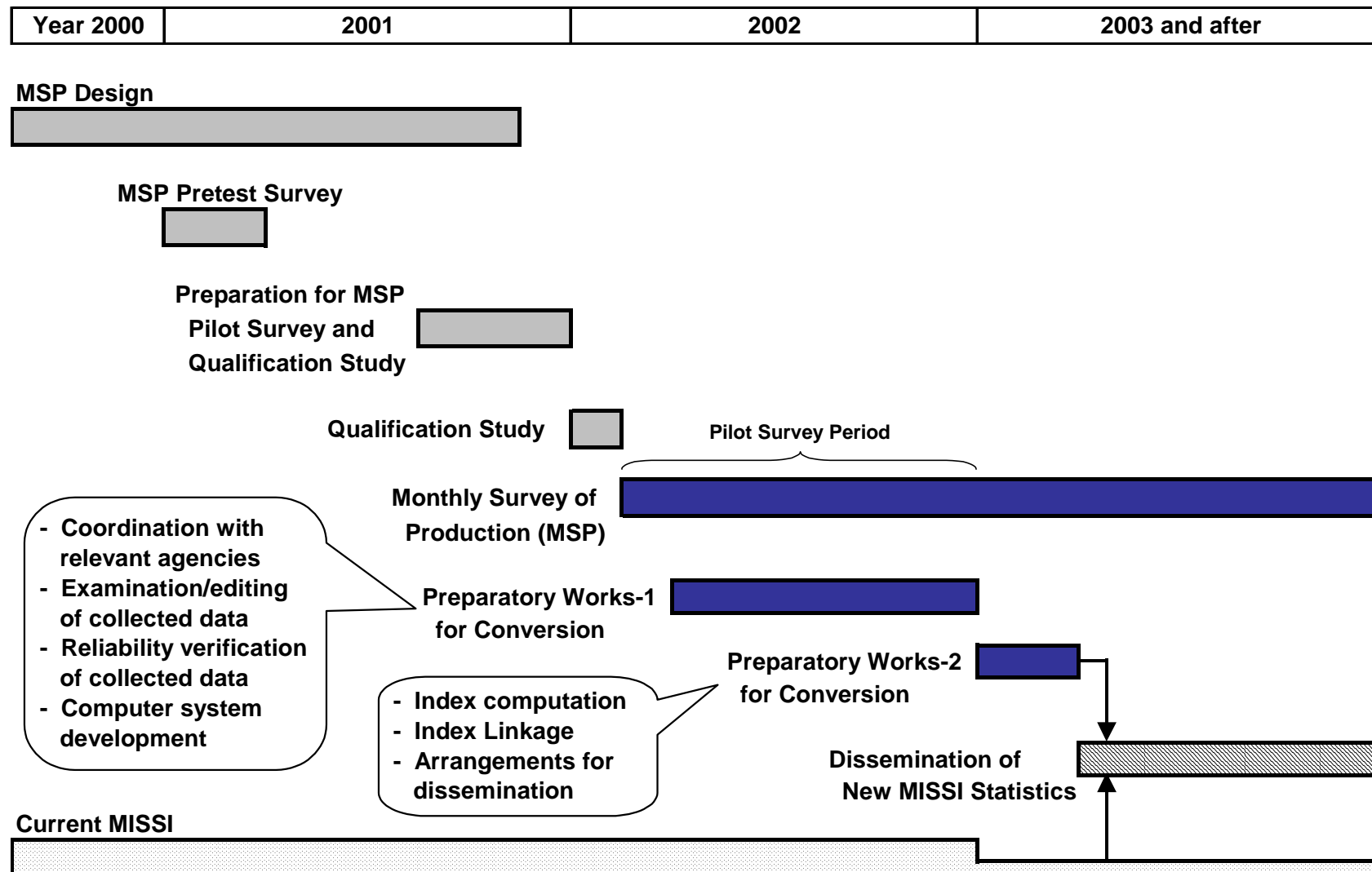
- Coordination with relevant agencies for the start of New MISSI in 2003
- Examination/editing of data collected by MSP pilot survey
- Reliability verification commodity absolute figures obtained by MSP pilot survey
- Computer system development for data processing of the MSP

(2) January to March of 2003

In this period, “preparatory works-2” shall be executed, which include the followings:

- Index computation
- Linkage of the MSP index and the MISSI index for the eleven common major sectors and the total manufacturing industry, as explained in 9.4.3.
- Arrangement for dissemination of the absolute figures and the industrial indices

Figure 9-12 Proposed Schedule of Conversion from Current MISSI to New MISSI



Chapter 10 Regular Operations for New MISSI

Chapter 10 Regular Operations for New MISSI

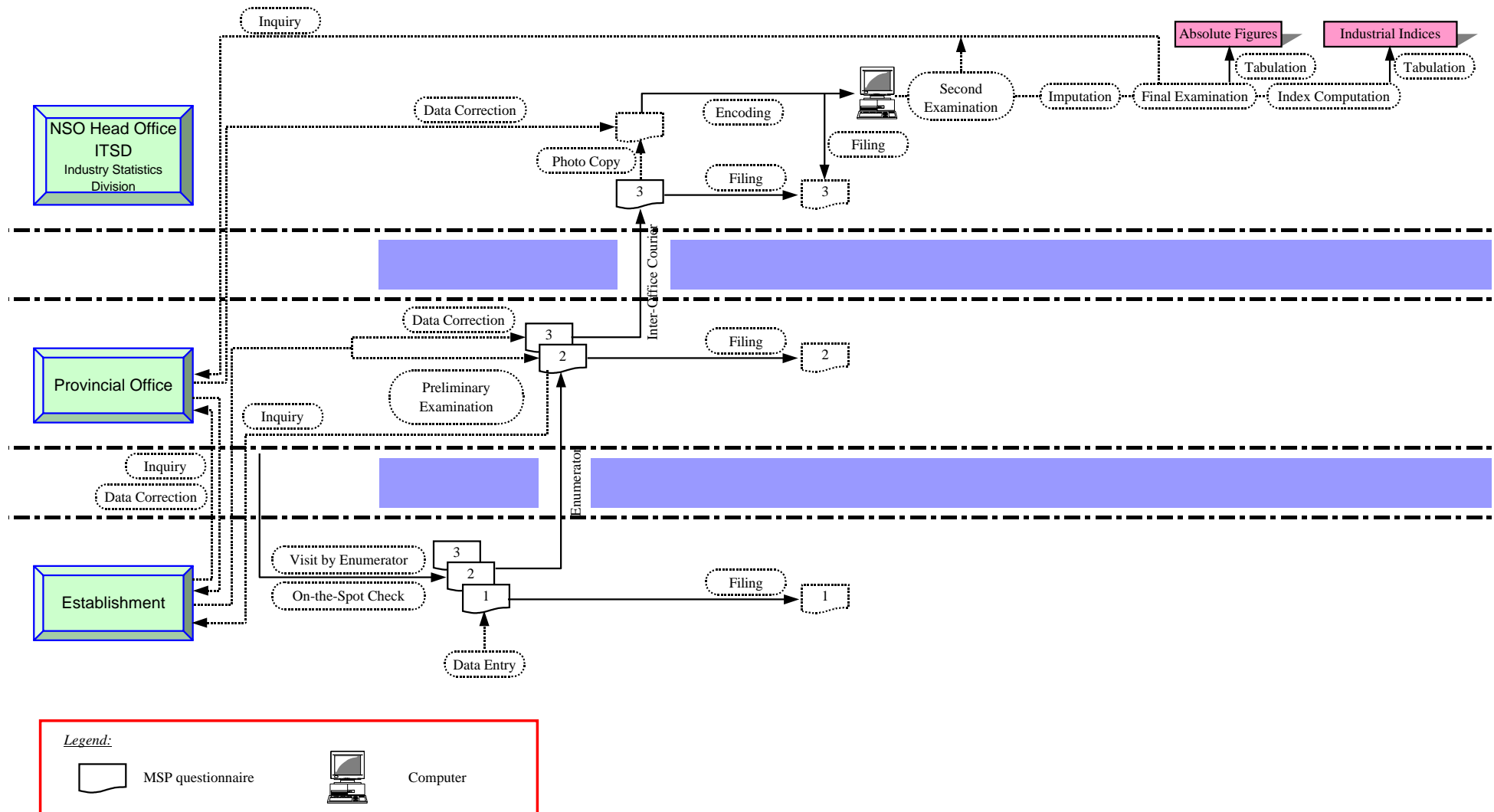
This chapter describes the various operations involved in producing, disseminating and otherwise working with the statistics provided as a result of the MSP, among them absolute figures by commodity and various types of industrial indices. These operations must be implemented by NSO after launching the MSP, on a daily or periodic basis as regular operations.

Additionally, the operations described in this chapter must be applied with respect not only to the MSP, but also with respect to the implementation of the “New MISSI”, which is an amalgamation of the MSP and the current MISSI. Therefore, from this point on, when NSO conducts examinations of the structural configuration, personnel scale and other factors involving the New MISSI, the contents of this chapter must always be considered.

10.1 Operations for Production of New MISSI Statistics

The contents of production operations involving the New MISSI statistics can be accurately understood by confirming the series of data processes, from the collection to the computation of indices, and examining them closely, one by one, in sequential order. Figure 10-1 shows how the MSP questionnaire moves among the three main New MISSI-related organizations, “establishments”, “provincial offices”, and “NSO head office”, and how it is processed. This section describes the operations for producing New MISSI statistics, by following through the processes indicated in Figure 10-1.

Figure 10-1 Operation Flow of MSP



10.1.1 Questionnaire Collection from Establishments

First, at the stage of the establishments noted at the very bottom of Figure 10-1, the MSP questionnaires that have been filled in are collected. In the MSP, each month's questionnaires are provided in triplicate, and after they have been filled in, one sheet is filed at the establishment itself and kept on hand, while the remaining two sheets are collected by the enumerator, and are taken to the NSO provincial offices. When the enumerator collects the questionnaires, he or she must check to make sure that the necessary data has been filled in for each questionnaire item before accepting them.

10.1.2 Operations at NSO Provincial Offices

The questionnaires that have been filled in and collected (two copies made of each) are processed as follows by NSO provincial offices.

(1) Preliminary examination

The following check is carried out as a preliminary examination of the data reported on the collected questionnaires.

a) Finished products section

1) Existence of unreported items

The questionnaires are checked to make sure that figures have been reported for the inventory at the end of the previous month, production, receipt (including purchase and import), internal consumption, domestic sales, export, transfer, inventory at the end of the current month (all data items up to this point are in terms of volume), and the production value for the commodities being manufactured by the establishment.

2) Confirmation of response status relating to commodities being produced

The questionnaires are checked to see whether responses have been provided for the previous month, if they have been provided for the current month, and to see if any responses have erroneously been provided for different commodities.

If it is confirmed as a result of this check that a certain establishment has discontinued production of a certain commodity or has temporarily ceased production of a commodity for some reason, or conversely, if it is confirmed that a certain establishment has initiated production of a new commodity, that information is noted in the "Remarks" column of the questionnaire. This

information is necessary for the second examination conducted subsequently at the NSO head office.

3) Check for balance among items

A check is made to see whether the proper balance exists among the items covered by responses for each commodity, using the formula below.

$$\text{Inventory at end of the previous month} + \text{Production} + \text{Receipt} - \text{Internal consumption} - \text{Domestic sales} - \text{Export} - \text{Transfer} = \text{Inventory at end of the current month}$$

b) Employees section

The questionnaire is checked to make sure the number of employees (= ATE) at the end of the current month has been filled in.

c) Production capacity section

1) Existence of unreported items

If the establishment is producing the finished products corresponding to the commodities targeted in this section (this can be ascertained by looking at the contents of the responses to the finished products section), the questionnaire is checked to see if the monthly production capacity has been entered in this section.

2) The questionnaire is examined to see if the production capacity that has been reported is excessive or too low in relation to the actual production volume noted in the finished products section.

In addition to the above check, the overall questionnaire must be looked over in order to identify any data that obviously contains missing digits, causing figures to be off by one or more digits, and therefore needs to be re-confirmed. Basically, this can be done by comparison of the data with that from the previous month.

(2) Inquiries and corrections

If any problems are discovered in the data during the preliminary examination, an inquiry is made to the establishment that provided the response, by telephone or other means.

Based on the inquiry, if it is judged that there is an error in the response, the relevant establishment is to promptly supply accurate data, and a correction is added to the collected questionnaire. The correction must be made on the two copies of the questionnaire sent to the NSO provincial office, and also to the copy kept by the establishment itself.

(3) Filing of the original questionnaires

Next, one of the two original questionnaires at the NSO provincial office is filed and kept, so that it can serve as an appropriate reference when the examinations are carried out in the following and subsequent months.

(4) Sending of the original questionnaires to the NSO head office

As the last step, the remaining original of the questionnaire is sent to the section in charge (ISD/ITSD) at the NSO head office, by inter-office courier.

If it is judged necessary to shorten the time required to produce New MISSI statistics, submission of the data reported in the questionnaire from the provincial offices may be faxed or e-mailed to the head office. In any case, the original questionnaires must be submitted to the head office.

10.1.3 Operations at the NSO Head Office

The questionnaires submitted from the NSO provincial offices that have undergone the preliminary examination are processed as follows by the ISD/ITSD within the NSO head office.

(1) Copying and filing of the original questionnaires

The original questionnaires are copied, and the originals are filed and kept.

As described later, the data reported on the questionnaires submitted from the provincial offices that have undergone the preliminary examination is first encoded in computers just as it is, and the necessary data examination and correction are then implemented on the computer screen. The filed original questionnaires are kept in the files in order to save the data at the stage when it was encoded.

The copies of the original questionnaires made at this stage are sent immediately to have the data encoded at a later stage.

(2) Data encoding

The data reported on the copies of the questionnaires made earlier is encoded just as it is. No examination or correction is made of the data when it is encoded.

(3) Second examination

The check described below is carried out as a second examination on the data reported on the collected questionnaires. In order to thoroughly examine the data, the same kinds of items are checked as those covered by the preliminary examination at the provincial offices.

It is assumed that this second examination will be carried out not on the questionnaires but on the data encoded earlier, while viewing the data on the computer screen.

a) Finished products section

1) Existence of unreported items

The questionnaires are checked to make sure that figures have been reported for the inventory at the end of the previous month, production, receipt (including purchase and import), internal consumption, domestic sales, export, transfer, inventory at the end of the current month (all data items up to this point are in terms of volume), and the production value for the commodities being manufactured by the establishment.

2) Confirmation of response status relating to production items

The questionnaires are checked to see whether responses have been provided for the previous month, if they have been provided for the current month, and to see if any responses have erroneously been provided for different commodities.

In case that a certain establishment has stopped providing data for the current month for a commodity for which data was provided in the previous month, it is essentially important that the reason be classified as one of those noted below, and that the information be appended to the relevant data already in the computer, using the specified symbols or codes.

1. Production has been discontinued.
2. Production has been temporarily stopped (due to a strike, etc.)
3. Data has not been made available (the establishment has refused to respond, or does not have the data).

For both 1. or 2. above, it is necessary to report the absolute figures for each month for sales and inventory even after production has been stopped, as long as products are being sold from remaining inventory (production itself is at zero). In 1., however, production, sales and inventory have all been terminated at the point when the inventory runs out, so subsequently there will be no responses for the relevant commodities (the columns will be left blank). In 2., on the other hand, even though inventory may have run out, there will be new sales and inventory if production is resumed, so it is necessary to continue reporting the absolute figures (including zeroes) for each month.

In case of 3. above, if an accurate grasp of the data cannot be acquired, this case must be handled by means of imputation or other means even if products are actually being produced and sold.

As 1., 2. and 3. have different statistical nuances respectively, data processing tailored to the respective situation must be carried out when computing the absolute figures and the indices.

3) Check for balance among items

A check is made to see whether the proper balance exists among the items covered by responses for each commodity, using the formula below.

$$\text{Inventory at end of the previous month} + \text{Production} + \text{Receipt} - \text{Internal consumption} - \text{Domestic sales} - \text{Export} - \text{Transfer} = \text{Inventory at end of the current month}$$

4) Check of commodity unit prices

Commodity unit prices can be estimated by dividing the production value by the production volume for each reported commodity.

Two points are checked here: whether or not the unit prices calculated in this way diverge noticeably from those for the same commodity produced at other establishments, and whether or not they diverge noticeably from the unit prices for the previous month at the same establishment.

b) Employees section

The questionnaire is checked to make sure the number of employees (= ATE) at the end of the current month has been filled in. This information is used to check whether or not the number of employees for a given establishment is at a higher level than that of the cut-off line that serves as the standard for target establishment extraction for the MSP.

c) Production capacity section

1) Existence of unreported items

If the establishment is producing the finished products corresponding to the commodities targeted in this section (this can be ascertained by looking at the contents of the responses to the finished products section), the questionnaire is checked to see if the monthly production capacity has been filled in, in this section.

2) The questionnaire is examined to see if the production capacity that has been reported is excessive or too low in relation to the actual production volume noted in the finished products section.

In addition to the above check, the overall questionnaire must be looked over in order to identify any data that obviously contains missing digits, causing figures to be off by one or more digits, and therefore requires to be re-confirmed. Basically, this can be done by comparing the data with that from the previous month.

(4) Inquiries and corrections to the encoded data

If any problems are discovered in the encoded data during the second examination, an inquiry is made to the establishment that provided the response through the person at the provincial office responsible for the questionnaires.

Based on the inquiry, if it is judged that there is an error in the response, the relevant establishment is to promptly supply accurate data, and a correction is made to the encoded data.

(5) Correcting and filing the questionnaire copies

The contents of data corrections that are revealed through the inquiry described in (4) above are reflected in the questionnaire copies used for the data encoding into computers at an earlier stage (for example, the corrections may be added directly to the questionnaire copies, using a red pen). The corrections must be processed the

same way on the original questionnaires, one of which is stored at the NSO provincial office and one at the target establishment.

Copies of the questionnaire on which the corrections have been made are stored in the same file as the original questionnaire stored earlier at (1) above. This is done in order to leave a record that can ultimately be used for comparison purposes, to show how the data was corrected, and to what extent it was corrected. This file is used as reference information for examinations conducted at the NSO head office in the following and subsequent months.

(6) Imputation of unreported figures

In some cases, the target establishment is unable to provide part or all of the required data items pertaining to production commodities. For example, there are likely to be establishments at which the absolute figures for the inventory volume are not known until at least six months after the reference month. Also, unexpected situation can cause significant delays in the responses to the questionnaires for only that month. In cases like these, it is necessary to impute the unreported figures in order to complement the rest of the data.

The main methods for imputing these figures are as described below.

a) Applying the figures from the previous month

In this method, the figures from the previous month are used as the relevant imputed data.

b) Applying the figures from the same month of the previous year

In this method, the figures from the same month of the previous year are used as the relevant imputed data.

c) Applying the growth rate

In this method, the imputed figure for the current month is obtained by multiplying the previous month's figure for the commodity by the average growth rate to the previous month based on the other establishments that have submitted responses concerning the same commodity.

(7) Tabulation of absolute figures and final examination

When the operations up to this point have been completed, tables are produced that shows the aggregate results for the absolute figures for each commodity. These tables are used in the final examination of the absolute figures that serve as the base data to calculate the MSP industrial indices. The following items are required in the tabulation contents.

- a) Comparison table to the previous month relating to the aggregate results for each commodity

The data is checked to see if the aggregate results for the relevant commodities diverge significantly from those of the previous month.

- b) Comparison table to the same month in the previous year relating to the aggregate results for each commodity

The data is checked to see if the aggregate results for the relevant commodities diverge significantly from those of the same month in the previous year.

- c) Table showing detailed absolute figures by establishment and commodity

As a rule, in order to assure the continuity in a time-series of both the absolute figures and the indices for each commodity, the absolute figures and the indices are calculated each month based on the response data provided by common establishments. As a result, when the final examination of the absolute figures is carried out, confirmation is required to ascertain whether the data that has to be collected has actually been obtained from the establishments, and, if it has not been obtained, whether it has been complemented by the imputation of unreported figures. The table showing the detailed absolute figures by establishment and commodity is used for the check conducted for this purpose.

Through the final examination conducted based on above-mentioned tables, the absolute figures that serve as the fundamental MSP statistics are determined. If any problematic figures are discovered during the final examination, the situation is reviewed to determine whether the previous second examination and the imputation of unreported figures were conducted properly, and then the necessary corrections must be added to the encoded data.

(8) Index computation

When the absolute figures have been determined, the indices are computed.

As proposed in Chapter 9, index items provided by the MSP consist of the six types relating to final products, as listed below.

- Production index
- Sales index
- Inventory index
- Inventory ratio index
- Production capacity index
- Capacity utilization index

(9) Tabulation of indices

Tables are produced that show the results of index computation. These tables are used for analysis involving the results of index computation, and may also be used in part as a format for dissemination. Basically, items like those below are required in the tabulation contents.

- Changes in a time-series and comparisons with the previous month/same month of the previous year for the “commodity index” relating to the six items
- Changes in a time-series and comparisons with the previous month/same month of the previous year for the “sector index” relating to the six items
- Changes in a time-series and comparisons with the previous month/same month of the previous year for the “major sector index” relating to the six items
- Changes in a time-series and comparisons with the previous month/same month of the previous year for the “total manufacturing index” relating to the six items
- Contribution degrees of the major sector index, sector index and commodity index to the growth rate of the total manufacturing index
- Contribution degrees of the commodity index to the growth rate of the major sector index and sector index

10.2 Operations for Dissemination of New MISSI Statistics

The Study Team proposes that the New MISSI statistics (absolute figures by commodity and the various industrial indices) be disseminated to the public following the guidelines noted below.

10.2.1 Preliminary Report, Revised Report and Annual Revision Report

New MISSI statistics are disseminated at three levels, based on the degree to which they have been determined: the preliminary report, the revised report, and the annual revision report.

(1) Preliminary report (monthly report)

As economic indicators that sensitively express the short-term industrial trends, there is a strong call for the New MISSI statistics to be made available rapidly. To accomplish this, the computed results must be presented promptly within a short period of time from a reference month. This is done in the “preliminary report” provided each month.

However, at the stage when the preliminary report is disseminated, there can be a case that all the necessary data has not yet been collected from a certain number of establishments, and it is therefore unavoidable that imputation be used to complement the calculated results.

Users of statistics who want to ascertain the business situation in the immediate area may find it certainly useful if the preliminary report includes objective comments --- these need not be analyses, but rather can be simply a summary of the facts indicated by the industrial indices --- that are related to the domestic manufacturing industry in view of trends in the various index items.

(2) Revised report (monthly report)

NSO continues to collect data from those establishments that were unable to provide it at the stage when the figures for the preliminary report were computed, and after a given period following the dissemination of the preliminary report, issues a “revised report” concerning the same reference month as that covered in the preliminary report. As a rule, the revised report is issued in the month following the preliminary report. The information that must be provided in the preliminary report and the revised report is basically the same, so the preliminary report for a given reference month may be combined with the revised report for the previous month.

At the stage when the revised report is published, the necessary data must have been collected from all of the establishments except for those from which the absolute figures cannot be collected for special reasons.

Dissemination of New MISSI statistics by monthly reports can be done only twice for each reference month, in the form of one preliminary report and one revised report. Cause must be avoided in which collection of the necessary absolute figures drags on over a period of several months, so that revised reports have to be updated and disseminated repeatedly. This is because repeated correction of the revised report adversely affects user confidence in the New MISSI statistics, and can lead to users no longer making use of the statistics. In that sense, the data used in New MISSI statistics must be acquired within a short period of time, and it goes without saying that, at the point when the revised report is created, a questionnaire collection rate of close to 100% is expected.

(3) Annual revision report (annual report)

The annual revision report is the vehicle through which the completely revised figures for New MISSI statistics for one year, January through December, are disseminated. Consequently, the annual revision report is issued only once a year.

In specific terms, around March of a given year, the absolute figures for January through December of the preceding year are completely refurbished, and the absolute figures and industrial indices for those twelve months are re-calculated. The results of the annual revision are then disseminated in the form of the annual revision report.

For instance, at the stage when the monthly revised report is issued, it is likely that the data required for New MISSI statistics has not been received from a small number of establishments, and the disseminated data has been complemented using imputed figures. In such cases, all the data for the actual figures that must be substituted for the imputed figures is collected from target establishments, and is reflected in the re-calculation of New MISSI statistics for the past year. This is the annual revision.

The operations carried out in the process of the annual revision are described in 10.3.1 later in this report.

The annual revision report is used to provide computed results for the final, highly accurate and reliable New MISSI statistics. As the absolute figures for a given year are disseminated around March of the following year, it is outstanding as an annual report in terms of promptness. For this reason, it can contribute significantly to the accuracy and reliability of relevant statistics such as the national income statistics.

(4) Items of monthly dissemination from New MISSI

The Study Team proposes the items of monthly dissemination by the above-mentioned preliminary report and revised report, as described below.

1. Absolute figures of target commodities

Preliminary Report	Revised Report
1) Production	1) Production
2) Sales	2) Sales
3) Inventory	3) Inventory

2. Industrial indices

a. For “commodity” and “sector” levels

Preliminary Report	Revised Report
---	1) Production index 2) Sales index 3) Inventory index 4) Inventory ratio index

b. For “major sector” and “total manufacturing industry” levels

Preliminary Report	Revised Report
1) Production index 2) Sales index 3) Inventory index 4) Inventory ratio index	1) Production index 2) Sales index 3) Inventory index 4) Inventory ratio index 5) Production capacity index 6) Capacity utilization index

Note: The production capacity index and capacity utilization index are disseminated only by major sector and for the total manufacturing industry, since the number of target sectors for these two indices is limited.

The composition of targets under the New MISSI scheme is as follows:

- Commodity: 156
- Sector: 24

- Major sector: 12
- Total manufacturing industry: 1

Assuming that all the targets at each level shown above could be disseminated, the numbers of disseminated data would be as follows:

- Commodity (absolute figure): 156 commodities x 3 items = 468
- Commodity (index): 156 commodities x 4 items = 624
- Sector (index): 24 sectors x 4 items = 96
- Major sector (index): 12 major sectors x 6 items = 72
- Total manufacturing industry (index): 1 x 6 items = 6

(5) Monthly and yearly operations for dissemination

Figure 10-2 summarizes the operations for production and dissemination of the preliminary report, revised report and annual revision report, dividing them into monthly operations and yearly operations. This figure shows a proposal from the Study Team with target deadlines for completion of each operation.

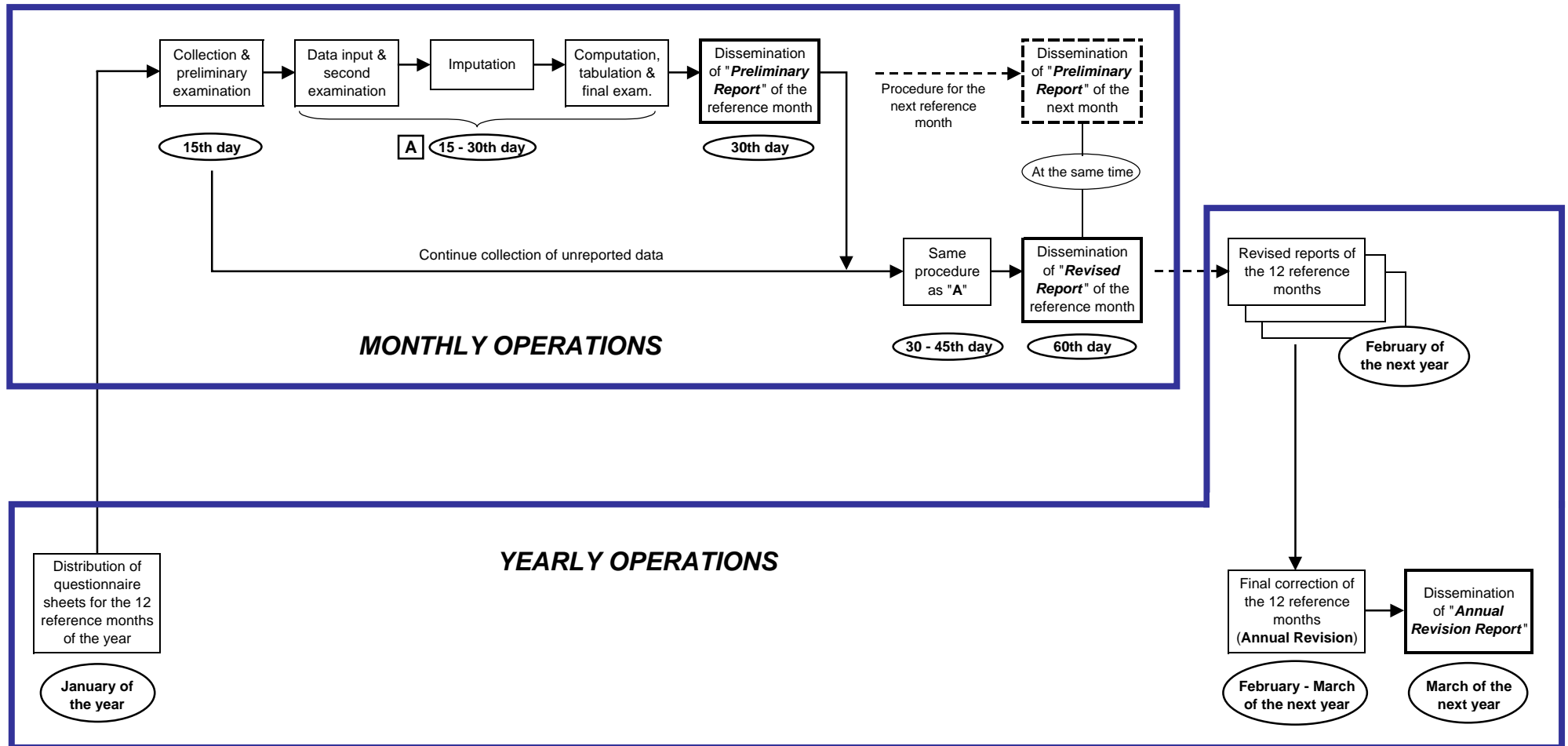
With regard to the monthly operations, first of all, the data collection from target establishments should be finished by the 15th day after the end of a reference month for producing the preliminary figures on the reference month. After that, the following procedure including data encoding, examination, imputation, index computation and tabulation should be implemented within two weeks, and finally the “preliminary report” should be disseminated on the 30th day.

On the other hand, data that has not yet been obtained by the 15th day should be continuously collected and integrated into the calculation of the revised figures. The calculation starts on the 30th day when the dissemination of the preliminary report of the reference month has finished, and the calculation results should be disseminated the 60th day in form of the “revised report”. The dissemination of the revised report is at the same time as the preliminary report of the next reference month.

Secondly, in the yearly operations, the questionnaire sheets for the 12 reference months in a given year are distributed to each target establishment in every January. The annual revision should be started in February of the next year when the necessary figures related to the 12 reference months within the year have been completely gathered. In March, the results of annual revision are disseminated in the form of the “annual revision report”.

In New MISSI operations, above-mentioned work cycles should be repeated without delay.

Figure 10-2 Proposed Monthly and Yearly Operations for New MISSI



Note: "15th day" in this figure, for example, means the 15th day after the end of a reference month.

10.2.2 Criteria for Dissemination of Absolute Figures and Indices

This section describes the criteria that must be met in order to disseminate two items that make up New MISSI statistics, namely the absolute figures and the industrial indices.

(1) Criteria for dissemination of the absolute figures by commodity

a) Stable data collection ratio

The first criterion is recovering the necessary data on an ongoing basis from the target establishments producing a given commodity. In order to confirm this, it is necessary to know which establishments are producing the relevant commodity domestically in the Philippines, and this information can be obtained from the results of the Qualification Study of Manufacturing Establishments, which confirms the commodities being produced by each establishment. Based on this information, if a list of establishments producing the relevant commodity is put together, it is possible to check the data collection ratio for each commodity by referring to the list.

b) Verification by knowledgeable persons of the aggregate results

When the criterion noted in a) above has been satisfied, the absolute figures for a given commodity are actually aggregated. Verification is then carried out by persons with the necessary knowledge to judge whether the aggregate results indicate the appropriate levels of domestic production, sales and inventory of the relevant commodity in the Philippines. The following types of people are candidates who are knowledgeable in this area.

- Representatives of enterprises involved in the production of the relevant commodity. (For example, the marketing supervisor or the production plant manager.)
- Representatives who are knowledgeable in the production in the industrial sector to which the relevant commodity belongs. (For example, the chief of the secretariat of a trade organization.)
- Supervisors in governmental organizations such as the NSCB or BOI, who watch the trends involving individual industrial sectors or individual commodities.
- Sector specialists in ISD/ITSD of NSO.

When this group of people come together in the conference, it is hoped that the participants will bring with them information that will serve as reference material when decisions are being made (for example, production volume data created independently by the trade organization), and they will verify the appropriateness of the absolute figures provided through the MSP based on the objective materials.

This conference is also meaningful in that it assures an opportunity for the exchange of information between the NSO and various related organizations. Consequently, it must be held not just once, but at periodic intervals, such as once during each of the four business quarters.

c) The number of domestic production establishments

Regardless of whether the absolute figures for a given commodity are judged based on a) and b) above to be sufficiently reliable, if there are only one or two domestic establishments in the Philippines producing that particular commodity, the absolute figures cannot be disseminated without permission by the establishments. The reason is that, in this case, disseminating the absolute figures reveals the actual volume data for a specific establishment, which conflicts with New MISSI's principle of concealing the data of individual establishments.

The absolute figures by commodity that are verified as satisfactory through a), b) and c) above may be published in the preliminary report, revised report and annual revision report described earlier.

(2) Criteria for dissemination of indices

The indices are obtained by processing the absolute figures by commodity, so they can be computed without any problem for commodities for which the absolute figures can be disseminated.

The indices, unlike the absolute figures that indicate absolute quantitative levels relating to the production, sales, inventory and other parameters of a specific commodity, indicate relative levels at a given point, and shifts in those levels. For this reason, a decision is likely to be made to compute the indices for reference purposes, even though the absolute figures cannot be disseminated for a given commodity. Specifically, if there are ten domestic establishments in the Philippines producing a certain commodity, and data can only be obtained from half of them, it is probably not possible to produce credible absolute figures. If the other five

establishments that have supplied data comprise a leading presence in the industry, however, there is a possibility that trends in production activities can be ascertained from the indices. If it is judged that this possibility exists, dissemination of the indices as a reference series is examined. At that point, the possibility of including the reference series into calculation of the aggregated indices is also examined.

However, no uniformly objective criteria exist for judging whether to disseminate the indices as an official series, or to disseminate them as a reference series. Decisions will ultimately have to be made on a case-by-case basis. Consequently, the situation needs to be examined by the group of people described in (1) b) above.

10.2.3 Media for Dissemination

(1) Printed materials for dissemination and NSO's official Web site

It is hoped that the preliminary report, revised report, and annual revision report of New MISSI statistics will be sold as printed materials (booklets) at appropriate prices. At the same time, however, producing large volumes of printed materials every month and distributing them nationwide would be problematic in realistic terms given budgetary and other concerns. For this reason, like the current MISSI, these reports need to be disseminated through NSO's official Web site.

From the standpoint of keeping the operations involved in disseminating New MISSI statistics as simple as possible, it would probably be appropriate to disseminate the revised reports concerning a given reference month at the same timing that the preliminary reports for the following reference month are disseminated.

(2) "Monthly Bulletin" of NSO

The NSO publishes a "Monthly Bulletin" that is a compilation of various monthly statistics created by NSO itself. The preliminary and revised reports of New MISSI statistics, in addition to being disseminated as media in their own right, should also be published in the "Monthly Bulletin" in order to reach a broader range of users.

(3) Newspapers, economic magazines, and periodic publications by economic organizations

From the standpoint of supplying New MISSI statistics on a broad scale, one proposal is to have New MISSI statistics published in the statistics sections of

newspapers, economic magazines, and periodic publications by economic organizations issued in the Philippines.

Because readers of those media can be assumed to have a higher level of interest because of their economic orientation, disseminating New MISSI statistics through these organs can be an effective way of meeting user needs.

10.3 Annual Operations for Data Revision/Adjustment

10.3.1 Works for Annual Revision

As described in **10.2.1**, the annual revision involves the complete revision of the absolute figures for January through December of a given year, and re-calculation of the absolute figures and industrial indices for those twelve months, by integrating the data collected after disseminating the monthly revised reports for each reference month. The following section outlines specific works that must be carried out in order for this to be accomplished.

- (1) Additions and exclusions of the target establishments included in computation of New MISSI statistics
 - 1) If an establishment proves to have been left out of the survey targets even though it is producing the commodity being surveyed, and the number of employees (ATE) is above the cut-off line, the absolute figures for that establishment for the past twelve months are added to those being computed in New MISSI statistics when the annual revision is carried out.
 - 2) If the number of employees (ATE) for a given target establishment dropped below the cut-off line at a certain point of time, the annual revision serves as an opportunity to exclude the absolute figures for the relevant establishment subsequent to that point from the figures computed for New MISSI statistics. However, when an establishment is excluded, another establishment must not be added as a replacement. Target establishments are not replaced in the MSP. Care must always be taken in that establishments are selected as targets based on whether the number of employees is above or below the cut-off line.
 - 3) If a new establishment has entered the market and begins producing the commodity being surveyed, and its number of employees (ATE) is above the cut-off line, that establishment is added to those being computed in the statistics

starting from the month in which the establishment entered the market when the annual revision is carried out.

(2) Replacement of imputed figures with actual figures at the revised report stage

If the absolute figures could not be obtained from an establishment when the monthly revised report was compiled, and imputed figures were used to complement the available figures, all of the actual absolute figures are obtained at the stage when the annual revision is carried out, and are used to replace the imputed figures.

(3) Aside from above cases, the data adjustment required for securing index continuity, which is explained in the following **10.3.2**, is carried out.

10.3.2 Gap Adjustment for Index Continuity

(1) Time-series gap

In the commodity and volume based survey of production, discontinuity in a time-series of absolute figure on a commodity can arise due to addition or exclusion of target commodities or change in survey scale/coverage. This is so-called “time-series gap”.

For the computation of individual index (= commodity index), adjustment of the time-series gap is required in order to secure the index continuity. This is so-called “gap adjustment”.

In the following parts, causes of time-series gap and methods of gap adjustment are described. It is suggested that the gap adjustment for the MSP indices be carried basically out once a year, as one of the works of the above-mentioned annual revision, which produces the final completed statistics for the past year’s worth of the MSP.

(2) Causes of time-series gap

Causes of time-series gap include the following.

1) Change in survey scale/coverage

In the commodity and volume based survey of production, to improve its efficiency, there are cases in which small establishments that do not greatly affect the overall trends are excluded by the cut-off. For example, if the cut-off line has changed to 20 or more employees while the past survey covered establishments with

10 or more employees, the figures for the establishments employing 10 to 19 fall off and so a time-series gap arises.

2) Recovery of omitted establishments

If establishments to be covered are omitted for some reason and these are discovered and recovered, this causes a time-series gap. However, it should be noted that if a new establishment starts operation, that must be taken as a market expansion, not a time-series gap.

3) Change of commodity definition

Changes in definitions and scopes of target commodities and rearrangement of commodity classifications cause time-series gaps. A complicated example is as follows. Different commodities are produced through several processing stages. In the past, only those sold or transferred to users as finished products were treated as production. However, the definition was changed to treat the commodities produced at each stage separately, and therefore the products for internal consumption at each stage are now counted as production. This case also causes a time-series gap.

4) Change of survey items

For example, only the production volume was surveyed and substituted for computation of the sales index in the past. However, the survey is now changed to cover the sales volume as well. Or, in the past, the survey item for sales included those to the same company's other plants. But it is now divided into sales and others. These cases cause time-series gaps.

5) Change of production and sales structure

Commodities produced by a factory and then consumed at another place within the same factory premises are basically treated as internal-consumption. However, if the factory becomes an independent company, the products should be treated as sales. Or, in case that a commodity is sold by an independent sales company, its inventory is treated as distribution stocks. However, if this sales company is merged with the production company, its inventory should be the manufacturer's stocks. These are examples of time-series gaps due to the change of production and sales structure.

(3) Gap adjustment --- Preparation of link coefficient

Gap adjustment can be conducted in two ways. One is to revise the past figures and the other is to revise the future figures. The time-series of absolute figures can reflect the actual state of production activity better than ever due to the revision that causes the time-series gaps. Therefore, the absolute figures are usually published without any adjustments even after the revision. (However, caution about gaps should be made.) On the other hand, in case of the industrial indices, the usual practice is to make gap-less commodity indices based on the adjustment by multiplying the figures after revision by link coefficients, and then make the gap-less aggregated indices.

There are several methods to prepare the link coefficients as mentioned below. The explanations assume that the revision is carried out in January.

1) Implementation of multiple surveys

$$\text{Link coefficient } (L) = \frac{\text{Old figures (Dec)}}{\text{New figures (Dec)}} \text{ or } \frac{\text{Old figures (Jan)}}{\text{New figures (Jan)}}$$
$$\text{Figures for commodity indices} = \text{New figures} \times L$$

Under this method, either the survey in December based on definitions after revision or that in January based on definitions before revision must be conducted along with the main survey. There is a case that the overlapping period for calculation of the link coefficient is three months.

2) Estimation based on similar surveys

If statistics prepared by industry organizations or those derived from administrative records cover the relevant individual commodities, these are used.

$$\text{Link coefficient} = \frac{\text{Old figures (Dec)}}{\text{New figures (Jan)}} \times \frac{\text{Similar statistics (Jan)}}{\text{Similar statistics (Dec)}}$$

This includes such cases as production volume estimated from production value. However, it is required to carefully and fully examine whether the similar statistics have continuity and whether the proportionality (coverage) between the two is equivalent.

3) Estimation based on gap-less items

If an individual commodity is made up of several sub-commodities and the gaps have occurred in some of them, these are excluded in calculating the link coefficient. This is also applied for the case in which the gaps have occurred with some of the survey items. The method in these cases is the same as 2) mentioned above.

On the other hand, if commodities that were surveyed as two different ones are combined into one, they are sometimes linked as follows. Suppose commodities A and B are combined into (A + B). Their component ratios before the combination are treated as link coefficients, and the absolute figure after the combination is multiplied by these coefficients.

$$\text{Link coefficient of commodity A } (L_A) = \frac{A_{12}}{A_{12} + B_{12}}$$

$$\begin{array}{l} \text{Figures of commodity A} \\ \text{for commodity index} \end{array} = (A + B)_t \times L_A$$

$$\text{Link coefficient of commodity B } (L_B) = \frac{B_{12}}{A_{12} + B_{12}}$$

$$\begin{array}{l} \text{Figures of commodity B} \\ \text{for commodity index} \end{array} = (A + B)_t \times L_B$$

In addition, if re-classification changes commodities A and B into A' and B', the sum of A and B and that of A' and B' are continuous, but they are not continuous on the individual basis. In this case, the following method is sometimes applied.

$$\text{Link coefficient of commodity A } (L_A) = \frac{(A' + B')_1}{(A + B)_{12}} \times \frac{A_{12}}{A'_1}$$

$$\begin{array}{l} \text{Figures of commodity A} \\ \text{for commodity index} \end{array} = A'_t \times L_A$$

$$\text{Link coefficient of commodity B } (L_B) = \frac{(A' + B')_1}{(A + B)_{12}} \times \frac{B_{12}}{B'_1}$$

$$\begin{array}{l} \text{Figures of commodity B} \\ \text{for commodity index} \end{array} = B'_t \times L_B$$

4) Recovery of omitted establishments and cut-off

(i) Recovery of omitted establishments

$$\text{Link coefficient} = \frac{\text{Published figures (Jan)} - \text{Recovered figures (Jan)}}{\text{Published figures (Jan)}}$$

(ii) Cut-off

$$\text{Link coefficient} = \frac{\text{Published figures (Dec)}}{\text{Published figures (Dec)} - \text{Cut-off figures (Dec)}}$$

(iii) Combination of (i) and (ii)

$$\text{Link coefficient} = \frac{\text{Published figures (Jan)} - \text{Recovered figures (Jan)}}{\text{Published figures (Dec)} - \text{Cut-off figures (Dec)}} \times \frac{\text{Published figures (Dec)}}{\text{Published figures (Jan)}}$$

Although recovery of omissions and cut-off are usually carried out from the beginning of the year in January to obtain full annual figures, there are cases in which the omissions for December are known. If December figures are known in advance, the following methods of (iv) and (v) are sometimes used.

(iv) If recovered figures in December can be used

$$\text{Link coefficient} = \frac{\text{Published figures (Dec)}}{\text{Published figures (Dec)} + \text{Recovered figures (Dec)}}$$

(v) If cut-off is carried out at the same time

$$\text{Link coefficient} = \frac{\text{Published figures (Dec)}}{\text{Published figures (Dec)} + \text{Recovered figures (Dec)} - \text{Cut-off figures (Dec)}}$$

10.4 Operations Concurrent With Base Year Revision

The operations described below must be carried out concurrently with the base year revision of New MISSI industrial indices, which, as is suggested in Chapter 9, should basically be carried out at 5-year intervals.

(1) Reviewing target commodities (commodities listed in the questionnaires)

The production configuration of a country is constantly changing, and along with those changes, the types of representative products being manufactured domestically change as well. Thus, it is a given that the commodities targeted for the MSP must be periodically reviewed and updated as changes take place in the principal product configuration.

Changes in the principal domestic products can be inferred based on such cases as a commodity for which responses were previously submitted by a large number of establishments recently being reported by fewer establishments, and the opposite cases. If a commodity comes along which is an entirely new principal product debuting on the market, which has not been listed previously on the questionnaires, an understanding of the commodity must be acquired through information collection activities such as ongoing interviews and surveys conducted with establishments and industrial organizations.

(2) Re-calculating the cut-off line and re-selecting target establishments

The cut-off line by sector that serves as a criterion for selecting MSP target establishments moves vertically in response to changes in the value-added scales of the various sectors, or changes in the numbers of principal establishments and employees. For this reason, the cut-off line must periodically be re-calculated based on the most recent CPBI or ASPBI results, and new target establishments chosen based on the result of the re-calculation. If the master list comprising of a register of target establishments is updated every year, target establishments can be selected by using the master list, based on the new cut-off line.

Because re-calculating the cut-off line and re-selecting target establishments are operations that take a considerable amount of time and effort, basically they are done at 5-year intervals, along with the base year revision. The operation of reviewing the establishments targeted for the MSP, however, leaving the cut-off line as it is, must be

carried out as an annual operation, together with the annual revision, as described earlier in **10.3.1**.

(3) Weight re-calculation

The Laspeyres formula requires the weight at the same point of time as the base year. To accomplish this, the weight is re-calculated along with the base year revision.

Chapter 9 describes how to calculate the weight.

Chapter 11 Issues in Implementing the New MISSI

Chapter 11 Issues in Implementing the New MISSI

A detailed design for the MSP was proposed in Chapter 8 of this report. Chapters 9 and 10 put forth proposals for the development of indices and the survey management to be used assuming that the new MISSI, which combines the sectors in which the MSP is used and those continuing to use the current MISSI, is implemented, based on the criterion of whether or not these are appropriate for volume surveys by commodity.

This chapter presents issues that must be addressed if the NSO implements the new MISSI in the future as a government-designated survey.

11.1 MSP Pilot Survey

In 2002, the NSO will implement the MSP pilot survey based on the detailed MSP design proposal created in cooperation with the Study Team and outlined in this report. The pilot survey will cover 24 sectors in the manufacturing industry, and will target establishments all over the country that have been confirmed by the Qualification Study of Manufacturing Establishments (QSME) to be producing the targeted commodities. The division of the NSO in charge of the MISSI will conduct the pilot survey along with the current MISSI. The objectives are as follows: 1) to verify survey tools, and 2) to verify and compile commodity production data.

The parallel implementation of the MSP pilot survey and the current MISSI in 2002 will no doubt be a budgetary burden for the NSO. It cannot be for more than one year. It is recommended to start the New MISSI which combines the MISSI and the MSP in 2003, when the pilot survey has been completed. The MISSI is a designated survey and, therefore, examination and approval by the Technical Committee are required for any changes to the survey methods, types of disseminated data and indices, and standards for the indices.

Figure 9-1 and 9-2 have already shown the schematic outline proposed for the new MISSI, combining the MSP and the MISSI. All of the sectors possible will be shifted to the volume survey by commodity, while indices of those sectors inappropriate to that survey will continue to be generated by the indirect method of the current MISSI.

Sector indices based on the direct method and those based on the indirect method will be integrated to compute the total manufacturing indices.

11.2 New MISSI

11.2.1 Survey Items

The dissemination target for the current MISSI is 45 days, but in actuality approximately 60 days are required. In order to implement the dissemination period in conformance with the guideline proposed in Chapter 10 and assure timely dissemination, it is absolutely necessary to review the survey items and narrow the focus of the items. In the new MISSI, almost all of the sectors will be shifted to the MSP, but sectors for which the commodities and sector configurations are not suited to being surveyed by commodity will continue to be surveyed using the MISSI method. The objective is to compute the VoPI of the sectors using the indirect method. However, there is no need to use the questionnaire of the current MISSI for these sectors as well.

Table 11-1 shows a comparison of items surveyed in the MSP and the current MISSI. Among the items surveyed in the current MISSI, the minimum items that need to be maintained in the questionnaires for the sectors in which the indirect method is to be applied under the new MISSI are marked.

There are concerns that labor-related data involve drastic fluctuations and cannot be adequately covered using annual surveys alone, and opposition may be raised to excluding this data. Many establishments comment, however, that monthly fluctuations are low and that this item is the easiest of all to which to respond. Quarterly survey data and data provided by other government departments need to be studied to see if they are not enough to monitor labor market, and the relevant entities persuaded.

In the current QSPBI of the NSO, if any of the establishments targeted in the manufacturing sector overlap those covered by the MISSI, those establishments are not surveyed; instead the MISSI results are used. That has been possible because the two share survey items, however, the survey items will be changed under the new MISSI, making it difficult to use those results. The budget for implementing the QSPBI is also affected, and adjustments are required.

Table 11-1 Question Items of Current MISSI and MSP

Current MISSI		MSP
I Total Employment		I Finished Products
A Working Owners and Unpaid Workers	○	101 (A) Beginning Inventory
B Paid Officials and Workers	○	(B) Production
II Total Compensation		(C) Purchased/Imported/Received
A Total Wages and Salaries		(D) Internal Consumption
B Employer's Contribution to SSS, GSIS, Medicare & Others		(E) Domestic Sales
III Sales, Production and Inventory by Major Product		(F) Export
1 Product Name		(G) Transfer
A Net Sales		(H) Ending Inventory
B Production		(I) Production Value
C Inventory of Finished Products		102 Ditto
2 Product Name		103 Ditto
A Net Sales		104 Ditto
B Production		
C Inventory of Finished Products		
3 Product Name		II Number of Employees
A Net Sales		III Monthly Production Capacity
B Production		
C Inventory of Finished Products		
4 Product Name		
A Net Sales		
B Production		
C Inventory of Finished Products		
5 Product Name		
A Net Sales		
B Production		
C Inventory of Finished Products		
6 All Other Products		
A Net Sales	○	
B Production	○	
C Inventory of Finished Products	○	
IV A Total Net Sales/Revenue		
B Other Income		
V Inventory of Raw Materials		
VI Capacity Utilization	○	

○ Items required for new MISSI

11.2.2 Target Sectors

After the sectors covered by the new MISSI were selected on the basis of value added, five sectors were added as a result of the sector study as important sectors of the Philippines. It was proposed in Figure 9-1 that, of the 20 current MISSI major sectors, the eight major sectors listed below should not be included in the new MISSI because of a policy of excluding sectors that have a relatively low degree of importance in terms of assuring timely dissemination of the survey results. Discussion is required with government organizations, and related private organizations, and it is necessary to explain that the aims of the MSP are different from those of other establishment surveys to monitor sector structure, and to persuade them to that point of view.

NSCB, which is responsible for the SNA, agrees to the New MISSI scheme on the premise that these eight major sectors are covered by QSPBI. This is a matter related to the budget for QSPBI, like change of the survey items described in 11.2.1.

- D. Textiles
- F. Wood
- G. Furniture
- I. Publishing
- J. Leather
- K. Rubber
- Q. Machinery, excluding electrical
- T. Miscellaneous

11.2.3 Sectors to Continue with MISSI Approach

In order to produce sector indices with a high level of reliability for sectors for which the MISSI approach (indirect method) is to be continued under the new MISSI, it is suggested that the following improvements be made.

(1) Review of PPS commodities

When computing the VoPI using the indirect method, the PPI continues to be used as the VaPI deflator, as at present. In order to obtain a PPI with a higher level of reliability, the survey commodities of the sector targeted by the PPS should conform to those actually being produced by the establishments targeted by the MISSI.

(2) Review of the selection method of sample establishments targeted by the MISSI

Target establishments for the MSP are selected not by sampling, but rather complete enumeration above the ATE cut-off line. In order to assure conformity, the target establishments need to be reviewed in sectors in which the MISSI approach will continue to be used. A complete enumeration must be used with an ATE cut-off line based on value added, and with no replacement rules.

11.2.4 Usage of Production Volume Data from Other Departments

From the standpoint of assuring the timely dissemination of data and indices, it is important that the production volume data from external sources be put to active use. In particular, if monthly production volume data is available for certain commodities from other government bureaus, those sectors should be excluded from the MSP, thus lightening the burden on both the NSO and the establishments. In addition to data on petroleum products from Department of Energy, this possibility exists for sugar, tobacco and other products as well.

Among private industrial organizations, also, there are instances in which production volume data is compiled and disseminated, but this is limited to data from member companies and normally registration is optional, making it difficult to use this data as is. Cooperation from industrial groups is indispensable, however, when it comes to verifying data obtained through the MSP.

11.2.5 Index Verification

(1) Verification of the New MISSI indices and the current MISSI indices

a) Necessity for comparison

The New MISSI indices and the current MISSI indices overlap for 12-month period of the year 2002 at two levels: “major sector” and “total manufacturing industry”. It would be beneficial, in regard with this period, to look at the degree to which the New MISSI indices and the current MISSI indices are divergent at these two levels, and analyze the reasons for the divergence, in order to evaluate the appropriateness of the New MISSI indices. Also, when linking over the indices from the current MISSI to New MISSI, it is necessary to make a careful study ahead of time to see whether or not the changes in both sorts of indices are moving in the same direction.

Thus, a comparison study on the “total manufacturing index” and the “major sector index” for each of the current MISSI and New MISSI is called for.

b) Contents of comparison

The comparison of the current MISSI indices and New MISSI indices should be carried out with respect to the following points:

1) Comparison of common “major sector indices”

In the New MISSI scheme there will be 11 major sectors common with the current MISSI, so a comparison should be made of 11 index series related to each of the common major sectors.

If the comparison result shows that the two sorts of indices are significantly different for a given major sector, the two must be studied to examine which reflects the actual circumstances more accurately, and to find out what is causing the difference in the directions of the two. And the validity of index linkage in the relevant major sector should also be considered prudently.

2) Comparison of the “total manufacturing index”

The “total manufacturing index” for each of the current MISSI and New MISSI should be compared. Respective “total manufacturing index” expresses an overall trend in the manufacturing industry of the Philippines but is composed of different numbers of major sectors. Namely, New MISSI is basically configured of 12 major sectors (including Apparel & Footwear), while the current MISSI is configured of 20.

If the comparison result of the two, which have different calculation bases respectively, does not reveal a significant divergence between them, it is assumed that the overall trend in the manufacturing industry of the Philippines could be grasped only with the 12 sectors covered under New MISSI. If the two diverge significantly, analysis needs to be conducted to find out why.

c) Trial calculation of the total manufacturing index using only the major sectors targeted by the MSP

When the comparison of the total manufacturing index described in 2) above is carried out, a trial calculation of total manufacturing index only based on the 11

major sectors that the MSP is planning to cover could be made, for a comparison with the current MISSI and New MISSI.

Unlike the current MISSI, indices for the MSP are basically created only by the direct method, so it is important to evaluate the index performance within the MSP by itself. Comparing the total manufacturing index computed only based on the MSP major sectors to the total manufacturing indices of the other two could be one way to do this.

However, the total manufacturing index consisting only of the MSP will not be disseminated but used only for internal studies.

(2) Verification of the New MISSI indices by chain index

a) Purpose of verification by chain index

As proposed in Chapter 9, the industrial indices of New MISSI are of the volume indices based on the Laspeyres formula. In this method, a certain period of time is set as the base period, and aggregated indices are calculated by weighted average using a weight at the base period that is fixed for a given period of time (specifically, for the period until the next revision of the base period). Whereas, it has been pointed out that if commodities of which price decreases and volume increases drastically are included in the index aggregation by this formula, an upward bias will possibility arise in its calculated result.

One method of compensating for this characteristic of the Laspeyres formula is to create a chain index. When calculating a volume index of a certain period of time, the chain index takes the volume from the previous period as the base. In specific terms, a ratio of the volume of the current period to that of the previous period is obtained first and then the ratio is multiplied by the index from the previous period to get the figure of chain index for the current period. This requires, at the same time, that weights based on the price and volume from one period earlier be re-calculated every period, in accordance with the shifts of the base period. Thus, the chain index constantly reflects changes in the industrial structure in the weight, making it possible to avoid or reduce the bias produced by a fixed weight.

On the other hand, to compute the chain index, a weight must be created for each new base period, and in actuality this is difficult to repeat as a monthly operation.

Consequently, for instance, a feasible way in practical terms is to compute the chain index as a trial, while using the Laspeyres as an official index formula, by a 5-year cycle in accordance with revisions of the base period, and then compare the result with that from the Laspeyres index.

At any rate, the purposes of verification using the chain index are to periodically determine if there is any bias in the New MISSI indices or not, and to objectively evaluate the accuracy of the New MISSI indices.

b) Formula for the chain index

The Laspeyres volume index based on a fixed weight is expressed by formula [1] below.

$$Q_t^L = \sum_{i=1}^n W_{i,0} \times \left(\frac{q_{i,t}}{q_{i,0}} \times 100 \right) \quad \text{--- [1]}$$

Q : Aggregated index, W : Weight, q : Volume,
 0 : Base period, t : Current period,
 i : Selected commodities ($i = 1, 2, 3, \dots, n$)

In formula [1], $\frac{q_{i,t}}{q_{i,0}} \times 100$ is the commodity index. $W_{i,0}$ is the weight fixed at

the base period, and, as shown below, this is calculated from the commodity volume ($q_{i,0}$) and the commodity unit price ($p_{i,0}$) at the base period.

$$W_{i,0} = \frac{p_{i,0} q_{i,0}}{\sum_{i=1}^n p_{i,0} q_{i,0}}$$

The formula for the chain index, on the other hand, varies depending on the base formula used for it. For example, if the base formula is the Paasche formula, the chain index formula will be the Paasche type. Since the MSP industrial indices are based on the Laspeyres formula, the chain index that should be computed is the Laspeyres type, and its formula is as shown in [2] below.

$$Q_t^{LC} = \left(\sum_{i=1}^n W_{i,t-1} \times \left(\frac{q_{i,t}}{q_{i,t-1}} \right) \right) \times Q_{t-1}^{LC} \quad \text{--- [2]}$$

In formula [2], $W_{i,t-1}$ is the weight at the previous period to the current period to be indexed, and is expressed through the following formula.

$$W_{i,t-1} = \frac{P_{i,t-1}q_{i,t-1}}{\sum_{i=1}^n P_{i,t-1}q_{i,t-1}}$$

The specific procedure for calculating formula [2] is as noted below:

- 1) The ratio of the volume of the current period to the previous period ($\frac{q_{i,t}}{q_{i,t-1}}$) is computed for individual commodities.
- 2) The weights ($W_{i,t-1}$) are computed for each period. (It can be presumed, however, that computing the weights on a monthly basis will require vast amounts of time and effort, so in cases where such frequent computation is judged to be difficult, the weight may be re-calculated on a yearly basis.)
- 3) The ratio to the previous period is weight-averaged using the weight from one period earlier.
- 4) The results of weighted averages of each period are consecutively multiplied to compute the chain index.

c) Verification of New MISSI industrial indices

Trial computation of the chain index is carried out at 3 levels: the sector index, the major sector index, and the total manufacturing index of New MISSI. At each level, changes in the chain index and the New MISSI indices are compared for a given period of time by making charts for comparison, and the degree to which they diverge is determined.

If the New MISSI indices are found to diverge remarkably from the chain index, there is a possibility that commodities that have fluctuations in prices and volumes are causing a significant upward bias, so those commodities need to be identified.

The verification results are accumulated to serve as reference information for re-calculation of the weight in accordance with the next revision of the base period.

11.2.6 Seasonal Adjustment of Index

(1) Necessity for seasonal adjustment

Generally, fluctuations in various types of economic and industrial statistics include the seasonal factor occurring repeatedly during the course of a year. Because the New MISSI industrial indices are monthly-based time series, their fluctuations naturally include the seasonal factor. For instance, as Christmas draws near, heightening of demand for ornamental lights and other related products increases their production volumes. That phenomenon has been verified in the Philippines as well.

When the industrial indices are analyzed, it is convenient to use a “seasonally adjusted series” that is obtained by subtracting the seasonal factor from the original index series, which is usually called an “original series”. It is because the fluctuation that occurs repeatedly every year is eliminated from the start in the seasonally adjusted series, so it can be used just as it is in an analysis that focuses specifically on fluctuations due to factors other than the seasonal factor. For this reason, the process of eliminating the seasonal factor from the original series of index, that is the seasonal adjustment, is necessary.

(2) How to execute the seasonal adjustment

The seasonal adjustment is generally done as outlined below.

- 1) An original series for a given period in the past is prepared.
- 2) Using the selected method, the seasonal factor for a 12-month period is computed from the original series prepared in advance.
- 3) The identified seasonal factor is eliminated from the original series newly computed each month to figure out the seasonally adjusted series.

The seasonal factor computed in 2) above is a monthly coefficient used to convert the original series to the seasonally adjusted series for each month. This is obtained from the results of past original series and, ideally, it should be identified from the original series of at least the most recent 5 years. Also, because the seasonal factor needs to be constantly updated, the computation period must be extended by one year once one year's (= 12 months') worth of an original series has been compiled, and the seasonal factor must be re-calculated based on the most recent figures.

There are several methods to compute the seasonal factor, but recently the X-12-ARIMA developed by the U.S. Census Bureau is enjoying wide use. This method can be run using a dedicated software package that can be downloaded from the U.S. Census Bureau Web site (<http://www.census.gov/>).

11.3 System Development for the New MISSI

11.3.1 Necessity of Machine Processing for the new MISSI

Data verification and aggregation of each commodity, survey item, and establishment are necessary in the MSP while for the current MISSI the overall verification and aggregation of data of establishments are performed. Completing all this process manually is difficult. An efficient process with the use of a computer system must be created.

The amount of data for processing changes according to the response rate, the filling rate to each item, the amount of conclusive data that is recognized as items that are index assessable. Nevertheless, the amount of data for processing of the current MISSI and the new MISSI will be estimated and compared, here, on the basis of a common assumption.

The comparison will be limited to the items related to the finished products, and employment, compensation, raw materials and capacity of the current MISSI will not be considered. The new MISSI is a combination of the MSP and the sectors that proceed with the indirect-method of the current MISSI. Here, the data processing amount of only the MSP for 11 major sectors will be compared with the current MISSI.

(1) Amount of data for encoding

<Current MISSI>

- | | |
|--------------------------|--|
| Number of Establishments | : 500 (Approximately 80 % of response rate is assumed out of 629 establishments surveyed.) |
| Number of Items | : 4 items (Establishment total production value, sales value, inventory value, other income) |

500 establishments X 4 items = 2,000 entries
--

<MSP>

Number of Establishments : 345 (Response rate is assumed at approximately 80% out of 432 establishments for survey.)

Number of Commodities Responded:

2 per questionnaire (It is assumed that there is a response to an average of 2 commodities from 1 establishment based on the results of the pretest survey.)

Number of Items : 9 items (production, sales, inventory, etc.)

$345 \text{ establishments} \times 2 \text{ commodities} \times 9 \text{ items} = 6,210 \text{ entries}$
--

The number of MSP data for encoding is 3 times more than that of the current MISSI.

(2) Amount of data for verification

<Current MISSI>

Verification Items : It is assumed that a verification of the 3 items below are conducted for each input data.

- Continuity check of response
- Check of unfilled items
- Divergence check of previous month/previous year, same month value

<MSP>

Verification Items : The verification items for input data are proposed in “Editing Manual”, but there are approximately 15 items including “Continuity”, “Unfilled”, “Previous month/Previous year, same month” and “Inventory balance”.

From the above (1) and (2), comparing with the current MISSI, there is 3 times the amount of encoding data, and there are 5 times the verification items for each data in the MSP. In other words, it is anticipated that the amount of data verification work for the MSP will be 15 times the amount. Note that, for the MSP, from which the

dissemination of absolute figures of commodities is expected, a careful check of data adequacy will be mandatory.

The number and types of indices for computation and dissemination under the new MISSI was explained in Chapter 10. As for the MSP, indices of the commodity level that do not apply in the current MISSI will be added. Furthermore, 4 to 6 index items will be computed in the MSP, while the current MISSI has only 2 index items of production value and volume.

11.3.2 Existing System Environment

(1) System environment

Referring to the year 2001 data, the NSO owns about 1,100 personal computers. Approximately 40% of them are located at the headquarters. CPU's of one half of these are 486DX2 equivalent or below. There is one mainframe computer at the headquarters, however, it can no longer be operated due to the Y2K problem in 2000.

The personal computers that the ISD/ITSD responsible for the current MISSI currently owns are listed below. They are divided into two groups, with connection to LAN and of stand-alone type.

Table 11-2 Number of Computers in ISD/ITSD

Place of Installation	ISD Computers	Network Status	Printers
Headquarters 6 F	7 units (2 w/Pentium)	3 units connected to LAN 3 stand-alone units	2 ink printers 1 laser jet printer
Headquarters 4F	8 units (4 w/Pentium)	LAN connections only within 4 floor	2 line printers 1 laser printer
Study Team Office	6 units (6 w/Pentium)	6 units with LAN connection (1 unit connected to gateway)	2 laser printers

The operating system used is MS-Windows 95 except those in the study team office using MS-Windows 2000. The applications used are MS-Word, MS-Excel and FoxPro-Dos. Mailers and browsers are also used. However the use of mailers

and browsers is limited to the managing staff because of the limited number of telephone lines.

(2) IT literacy

The division in charge of the current MISSI (ISD/ITSD) uses MS-Excel for data entry and tabulation. Functions used are arithmetic operations. Some staffs have already completed a course on MS-Access, but they still don't have the development experience in its practical use. There is one who has capacity of system development at a practical level with FoxPro-Dos version that was popular in Asian countries, except Japan, in the later half of the 1980's. Support from the Information Resources Department (IRD) will be indispensable when it comes to introduction or development of a new system.

11.3.3 Towards Expansion of System Environment

(1) Points of consideration for expansion of system environment

The purpose of introducing or expanding systems is to increase operational efficiency and to simplify operations. Setting aside the expected advantages, it is necessary to take into account those factors such as maintenance and operational costs that accompany, training cost of IT personnel, and the cost for countermeasures to deal with viruses and other problems that are inevitable with networks.

Also, it is necessary to explore at the planning stage questions such as how extensively the functions of the new/expanded system will be used in the future, and to what quantitative extent the system need to be able to handle, and to formulate a plan that virtually eliminates, or at least minimizes, redundancy.

The following points should be taken into consideration:

- Clarification of the range of systematization, the functions called for, and the volume of data to be handled
- Planning of stepwise introduction or upgrading of the system to avoid excessive strain
- Carrying over existing computer assets
- Assurance of an organizational structure for running and maintaining the system
- Security measures for system protection
- IT literacy training for personnel

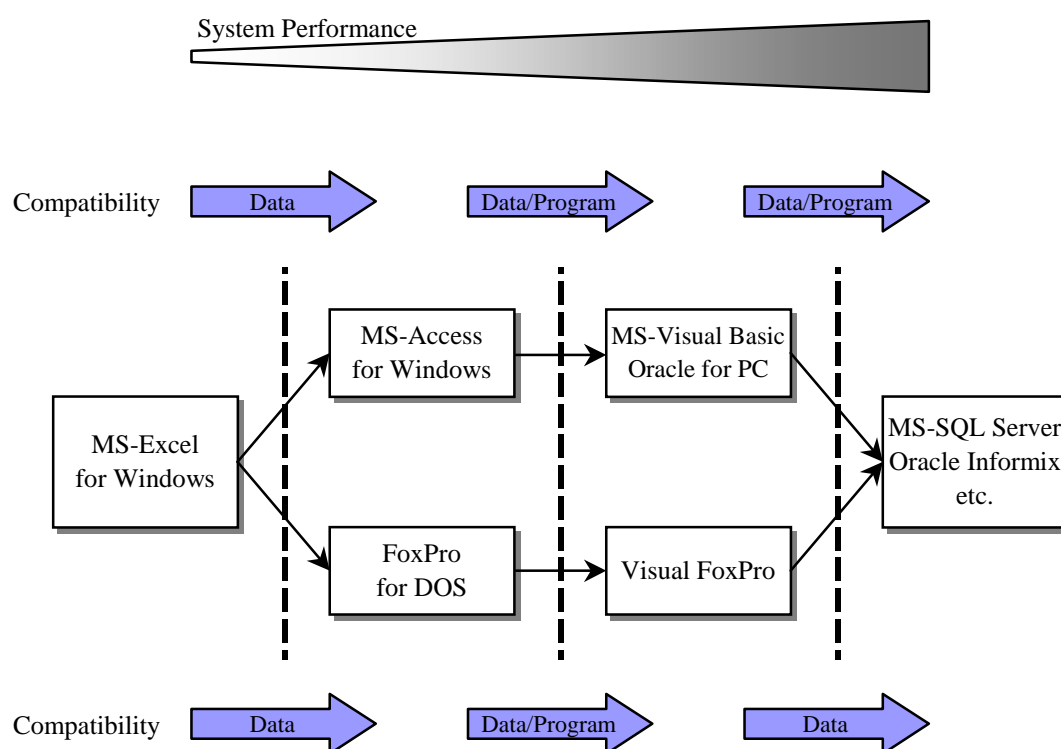
- Selection of development vendors and products
- Other factors (costs, development and shift schedule, etc.)

(2) Various systems involved in spreadsheet operations

Computers are particularly effective in operations such as data compilation. There is a wide range of software packages such as MS-Excel on the market that support data storage and management operations, as well as data compilation and tabulation programs, and the software levels range from introductory-level that allows beginners to create the systems themselves, to advanced-level for system engineers that requires specialized knowledge. A number of spreadsheet programs are available for selection as well, ranging from those designed for specific operations to sophisticated general-purpose programs that cover a broad spectrum of applications.

Figure 11-1 shows the process involved in moving towards sophisticated software, keeping the existing system environment in mind and targeting the products of representative makers and products being used by the NSO. This information will serve as reference materials as the NSO formulates system development planning that carries over existing system assets, encompassing factors such as expanding the number of establishments being surveyed, broadening the range of operations targeting systematization, and moving in the direction of more advanced functions.

Figure 11-1 Alternatives of Application Environment for Data Processing



11.3.4 Recommendations for MSP Pilot Survey System

With regard to the system supporting tabulation operations involved in the MSP pilot survey planned for implementation in 2002, the question to be considered is what kind of system resources should be used in configuring a temporary system designed for use during the initial one-year period.

Specific work processes targeting systematization in data processing operations can be categorized in five classifications: encoding, verification, retrieving, imputation and tabulation. If the system encompassing these operations is configured utilizing the various software programs shown in Figure 11-1, the categorization can be further divided into six cases. Figure 11-2 shows the work processes in each case for which system processing is possible, the advantages and disadvantages of each when the system is configured and run, and the number of hours required for development assuming a system engineer with proven experience in development is available.

Comparing these six cases from the standpoint of user performance, cases 1 to 3 can be categorized as spreadsheet software packages, while cases 4 to 6 are classified as simple databases. The difference among them is whether they are provided with a retrieving function, the burden of work on the user when running the system, and how flexible the software is in terms of user customization. Naturally, the more advanced the software, the lighter the work burden will be on the user, and the more flexibly the software can be customized, rather than the development burden increasing.

Taking future expansion into consideration, it goes without saying that case 6 is the most suitable. Contemplating the development schedule for the MSP pilot survey, either case 2 or case 4 would appear to be an appropriate selection.

Figure 11-2 Alternatives of Computer System Application for MSP

Case 1: Excel (basic)	Case 2: Excel	Case 3: Excel (advanced)	Case 4: FoxPro (basic)
Encoding (no file-sharing)	Encoding (no file-sharing)	Encoding (no file-sharing)	Encoding (file-sharing)
Verification	Verification	Verification	Verification
Retrieving	Retrieving	Retrieving	Retrieving
Imputation	Imputation	Imputation	Imputation
Tabulation (Absolute figure & index)	Tabulation (Absolute figure & index)	Tabulation (Absolute figure & index)	Tabulation (Absolute figure & index)
.....			
Merit			
- Easy to construct	- Easy to advance to next	- Easy to advance to next step	- File sharing & retrieving
- Easy to advance to next	system (Access)	(Access)	- Easy to encode
system (Access)	- Relatively easy to construct	- Imputation function	
.....			
Demerit			
- File manage is complicated.	- File manage is complicated.	- File management is	- Reconstruction is required
- Data integration is required.	- Data integration is required.	complicated.	for next step (Access &
- Verification and imputation	- Imputation has to be done	- Stuff training is required.	Oracle).
have to be done manually.	manually.	- Data integration is required.	- LAN equipment is required.
			- Interface is primitive.
.....			
Estimated Period for Development			
-0.75MM	-1.0MM	-1.5MM	-1.5MM
.....			

Figure 11-2 Alternatives of Computer System Application for MSP (continued)

<u>Case 5: FoxPro (advanced)</u>	<u>Case 6: MS-Access</u>	<u>Reference: PC-Oracle</u>
<div>Encoding (file-sharing)</div> <div>Verification</div>	<div>Encoding (file-sharing)</div> <div>Verification</div>	<div>Encoding (file-sharing)</div> <div>Verification</div>
<div>Retrieving</div> <div>Imputation</div>	<div>Retrieving</div> <div>Imputation</div>	<div>Retrieving</div> <div>Imputation</div>
<div>Tabulation (Absolute figure & index)</div>	<div>Tabulation (Absolute figure & index)</div>	<div>Tabulation (Absolute figure & index)</div>
<hr/>		
Merit		
<ul style="list-style-type: none"> - File sharing & retrieving - Easy to encode 	<ul style="list-style-type: none"> - File sharing & retrieving - Sophisticated interface - Easy to advance to next step (Oracle) 	<ul style="list-style-type: none"> - Easy to link with other system - High flexibility for user-customization - Totally sophisticated user interface
<hr/>		
Demerit		
<ul style="list-style-type: none"> - Reconstruction is required for next step (Access & Oracle). - LAN equipment is required. - Interface is primitive. 	<ul style="list-style-type: none"> - Staff training is required. - LAN equipment is required. 	<ul style="list-style-type: none"> - Long period for construction. - System engineer is required. - Maintenance stuff is required.
<hr/>		
Estimated Period for Development		
-2.5MM	-2.0 to 2.5MM	-5.0 to 6.0MM

11.3.5 Current Status of Development of MSP Pilot Survey System

Currently at the NSO, the MSP pilot survey system is being developed using FoxPro Version 2.5. The program that supports most of the data processing required for the daily works of the MSP operation including “Encoding”, “Verification”, and “Retrieving” has already been completed.

FoxPro Version 2.5 is not a Windows based application package. Therefore, to use Windows PCs installed in the ISD, MS-DOS mode should be called by the methods like opening a DOS window. Though this software is a bit outdated, it is a relational database software that has adequate flexibility in performing ”Encoding”, “Verification”, “Retrieving”, “Imputation” and “Tabulation” meeting the requirements of data processing for the MSP.

The Study Team gave advice and guidance for development of the MSP data processing system being developed by the NSO. Basic functions recommended for the system are as follows.

- a. Automatic verification
 - Blank check
 - Divergence check of previous month, same month of previous year
 - Continuous response check (Whether the same establishment responds to the same commodities with certain stability or not.)
 - Inventory balance check (Whether the values of beginning inventory, production, sales and month-end inventory are balanced or not.)
 - Unit price check
 - Balance check between production volume and corresponding capacity of production etc...
- b. Data property setting function
 - Settings by reasons for blanks (permanent or temporary stop of production, refusal to respond, or other)
 - Settings of entry property (actual or estimated figures) etc....
- c. Types of Output
 - For absolute figures as well as data examination (2 types)
 - For data analysis (4 types)
 - For analysis of preliminary / revised reports (1 type)

- For results of index computation (3 types)

d. Data transfer to Excel

To facilitate data handling for index computation, functions to export (transfer) data including absolute figures as well as index data into Excel is recommended to be equipped etc...

11.4 Other Recommendations

11.4.1 Master List of Establishments

The Master List of Establishments is used as the population for all of the establishment surveys conducted by the NSO. It is reviewed every year, and manuals are also provided. This list was also used as the population for selecting the establishments to be targeted by the MSP in this Study. However, one reason for establishments being disqualified in the pretest survey was that they were erroneously classified on the Master List of Establishments. A revision review presents budgetary problems, making it impossible to proceed as originally decided, so currently, the list is being updated by incorporating information that enumerators obtain during their fieldwork.

Unfortunately, there are establishments targeted by the ASPBI, QSPBI, and MISSI that are not on the Master List of Establishments. Making sure that information obtained in those establishment surveys is accurately reflected in the Master List of Establishments takes precedence over budgetary concerns, and must be done immediately and thoroughly.

At the revision of the base year for the new MISSI, the target establishments will be selected over again. When that is done, the only recourse is to rely on the Master List of Establishments as the establishment population.

11.4.2 PPS (Producer's Price Survey)

The PPS is a monthly survey that was begun in order to generate the PPI (Producer's Price Index), which is the deflator used to calculate the VoPI from the VaPI obtained through the MISSI. Currently, 320 commodities from 180 establishments are surveyed. The NSO also disseminates the WPI (Wholesale Price Index) and CPI (Consumer Price Index) as price indices, in addition to the PPI.

The MSP, in which volume data is collected directly from the establishment, does not require a deflator. In the new MISSI, however, sectors exist for which the sector volume index (VoPI) will be calculated using the indirect method, so the PPI will be required only for those sectors. Confirmation is needed to see whether any users are using the PPI for other purposes than as a VaPI deflator, but under the new MISSI, the PPS will no longer be required on the current scale.

11.4.3 Commodity Codes

Currently, there is no list of establishments in the Philippines that is keyed to production commodities. For this reason, the QSME (Qualification Study of Manufacturing Establishments) must be implemented as part of the preparation for the MSP, and establishments identified that are manufacturing the target commodities.

In other establishment surveys, multiple entries are submitted by establishments as their production commodities, but because there are no commodity codes by which response items can be organized, these cannot be used as statistics. One proposal is to use those produced from the PSCC, but in view of maintaining conformity with the PSIC as far as possible, it is proposed that commodity codes be organized for use. By using commodity codes, it will be possible to create establishment lists for each commodity from the results of the CPBI or ASPBI.

11.5 Implementation Organization and Budget for the New MISSI

11.5.1 Implementation Organization

(1) NSO

Figure 11-3 shows the ranking of the NSO within the government of the Philippines. The NSO is one of the organizations of the Attached Agencies of the National Economic and Development Authority (NEDA) belonging to the Office of the President. Among the Attached Agencies, the NSO is strongly related to the NSCB, and its authorities and functions as stipulated by Executive Order No. 121 are as noted below.

- Promote and maintain an efficient statistical system in the government
- Formulate policies on all matters relating to government statistical operations

- Recommend executive and legislative measures to enhance the development and efficiency of the system, including the internal structure of statistical agencies
- Establish appropriate mechanism for statistical coordination at the regional, provincial and city levels
- Approve the Philippine Statistical Development Program (PSDP)
- Allocate statistical responsibilities among government agencies by designating the statistics to be collected by them, including their periodicity and content
- Review budgetary proposals involving statistical operations and submit an integrated budget for the Philippine Statistical System (PSS) to the Department of Budget and Management (DBM)
- Review and clear, prior to release, all funds for statistical operations
- Develop, prescribe and maintain appropriate framework for the improvement of statistical coordination
- Prescribe uniform standards and classification systems in government statistics

(2) Organizational structure of the NSO and survey classifications

Figure 11-4 is a diagram showing the organizational structure of the NSO. The NSO is comprised of a Head Office and Regional Offices. The Head Office is comprised of the following five Departments.

- General Administration Department
- Information Resources Department
- Industry and Trade Statistics Department (ITSD)
- Household Statistics Department
- Civil Registration Department

When budget proposals are filed by the NSO, the statistical surveys are classified as Programs or Projects, as indicated by Table 11-3.

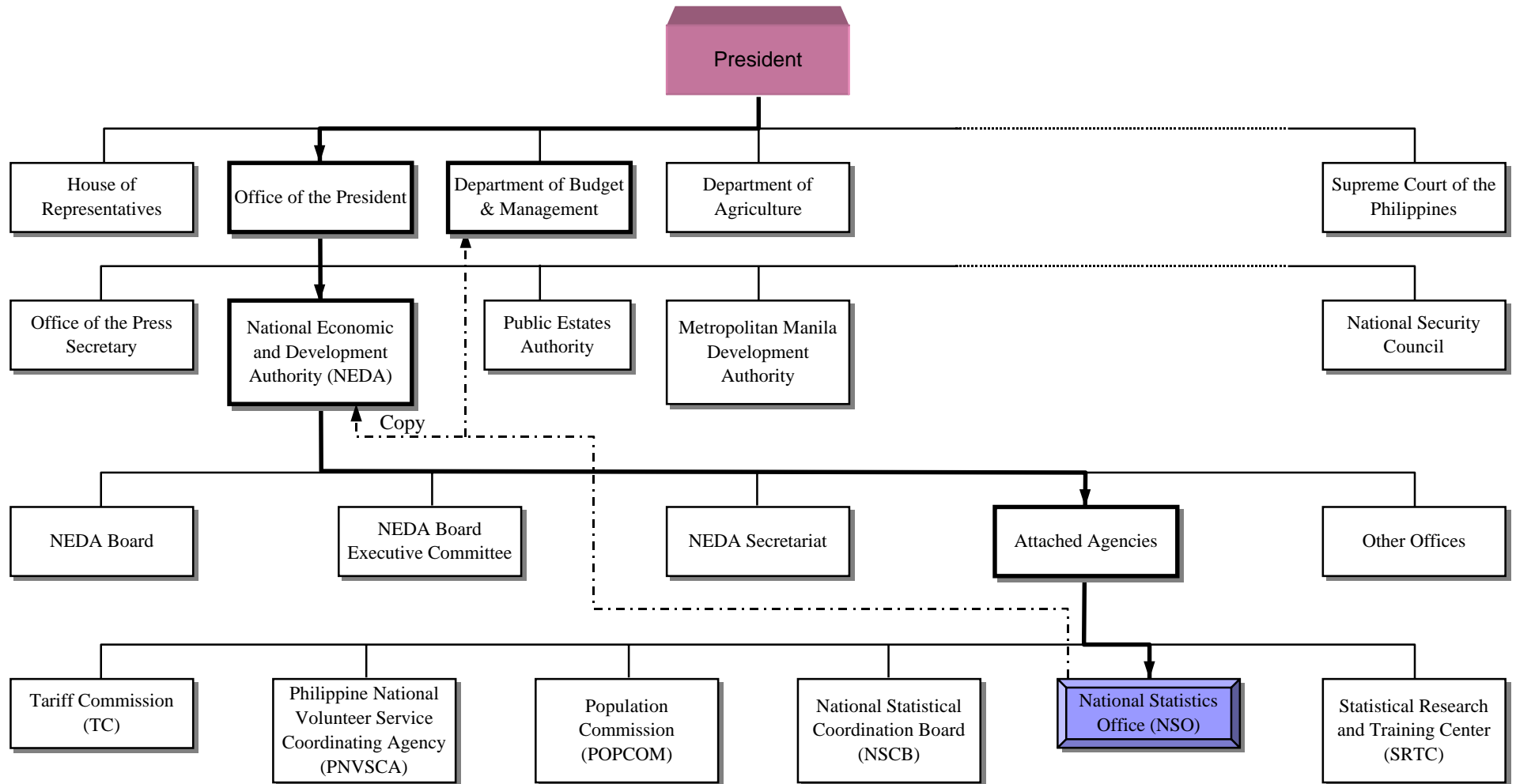
- Programs: Designated surveys that are implemented at intervals of less than one year
- Projects: Statistical surveys other than Programs

Although the CPBI is a designated survey carried out regularly, it is treated as a Project because it is implemented every five years. The ULE is a designated survey

that is carried out every other year, but it is treated as a Project in terms of its budgetary scale.

Of the five Departments, the ITSD oversees establishment surveys. The surveys overseen by the four Divisions of the ITSD are as shown in Table 11-4.

Figure 11-3 Philippine Government



Note: — Management Flow - - - Budget Reporting Flow

Figure 11-4 National Statistics Office Organizational Chart

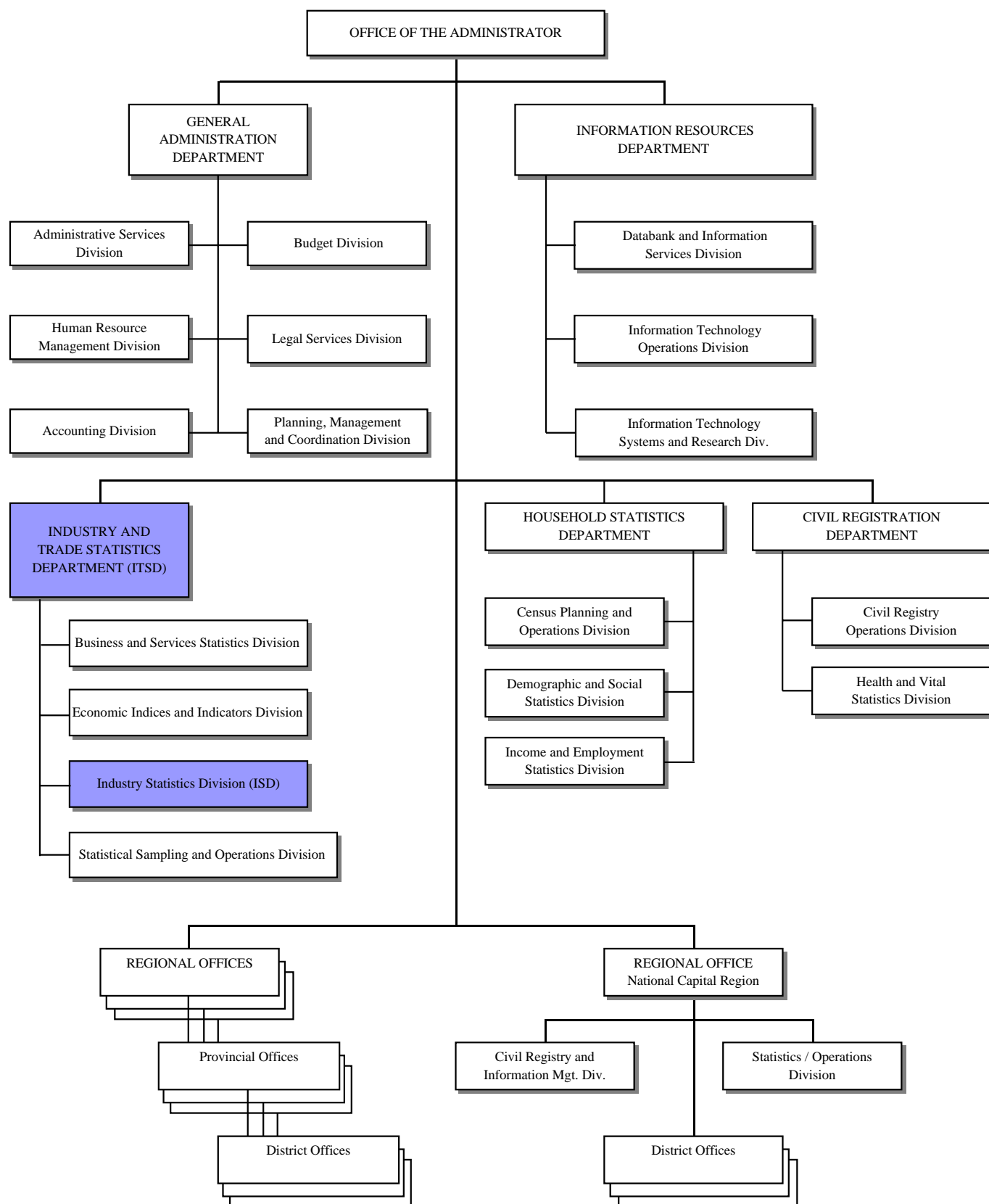


Table 11-3 NSO Statistics

Programs	Projects	
	Funded by Philippine Government	Funded by Foreign Assistance
<ul style="list-style-type: none"> - ASPBI (Annual Survey of Philippine Business and Industry) - QSPBI (Quarterly Survey of Philippine Business and Industry) - MISSI (Monthly Integrated Survey of Selected Industries) - Price Indicators (CPI, WPI, and PPI) - Trade Statistics - ASCPLG (Annual Survey of Construction Projects of Local Government) - DOMSTAT (Commodity Flow Statistics) 	<ul style="list-style-type: none"> - CPBI (Census of Philippine Business and Industry) - ULE (Updating of List of Establishments) - Input-Output Survey - ICT (Survey on Information and Communication Technology) - Survey on Subcontracting Activities of Establishments - Total Factor Productivity - Commodity Outlet Survey - Generation and Revising of CPI for 2001 	

Table 11-4 NSO Survey by ITSD

	Establishment Surveys				Price Indicators			List of Establishments	Trade Statistics
	CPBI	ASPBI	QSPBI	MISSI	CPI	WPI	PPI		
Survey Interval	5 years	1 year	3 month	1 month	1 month	1 month	1 month	1 year	1 month
Industry & Trade Statistics Department									
- Business & Services Statistics Division	○	○	○						
- Economic Indices & Indicators Division									
Price Indicators Section					○	○	○		
Trade Statistics Section									○
- Industry Statistics Division (ISD)									
Manufacturing Section	○ ¹⁾	○ ¹⁾	○ ¹⁾	○ ¹⁾					
Non-Manufacturing Section	○ ²⁾	○ ²⁾	○ ²⁾						
- Statistical Sampling & Operations Divisions			○					○	

1) Manufacturing

2) Agriculture, Forestry, Fishing, Mining/Quarrying, Electricity/Gas/Water Supply, Construction

(3) Organizational structure for implementing the current MISSI

NSO employees are divided into the following grades: Statistician Grade I to Statistician Grade V, Assistant Statistician, and Aide. Table 11-5 shows the number of employees in the various ITSD Divisions.

Table 11-5 Staffs of ITSD

Industry & Trade Statistics Department (ITSD)	Statisticians	Assistants/ Aides
Industry & Trade Statistics Department	4	1
Business & Services Statistics Division	19	12
Economic Indices & Indicators Division	20	21
Industry Statistics Division (ISD)	18	13
Statistical Sampling & Operations Division	10	5

The Industry Statistics Division (ISD) of the ITSD is responsible for implementing the current MISSI. Figure 8-19 shows a flowchart of the survey operations involved in the MISSI. Operations carried out at the Head Office include transcription of data on posting sheets, data verification, imputation/editing, encoding, tabulation, and index computation.

For the operations of transcription of data on posting sheets, and data verification and imputation/editing on them, there is an assigned staff in charge of each target sector. Generally, there is one per sector, but for some sectors, several staffs are assigned. The Food Manufacturing sector is unique in that six staffs are assigned to this sector. Of the total of 31 employees in the ISD, 23 are assigned to a sector of some kind, although not full-time. There are four types of posting sheets, differentiated by content, and those that have been through the imputation/editing stage are used for encoding. The operations then proceed from tabulation to index computation, which is the final stage of processing, and which is normally handled entirely by one person.

There is only one computer available for the MISSI.

(4) Recommendations for implementing the new MISSI

The number of establishments targeted by the new MISSI cannot be determined at the present stage because except for the Garments sector, no final decision has been made as to the number of sectors to which the indirect method will be applied. Although it will be larger than that of the current MISSI, there would not be a significant difference. However, the volume of data collected from each establishment will be larger. The absolute figures for each commodity (group) will be added as disseminated data, and the number of indices targeted for dissemination will be incomparably larger than that of the current MISSI.

The fieldwork carried out on a monthly basis by the enumerators will increase, but even more than that, it will become necessary to increase the number of staff at the Head Office. A total of six computers can be used to process data for the new MISSI. Of these six, one will definitely be needed to compute indices. Dividing the target sectors into five groups, it is recommended to allocate one computer to each group. When staff assignments are made, those who are specialists in particular sectors for the current MISSI will continue to supervise those same sectors.

In the new MISSI, closer contact with industrial private sectors will be indispensable in verifying the survey data and improving survey tools. It will be necessary to reinforce not only the computer system, but also an infrastructure to support communication with external entities.

11.5.2 Budget

Every April, the NSO submits a budget proposal to the DBM, with a copy also being submitted to the NEDA. The NSCB is involved only in coordinating functions regarding the NSO budget, and does not have the right to make decisions. Budget proposals for Programs and Projects are divided into Baseline Budget and Above Baseline proposals.

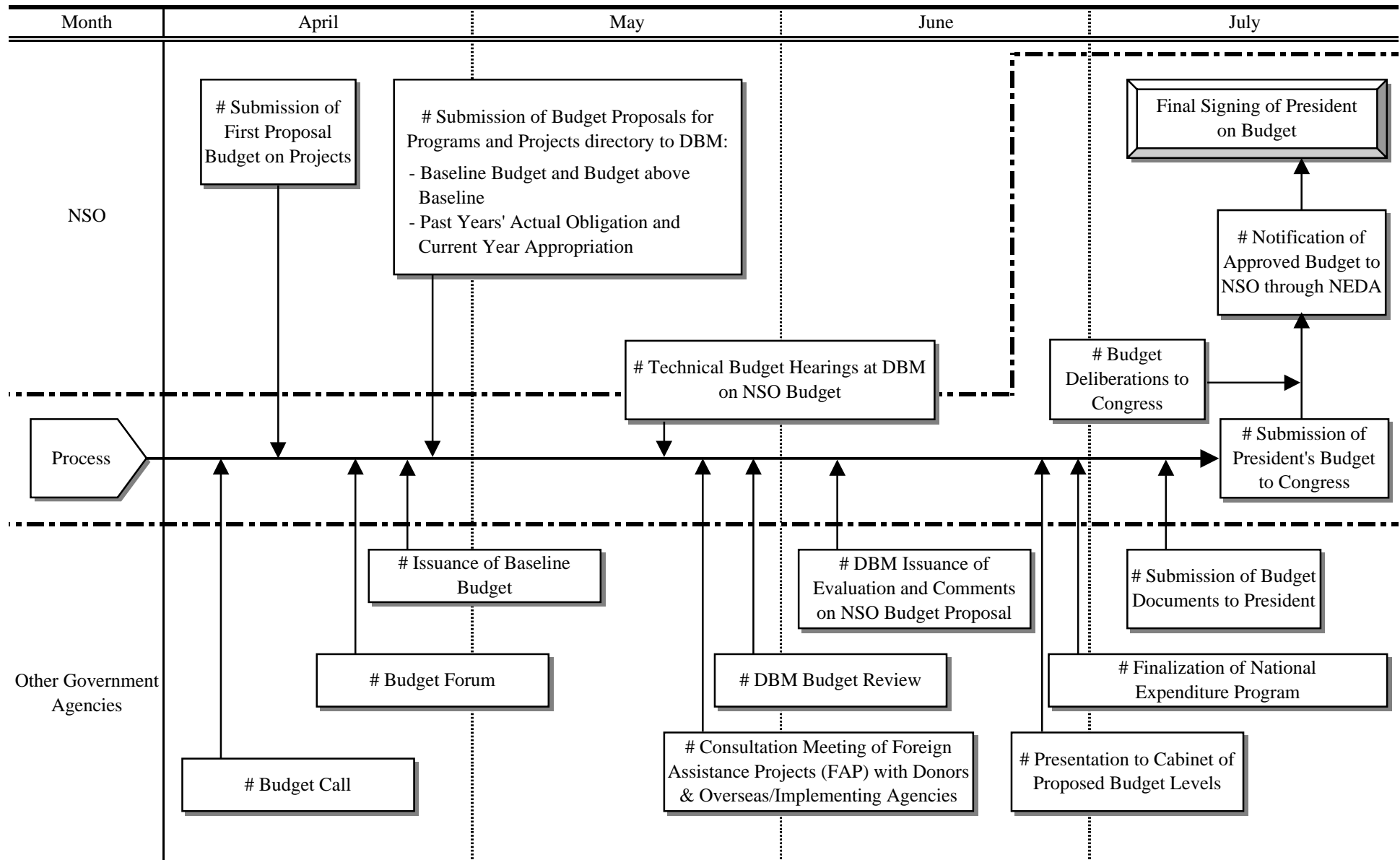
Figure 11-5 shows the flow of operations by which fiscal budgets are drafted, submitted, and approved.

Budget figures that receive final approval from the government are generally below the proposed figures. After the budget has been decided, the NSO internally re-

allocates budgets to the various surveys. The government approval is issued with respect to the total amount of the budget, and does not stipulate which surveys are to be implemented and which are to be temporarily tabled. Decisions concerning which surveys are to be implemented within the established budget are made through mutual discussion between the NSO and the NSCB.

The budget of the NSO for the year 2002 has been approved. A part of the MISSI budget with an increment will be allocated for the MSP pilot survey. When the new MISSI becomes one of the designated surveys in the future, it will be implemented with the budget for programs.

Figure 11-5 Deliberations Process of NSO Yearly Budget



Annex

Annex-1 Commodity Selection Work Sheet

Commodity Selection Work Sheet

Target Sector 151: Production, processing and preservation of meat, fish and other seafoods, fruit, vegetables, oils and fats, including slaughtering and meat packing

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
151: Production, processing and preservation of meat, fish and other seafoods, fruit, vegetables, oils and fats, including slaughtering and	1511: Slaughtering and meat packing	15110: Slaughtering and meat packing	31113: Dressing and Packing of Poultry Including Rabbit	2,110 (3.8)	4,583,908 (8.7)	1,231,757 (9.3)
	1512: Production, processing and preserving of meat and meat products	15120: Production, processing and preserving of meat and meat products				
			31114: Meat Processing, Curing, Preserving and Canning	8,896 (16.2)	8,721,854 (16.6)	2,005,943 (15.1)
	1513: Processing and preserving of fish and fish products and other seafoods	15131: Canning/packing of fish and other marine products	31151: Canning of Fish and Other Marine Products	11,519 (20.9)	5,210,250 (9.9)	1,165,319 (8.8)
		15132: Drying of fish and other marine products	31152: Drying of Fish and Other Marine Products	1,916 (3.5)	1,061,519 (2.0)	181,216 (1.4)
		15133: Smoking of fish and other marine products	31153: Smoking of Fish and Other Marine Products	38 (0.1)	884 (0.0)	498 (0.0)
		15134: Manufacture of fish paste (bagoong) and fish sauce (patis)	31154: MFR of Fish Paste (Bagoong) and Fish Sauce (Patis)	620 (1.1)	174,083 (0.3)	71,364 (0.5)
		15135: Processing of seaweeds; manufacture of agar-agar or carageenen	31155: MFR of Dried Agar-Agar (Gulaman)	275 (0.5)	330,494 (0.6)	43,646 (0.3)
		15136: Production of fishmeal/prawn feeds	31282: Manufacture of Fish Meal Feed	190 (0.3)	413,450 (0.8)	60,743 (0.5)
		15137: Manufacture of unprepared animal feeds from fish, crustaceans and mollusks and other aquatic animals	31284: MFR of Unprepared Animal Feeds	s (---)	s (---)	s (---)
		15139: Processing, preserving and canning of fish, crustacean and other sea foods, n.e.c.	31159: Procg, Preserving and Canning of Fish, Crustacean and Other Seafoods, n.e.c.	4,607 (8.4)	4,786,270 (9.1)	418,086 (3.1)
	1514: Processing and preserving of fruits and vegetables	15141: Canning/packing and preserving of fruits and fruit juices	31141: Canning and Preserving of Fruits and Fruit Juices	15,844 (28.8)	8,982,635 (17.1)	4,789,770 (36.0)
		15142: Canning/packing and preserving of vegetables and vegetable juices	31142: Canning & Preserving of Vegetables & Vegetable Juices	244 (0.4)	429,943 (0.8)	213,429 (1.6)
		15143: Manufacture of fruit and vegetable sauces	31143: Manufacture of Fruit and Vegetable Sauces	2,139 (3.9)	1,321,433 (2.5)	399,262 (3.0)
		15144: Quick-freezing of fruits and vegetables	31144: Quick-Freezing of Fruits and Vegetables	s (---)	s (---)	s (---)
		15145: Manufacture of potato flour and meal	31190: Flour Milling, Except Cassava	2,703 (4.9)	10,187,649 (19.4)	1,455,992 (10.9)
	1515: Manufacture of vegetable and animal oils and fats	15151: Production of crude vegetable oil, cake and meals, other than crude coconut oil, copra cake, meals and pellets	31171: Production of Crude Veg Oil, Cake & Meal, Except Coconut Oil	1,518 (2.8)	1,492,047 (2.8)	312,831 (2.4)
		15152: Manufacture of refined coconut and other vegetable oil and margarine	31172: Manufacture of Refined Coconut and Veg Oil and Margarine	2,423 (4.4)	4,884,010 (9.3)	958,037 (7.2)
		15153: Manufacture of fish oil and other marine animal oils	31173: Manufacture of Fish Oil and Other Marine Animal Oils	na (---)	na (---)	na (---)
		15154: Manufacture of unprepared animal feeds from vegetable, animal oils and	31284: MFR of Unprepared Animal Feeds	s (---)	s (---)	s (---)
		15159: Manufacture of vegetable and animal oil and fats, n.e.c.	31179: Manufacture of Veg and Animal Oils and Fats, n.e.c.	s (---)	s (---)	s (---)
TOTAL			55,042 (100.0)	52,580,429 (100.0)	13,307,893 (100.0)	

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 90.2

Commodity Selection Work Sheet

Target Sector 151: Production, processing and preservation of meat, fish and other seafoods, fruit, vegetables, oils and fats, including slaughtering and meat packing

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
15110: Slaughtering and meat packing	Dressed or packed meat of cattle, hogs, sheep, goats, horses, poultry, rabbits, game or other animals, including whales processed on land or on vessels specialized for this work	Dressed chicken Beef loaf	12 12	Dressed chicken Fresh chicken	kilo per kilo	 Poultry Hogs	 kg or pieces kg		
15120: Production, processing and preserving meat and meat products	Chilled or frozen meat or poultry; preserved and prepared meat and meat products by such processes as drying, smoking, salting, immersing in brine or canning	Cooked ham Bacon Chorizo Corned beef Processed meat Canned meat Sausages	12 12 12 12 12 12 24	Hotdog Bacon Corned Beef Sausage Cold Cuts	per kilo per 200 gm per case per case 1 kg	Ham Bacon Sausage Canned meat products Fresh or frozen meat	kg kg kg case kg	Corned beef Sausage Processed/canned meat (chicken, hog and beef)	50,408 78,832 567,074
15131: Canning/packing of fish and other marine products	Canned/packed fish, crustaceans and mollusks, and other aquatic animals	Tuna Sardines Canned fish Marine frozen	12 24 12 24	Canned Tuna Sardines Squid Shrimp	48 cans/case 50 cans/case 1 ctn = 8 kgs 1.3 kg x 6	Canned tuna Canned sardine Fresh or frozen fish	case case case	Processed/canned tuna Processed/canned sardine Processed/canned squid/octopus Processed/canned shrimp Processed/canned bonito Processed/canned mackerel Processed/canned herring Processed/canned shell	41,948,674 924,884 6,083,962 62,044,961 25,028,673 508,579 44,432 6,083,962
15141: Canning/packing and preserving of fruits and fruit juices	Canned/packed fruits and fruit juices	Processed fruits Fruits juice Canned pineapple	12 12 12	Pine juice Pineapple juice canned Pineapple tidbits Powdered Juice Drink Fiesta Fruit Cocktail	12/case case case 24 pouch/case 24/case	Pineapple juice Canned & preserved fruits Pineapple slice Fruit cocktail Guava jelly Preserved mango Orange concentrates	case case case ??? case case case	Processed/canned banana Processed/canned pineapple Calamansi juice Processed/canned mango Orange juice Mango juice	9,091,825 43,565,788 134,286 3,335,378 69,221 1,042,104
15143: Manufacture of fruit and vegetable sauces	Fruit and vegetable sauces (e.g., tomato sauce and paste)	Tomato sauce Spaghetti sauce Ketchup Tomato paste Soy sauce	12 12 12 12 12	Tomato sauce Spaghetti Sauce	48/case 48/case	Tomato sauce Ketchup Soy sauce	case case case	 Ketchup Soya sauce	 658,202 1,090,643
15145: Manufacture of potato flour and meal	Flour products except cassava	Flour Corn grits	12 12					Potato flour Wheat flour	62,080 22,507
15152: Manufacture of refined coconut and other vegetable oil and margarine	Refined coconut oil and vegetable oil (including corn oil), and margarine			Vegetable shortening Edible Oil Acid Oil Coconut edible oil	kilo kilograms kilograms case	Vegetable lard Cooking oil Margarine	case case case	vegetable oil Coconut oil Cocoa butter, oil/fat	1,258,834 9,534,862 3,334,224

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 155: Manufacture of beverages

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
155: Manufacture of beverages	1551: Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials	15511: Manufacture of distilled, potable alcoholic beverages (e.g. whisky, brandy, gin, etc.)	31311: Distilling, rectifying and blending of alcoholic liquors	2,821 (6.9)	4,469,008 (7.9)	923,096 (3.0)
		15512: Production of ethyl alcohol	31312: Distilling ethyl alcohol, except from sulphite residues of pulp manufacturing	595 (1.5)	637,431 (1.1)	167,481 (0.6)
	1552: Manufacture of wines	15521: Fruit wine manufacturing	31321: Native fruit wine manufacturing	na (----)	na (----)	na (----)
		15529: Wine manufacturing, n.e.c.	31329: Wine manufacturing, n.e.c.	198 (0.5)	13,335 (0.0)	4,342 (0.0)
	1553: Manufacture of malt liquors and malt	15530: Manufacture of malt liquors and malt	31330: Malt liquors and malt	4,170 (10.2)	18,829,002 (33.2)	11,438,820 (37.7)
	1554: Manufacture of soft drinks; bottling of mineral waters	15541: Manufacture of soft drinks	31340: Soft drinks and carbonated water manufacturing	17,285 (42.2)	23,728,955 (41.9)	12,986,176 (42.8)
		15543: Bottling of mineral waters				
		15542: Manufacture of drinks flavored with fruit juices, syrups or other materials	31141: Canning and preserving of fruits and fruit juices	15,844 (38.7)	8,982,635 (15.9)	4,789,770 (15.8)
TOTAL				40,913 (100.0)	56,660,366 (100.0)	30,309,685 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 96.3

Commodity Selection Work Sheet

Target Sector 155: Manufacture of beverages

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
15530: Manufacture of malt liquors and malt	Manufacture of malt & malt liquor such as beer, ale, porter and stout	Beer	12 times	Beer Beer	24 bot/case 6 bot/case	Beer	24 bot/case	Beer	3,978,328
15541: Manufacture of soft drinks	Manufacture of non-alcoholic beverages	Soft drinks	12 times	Soft drinks	case	Soft drinks	24 bot/case	Soft drinks	131,678
15543: Bottling of mineral waters	Production; bottling at the source of spa or mineral water	Bottled water	12 times					Mineral water	28,164
15542: Manufacture of drinks flavored with fruit juices, syrups or other materials	Manufacture of drinks flavored with fruit juices, syrups or other materials	Juice (HI-C)	reported only in 2000					lemonade coconut water prepared as beverage	1,568 270,511

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 160: Manufacture of tobacco products

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
160: Manufacture of tobacco products	1601: Manufacture of cigarettes	16010: Manufacture of cigarettes	31410: Distilling, rectifying and blending of alcoholic liquors	2,821 (11.3)	4,469,008 (9.4)	923,096 (3.6)
	1602: Manufacture of cigars	16020: Manufacture of cigars	31420: Distilling ethyl alcohol, except from sulphite residues of pulp manufacturing	595 (2.4)	637,431 (1.3)	167,481 (0.7)
	1603: Manufacture of chewing and smoking	16030: Manufacture of chewing and smoking	31430: Native fruit wine manufacturing	na (----)	na (----)	na (----)
	1604: Curing and redrying tobacco leaves	16040: Curing and redrying tobacco leaves	31440: Malt liquors and malt	4,170 (16.8)	18,829,002 (39.5)	11,438,820 (44.8)
	1609: Tobacco manufacturing, n.e.c.	15541: Tobacco manufacturing, n.e.c.	31490: Soft drinks and carbonated water manufacturing	17,285 (69.5)	23,728,955 (49.8)	12,986,176 (50.9)
TOTAL				24,871 (100.0)	47,664,396 (100.0)	25,515,573 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 95.7

Commodity Selection Work Sheet

Target Sector 160: Manufacture of tobacco products

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
15530: Manufacture of malt liquors and malt	Manufacture of malt & malt liquor such as beer, ale, porter and stout	Beer	12 times	Beer Beer	24 bot/case 6 bot/case	Beer	24 bot/case	Beer	3,978,328
15541: Manufacture of soft drinks	Manufacture of non-alcoholic beverages	Soft drinks	12 times	Soft drinks	case	Soft drinks	24 bot/case	Soft drinks	131,678
15543: Bottling of mineral waters	Production; bottling at the source of spa or mineral water	Bottled water	12 times					Mineral water	28,164
15542: Manufacture of drinks flavored with fruit juices, syrups or other materials	Manufacture of drinks flavored with fruit juices, syrups or other materials	Juice (HI-C)	reported only in 2000					lemonade coconut water prepared as beverage	1,568 270,511

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 181 : Manufacture of garments

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
181: Ready-made garments manufacturing	1811: Men's and boy's garment manufacturing	18110: Men's and boy's garment manufacturing	32221: Men's & Boy's Garment Manufacturing	17,810 (18.0)	3,573,498 (15.2)	1,699,404 (14.3)
	1812: Women's and girls' and babies' garment manufacturing	18120: Women's and girls' and babies garment manufacturing	32222: Women's, Girls' and Babies Garment Manufacturing	76,173 (76.8)	19,178,156 (81.6)	9,912,253 (83.2)
	1813: Ready-made embroidered garments manufacturing	18130: Ready-made embroidered garments manufacturing	32220: Ready-Made Embroidered Garments Manufacturing	5,180 (5.2)	740,737 (3.2)	303,346 (2.5)
TOTAL				99,163 (100.0)	23,492,391 (100.0)	11,915,003 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 100.0

Commodity Selection Work Sheet

Target Sector 181 : Manufacture of garments

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
18110: Men's and boy's garment manufacturing	Men's and boy's garment manufacturing	Jackets	?	V-neck sweater	piece	Not included in WPI		Raincoats, overcoats, jackets, anoraks, wind-cheaters, blazers	17,134,845
		Pants/trouser	?	Men's/boy's jeans, jogging pants	peace			Trousers, shorts, breeches	51,911,944
		Briefs, Undershirt	?	Tops	peace			Polo shirts, sports shirts	26,198,051
		Shirt	?	Briefs, Undershirt	dozen			Underpants, briefs	45,102
				T-shirt	dozen			Suits, ensembles Nightshirts, pajamas Singles, bathrobes	277,867
18120: Women's and girls' and babies garment manufacturing	Women's and girls' and babies garment manufacturing	Blazer	?	Blazer, blouses, knitted sweater	piece	Not included in WPI		Overcoats, capes, anoraks, jackets	
		Jeans	?	Ladies jeans, pants, shorts	piece			Trousers, breeches	
		RTW	?					Dresses, skirts, blouses, shirts	
		Lingerie	?					Nightdresses, pajamas, negligees & bedjackets	
		Underwear, bras, half-sli	?	Panties	dozen			Slips, petticoats, panties, girdles, bras	
		Swimwear	?					Swimwear	
		Corsetry	?					Singles, bathrobes	
		Infants wear/children's wear	?					Suits, ensembles Baby dresses, baby blouses, skirts Coats, jackets, suits, costumes Panties, diapers Stockings, socks Other baby accessories	

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 232: Manufacture of refined petroleum products

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
232: Manufacture of refined petroleum products	2320: Manufacture of refined petroleum products	23200: Manufacture of refined petroleum products	35300: Petroleum Refineries	2,677 (100.0)	111,689,967 (100.0)	20,001,540 (100.0)
TOTAL				2,677 (100.0)	111,689,967 (100.0)	20,001,540 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 100.0

Commodity Selection Work Sheet

Target Sector 232: Manufacture of refined petroleum products

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
23200: Manufacture of refined petroleum products	Manufacture of refined petroleum products	Fuel oil	?	Fuel Oil	liters				
		Petroleum	?			Crude Petroleum Oil	kg	Petroleum Naphtha	65,740,714
		Premium	?	Premium	liters				
		Regular	?			Fuel oil, bunker	liter	Fuel Oils	69,984,393
		Lubricant, grease	?			Lubricating oil, gear oil	gal, liter	Lubricating Oil	913,776
		Grease oil	?					Mineral Oil	114
		Bituminous	?					Bit Mixt Based on Nat'l	23,187
		Distillates	?					Asphalt/Bit	
		Unleaded	?	Gasoline	liters	Gasoline	liter	Paraffin Wax	765,098
		Auto Diesel	?	Diesoline	liters	Diesel oil, automotive	liter	Carbon Black Feedstock Oil	15,341
				Premium Low Lead	liters				
		Turbo jet	?	AV Turbo	liters				
				Regular Fuel Oil	liters				
		Residual/LPG	?	LPG	kg	LPG	kg	Liquefied Petroleum Gas	32,110,300
		Kerosene	?	Kerosene	liters	Kerosene	tin, liter		

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 242- 243: Manufacture of other chemical products and man-made fibers

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Number of Establishment	Total Employment (%)	Value of Output (%)	Value-Added (%)
242: Manufacture of other chemical products	2421: Mfr of fertilizers and nitrogen compounds	24210: Mfr of fertilizers and nitrogen compounds	35120: Mfr of fertilizers	12	1,906 (4.8)	7,008,218 (9.0)	2,406,450 (7.3)
	2422: Mfr of fertilizers and nitrogen compounds	24220: Mfr of pesticides and other agro-chemical products	35140: Mfr of pesticides, insecticides and herbicides	11	1,151 (2.9)	2,007,773 (2.6)	661,522 (2.0)
	2423: Mfr of paints, varnishes and similar coatings, printing ink and	24231: Mfr of paints	35211: Mfr of paints	43	3,403 (8.6)	5,367,482 (6.9)	1,012,420 (3.1)
		24232: Mfr of varnishes, lacquers, shellac and stains	35212: Mfr of varnishes, lacquers, shellac and stains	3	45 (0.1)	40,896 (0.1)	10,176 (0.0)
		24233: Mfr of paint removers, thinners & brush cleaners	35213: Mfr of paint removers, thinners & brush cleaners				
		24234: Mfr of pigments & other coloring matter	35219: Mfr of paint products, n.e.c.	S	S	S	S
		24235: Mfr of printing ink	35295: Mfr of inks	18	911 (2.3)	1,336,723 (1.7)	315,539 (1.0)
		24239: Mfr of paint products, n.e.c.	35219: Mfr of paint products, n.e.c.	S	S	S	S
	2424: Mfr of plastics in primary forms and of synthetic rubber	24241: Mfr of drugs and medicines	35220: Mfr of drugs and medicines	86	13,436 (34.0)	24,409,338 (31.3)	10,269,437 (31.0)
		24242: Mfr of surgical dressings, med wadding ...	39040: Mfr of surgical, dental, medical and orthopedic supplies	10	1,103 (2.8)	305,271 (0.4)	182,581 (0.6)
		24243: Mfr of cement used for dentistry					
	2425: Mfr of plastics in primary forms and of synthetic rubber	24251: Mfr of soap and detergents	35231: Mfr of soap and synthetic detergents	28	5,637 (14.2)	22,600,579 (29.0)	12,881,490 (38.9)
		24252: Mfr of cleaning prepns, except soap & detergents	35232: Mfr of cleaning prepns, except soap & detergents	S	S	S	S
		24253: Mfr of waxes and polishing prepns	35291: Mfr of waxes and polishing prepns	7	266 (0.7)	527,734 (0.7)	170,606 (0.5)
		24254: Mfr of perfumes, cosmetics & other toilet	35233: Mfr of perfumes, cosmetics & other toilet	33	3,711 (9.4)	5,146,972 (6.6)	1,848,778 (5.6)
	2429: Mfr of plastics in primary forms and of synthetic rubber	24291: Mfr of explosives and fireworks	35294: Mfr of explosives and fireworks	6	450 (1.1)	504,415 (0.6)	276,776 (0.8)
		24292: Mfr of matches	35293: Mfr of matches	3	923 (2.3)	1,223,572 (1.6)	853,054 (2.6)
		24293: Mfr of writing and drawing ink	35295: Mfr of inks	18	911 (2.3)	1,336,723 (1.7)	315,539 (1.0)
		24294: Mfr of glues and adhesives	35296: Mfr of glues and adhesives	18	1,017 (2.6)	998,092 (1.3)	241,805 (0.7)
		24295: Mfr of activated charcoal	35299: Mfr of other chemical prods., n.e.c.	19	812 (2.1)	1,053,858 (1.4)	371,977 (1.1)
		24299: Mfr of miscellaneous chemical products					
243: Manufacture of other man-made fibers	2431: Mfr of synthetic or artificial filament	24310: Mfr of plastic synthetic resins	32112: Fiber and filament mills	13	3,369 (8.5)	3,628,721 (4.6)	1,096,881 (3.3)
	2432: Mfr of man-made filament tow or staple fibers, except glass	24320: Mfr of man-made filament tow or staple fibers, except glass	35132: Mfr of man-made fibers except	3	508 (1.3)	552,401 (0.7)	167,086 (0.5)
TOTAL					39,559 (100.0)	78,048,768 (100.0)	33,082,117 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 82.8

Commodity Selection Work Sheet

Target Sector 242- 243: Manufacture of other chemical products and man-made fibers

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
24210: Manufacture of fertilizers and nitrogen compounds	Mixed or composite fertilizers such as Perfect Gro or 14-14-14, 18-46-0, 16-20-0, ammosol or 20-0-0; ammonium sulfate and ammonium nitrate	Perfect Gro	24 times	Perfect Gro	bag	Perfect Gro	50 kg	Mineral/cheml fertilizer contg N, P and K Ammonium Sulfate Ammonium Nitrate	15,969,042 677,415 4,735,419
		18-46-0	12 times	Super Gro	bag	Ammonium Sulfate	50 kg		
		16-20-0	12 times	18-46-0	bag	Ammosol	50 kg		
		Ammosol	24 times						
		Sulfur dioxide	12 times						
		Super Gro	11 times						
24241: Manufacture of drugs and medicine	Antibiotics such penicillin, sulfonamides, tetracycline, streptomycin, chloramphenicols and other antibiotics combination; vitamins such as vitamin A, D and E, Vit B and B complex, Vit C and multivitamins w/ or w/o iron, pre- and post-natal vitamins, vitamin drops, vitamin powder, appetite stimulants, and other nutritional preparations and analgesics	Antibiotics	50 times	Antibiotics	bottle	Antibiotics, penicillin	60 vials	Antibiotics Medicament w/vitamins Analgesic & antipyretics	412,975 1,680,508 573,002
		Respiratory	20 times	Gastroentorology	50 tabs/box	Antibiotics, chloromycetin	100 caps		
		Vitamins	20 times	Hematinics	100 tabs/bot	Vitamins, Thiamine HCl	bot of 500		
		Gastro preps	20 times	Respiratory	bottle	Vitamins, Enervon C	bot of 100		
				Analgesic	bottle	Vitamins, Revicon,	bot of 500		
				Dewormer	pack	Vitamins, Ascorbic acid	bot		
				Dextrose	100 ml	Cortal	box of 500		
				Antibacterial	50 caps/bot	Aspirin	1000 tabs		
				Vitamins	pouch				
				Antibiotics	100 tab/box				
				Vitamins	100 tabs/box				
24251: Manufacture of soap and detergents	Toilet soap including medicated and laundry soap such as detergent bars and powder	Toilet soap	36 times	Toilet soap	96 pcs/case	Toilet soap	gross	Soap & org surface-active prods and preps in bar, cake, pcs/shape for toilet Surface-active, washing, cleaning	1,362,327 4,846,240
		Detergent bar	24 times	Bath soap	96 pcs/case	Laundry soap	case		
		Detergent granules	12 times	Laundry soap	bar				
24254: Manufacture of perfumes, cosmetics and other toilet preparations	Glycerin (crude or refined), skin lotions, shampoo, body powder	Shampoo		Shampoo	kilo/case				
		Lotion	23 times	Baby powder	12 pcs/pack	Baby powder	gross	Glycerol (glycerin) Shampoos Other beauty make-up for the care of skin	4,651,877 1,018,645 2,340,326
		Powder	24 times	Baby cologne		Vanishing cream	gross		
		Cologne	12 times	Baby oil					
		Baby oil	12 times	Glycerin	MT				

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 262: Manufacture of cement

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
262: Manufacture of cement	2620: Manufacture of cement	26200: Manufacture of cement	36300: Manufacture of cement	7,107 (100.0)	16,140,571 (100.0)	16,080,910 (100.0)
TOTAL				7,107 (100.0)	16,140,571 (100.0)	16,080,910 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 100.0

Commodity Selection Work Sheet

Target Sector 262: Manufacture of cement

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
26200: Manufacture of cement	This group includes manufacture of hydraulic cements, including Portland, aluminous slag and superphosphate, whether or not in the form of clinkers	Portland	60	Portland	kg/bag	Portland	40kg/bag	Oth Portland Cement	10,076,484
		Premium	12			Cement, white, prime/asano	40kg/bag	Other Hydraulic Cements, n.e.s.	527,087
		Pozzoland	60					Pozzolan Cement and Blended Pozzolan Cement	10,500

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 271: Manufacture of basic iron and steel

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES									
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)						
				Total Employment	(%)	Value of Output	(%)	Census Value-Added	Value-Added (%)	
271: Manufacture of basic iron and steel	2711: Operation of blast furnaces and steel making furnaces	27110: Operation of blast furnaces and steel making furnaces	37110: Biast Furnaces and Steel Making Furnaces	2,144	(11.1)	3,837,773	(10.8)	735,604	592,593	(4.5)
		2712: Operation of steel works and rolling mills	27121: Operation of rolling mills	37121: Rolling Mills	10,910	(56.4)	20,567,937	(57.7)	11,605,036	10,400,252
	2712: Operation of steel works and rolling mills	27122: Pipes and tubes manufacturing, iron or steel	37122: Pipe and Tube Manufacturing, Iron and Steel	3,278	(17.0)	2,458,461	(6.9)	643,905	581,026	(4.4)
		27123: Manufacture of pipe fittings of iron and steel	38191: Manufacture of Metal Sanitary Ware and Plumbing Fixtures	463	(2.4)	219,988	(0.6)	158,802	153,665	(1.2)
		27124: Manufacture of galvanized steel sheets, tin plates and other coated metal products made in steel works or rolling mills	37123: Manufacture of Galvanized Steel, Tin Plates & Other Coated Metal Products							
		27129: Steel works, n.e.c.	37129: Steel Works & Rolling Mills, n.e.c.		6,903,197	(19.4)	1,126,444	1,012,998	(7.7)	
			37131: Cast Iron Manufacturing	1,614	(8.3)	426,510	(1.2)	138,592	123,679	(0.9)
			37132: Cast Steel Manufacturing	196	(1)	75,713	(0.2)	27,614	22,053	(0.2)
			37190: Iron & Steel Basic Industries, n.e.c.	731	(3.8)	1,138,143	(3.2)	600,248	256,313	(2.0)
TOTAL				19,336	(100.0)	35,627,722	(100.0)		13,142,579	(100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 95.7

Commodity Selection Work Sheet

Target Sector 271: Manufacture of basic iron and steel

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
27110: Operation of blast furnaces and steel making furnaces	Blast furnaces, steel converters, rolling and finishing mills. Manufacture of primary iron and steel products, i.e., production of primary ferrous metal products in granular or powder form or in the form of pigs, blocks, lumps or liquids from ore or scrap							Ferro-Silicon-Manganese Other Ferro-Silicon	1,260,000
27121: Operation of rolling mills	Blooms, billets, slates, or other forms of semi-finished iron, steel or alloy steel; rolled, drawn extruded or forged iron, steel or alloy steel products	Billets Steel bars	24 times	Steel bars	Kg	Steel bars (round)	Kg./pc.	Other Flat Rolled Products of Iron or Non-Alloy Steel, of a Width of 600 MM or more, not Clad, Plate	3,367,723
			55 times	Plain round bar	Kg./meter	Deformed bar		Flat-Rolled Products, of Iron or Non-Alloy Steel, Plated or Coated W/Chromium Oxides or W/Chromium	1,064,596
				Deformed bars	Kg./meter	Angle bar		Flat-Rolled Products of Iron or Non-Alloy Steel, [Containing by Weight 0.60% or more of Carbon,] not	473,809
						Flat bar		Oth Bars & Rods of High Speed Steel	218,580
27122: Pipes and tubes manufacturing, iron and steel	Tubes, pipes, seamless, welded, of iron or steel	Galvanized iron pipe	12 times			G.I. Pipe, sched 40, 1/2 dia	piece	Flanges, of Stainless Steel	3,545,942
		Steel pipes	24 times			G.I. Elect conduit pipe, 1/2 dia. Elect metal tubing, EMT		Galvanized Iron/Steel Pipe & Tube, Welded, Type, 1.270-7.620 CM Nominal Diameter	8,562
27124: Manufacture of galvanized steel sheets, tin plates and other coated metal products made in steel or rolling mills	Tin plate or tin plate bar, terneplate or galvanized steel sheet	Galvanized Iron Sheets (G.I.) Tin plates	67 times 24 times	G.I. Sheet G.I. Color sheet Color steel tile roof Tin plates	Metric tons				
27129: Steel works, n.e.c.	Products may be subjected to treatment while hot or cold or may start hot and end cold such as railway and tramway track construction material (e.g. Unassembled rails, and other finished iron or steel products).	Hot rolled coils (HRC) Cold rolled coils (CRC)	12 times 12 times	Steel hot rolled coils Steel cold rolled coils Welding electrodes	Metric tons 20 kg./box				

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 321- 323: Manufacture of radio, television and communication equipment and apparatus

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
321: Manufacture of electronic valves and tubes	3210: Manufacture of electronic valves and tubes	32100: Manufacture of electronic valves and tubes	38329: MFR of Radiographic, Fluoroscopic & Other X-Ray Apparatus & Tubes & Other Elecnc Eqpt & Apparatus, n.e.c.	S (---)	S (---)	S (---)
322: Manufacture of semi-conductor devices and other electronic components	3220: Manufacture of semi-conductor devices and other electronic components	32200: Manufacture of semi-conductor devices and other electronic components	38325: MFR of Parts & Supplies Used for Radio, TV & Commun Eqpt & Apparatus	53,626 (97.9)	42,281,208 (98.0)	10,528,914 (96.9)
323: Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	3230: Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	32300: Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy	38324: MFR of Radio and TV Transmitting, Signaling and Detection Eqpt and Apparatus	1155 (2.1)	847031 (2.0)	331271 (3.1)
TOTAL				54,781 (100.0)	43,128,239 (100.0)	10,860,185 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 96.9

Commodity Selection Work Sheet

Target Sector 321- 323: Manufacture of radio, television and communication equipment and apparatus

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
32200: Manufacture of semi-conductor devices and other electronic components	Manufacture of diodes, transistor and similar semi-conductor devices; photosensitive semi-conductor devices including photo-voltaic cells; mounted piezo-electric crystals; electronic integrated and micro-assemblies; monolithic integrated circuits, hybrid integrated circuits, etc.	IC	12 times	IC plastic	piece			Integrated circuits	145,062,330
		Sensor	11 times						
		Semi-conductor	12 times						
		Capacitors	11 times					Piezo-electric crystals	22,569,477
		Safety switch	12 times					Diodes (light emitting or not)	
		Panel board	12 times						
		Printed circuit board	12 times					Other printed circuit	181,295,185
		Magnetic head/thin film head	12 times						
		Transistor	12 times	Thin filter transistor	piece			Transistors	124,696,158
		Flash/SPGA assembly	12 times	Head Gimbals assembly	piece				
		Flash/SPGA/Targam	12 times						
		Test							
		RF infrastructure	12 times						
		Isolator 1	6 times						
		Isolator 3	7 times						
		LCC	12 times	PLCC	piece				
				Microcircuits	unit			Other integrated circuits and microassemblies	752,906,323
								Parts of integrated circuits and microassemblies	178,054,426
				Voice coil motor	piece				
				Escutheon for car stereo	piece			Other fixed resistor, n.e.c	41,194,882

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 324: Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
324: Manufacture of radio and television receiving sets, sound recording and reproducing equipment	3240: Manufacture of radio and television receiving sets, sound recording and reproducing equipment	32400: Manufacture of radio and television receiving sets, sound recording and reproducing equipment	38321: Manufacture of Radio & TV Receiving Sets, Sound Recg and Reproducing Eqpt	8,524 (98.2)	16,139,289 (99.1)	3,873,555 (99.3)
			38322: MFR of Gramophone Records and Pre-Recorded Magnetic Tapes	156 (1.8)	150,137 (0.9)	26,563 (0.7)
TOTAL				8,680 (100.0)	16,289,426 (100.0)	3,900,118 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 99.3

Commodity Selection Work Sheet

Target Sector 324: Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
324: Manufacture of radio and television receiving sets, sound recording and reproducing equipment	This group includes manufacture of television receivers (including video monitors and video projectors), whether or not combined in the same housing with radio-broadcast receivers or sound or video recording or reproducing apparatus; reception apparatus for radio broadcasting including apparatus with sound recording or reproducing apparatus or a clock; magnetic tape recorders and other sound recording generators including those incorporating a sound reproducing device: telephone answering machine, cassette-type recorders, etc; video recording or reproducing apparatus; turntables (record decks), record players, cassette players, disc players and other sound reproducing apparatus, including gramophone records, pre-recorded magnetic tapes and cassette tapes; microphones, loudspeaker, headphones, earphones, amplifiers & sound amplifier sets regardless of the particular purpose for which the apparatus may be designed; specialized part for the equipment resulting from the activities classified in this class; pick-ups, tone arms, sound-heads, tables for turntables, record cutters, aerials of all kinds and aerial reflectors and aerial rotors.	Television		Television set	Unit	Television	Unit	Television receivers, color	35,059,120
		Karaoke		Radio	Unit	Radio	Unit	Radiobroadcast receiver, used in motor vehicle	60,535,685
		Stereo				Karaoke	Unit	Video monitors (and video projectors), black & white or other monochrome	2,537,454
		VHS				Car Stereo	Unit	Sound reproducing apparatus, cassette-type (other than pocket-size)	1,884,357
		CATV				SVR	Unit		
		CTV							
		Parts, home appliances							

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 341-343: Manufacture of motor vehicles, bodies, parts and accessories for motor vehicles

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
341: Manufacture of motor vehicles	3410: Manufacture of motor vehicles	34100: Manufacture of motor vehicles	38430: MFR & Assembly of Motor Vehicles	9,124 (49.7)	35,543,755 (84.4)	4,919,011 (76.5)
342: Manufacture of bodies (coachwork) for motor vehicles, trailers and semi-trailers	3420: Manufacture of bodies (coachwork) for motor vehicles, trailers and semi-trailers	34202: Manufacture of trailers and semi-trailers	38299: Manufacture of Machines and Eqpt, Except Elecl, n.e.c.	342 (1.9)	197,457 (0.5)	41,377 (0.6)
		34201: Manufacture of bodies (coachwork) for motor vehicles	38440: Rebuilding and Major Alteration of Motor Vehicles	1,053 (5.7)	552,023 (1.3)	111,844 (1.7)
343: Manufacture of parts and accessories for motor vehicles and their engines	3430: Manufacture of parts and accessories for motor vehicles and their engines	34300: Manufacture of parts and accessories for motor vehicles and their engines	38450: Manufacture of Motor Vehicle Parts and Accessories	7,850 (42.7)	5,822,872 (13.8)	1,358,919 (21.1)
TOTAL				18,369 (100.0)	42,116,107 (100.0)	6,431,151 (99.9)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 97.6

Commodity Selection Work Sheet

Target Sector 341-343: Manufacture of motor vehicles, bodies, parts and accessories for motor vehicles

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
34100: Manufacture of motor vehicles	Includes passenger cars, jeeps, commercial utility vehicles, trucks and buses	Cars	44 times	Passenger cars (300-2000 CC)	unit	Cars (Gemini, 1500, 4 cyl, CKD)	unit	Dumpers (Dump trucks) for off-highway use	163,986
		Jeeps	12 times			Jeepney (16 passenger)	unit	Buses w/compression-ignition internal combustion engine	2,252,263
		Vans	32 times	Commercial cars	unit				
		Trucks	10 times	Bus (RB 31, RB 46)	unit				
34300: Manufacture of parts and accessories for motor vehicles and their engines	Includes engines, chassis, brakes, radiators, wheels and gear boxes	Chassis	16 times	Engine	set	*** No sample ***		Brakes and servo brakes	89,515,195
		Engine	21 times	Mag wheels (alloy wheels)	piece			Other parts and accessories of motor vehicles	58,282,982
		Axle	11 times	EGI harness	set			Gear-boxes of motor vehicles	69,503,137
				Main harness	set			Road wheels and parts	13,115,296
								Radiator	6,281,936
								Brakes & clutch pedals, chasis for AUV; fuel tanks	13,013,245

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 152: Manufacture of Dairy Products

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
152: Manufacture of Dairy Products	1521: Processing of fresh milk & cream	15210: Processing of fresh milk & cream	31121: Processing of fluid (fresh) milk & cream	266 (3.6)	263,024 (1.4)	124,675 (2.0)
	1522: Manufacture of powdered milk (except for infants) & condensed or evaporated milk (filled combined or reconstituted)	15220: Manufacture of powdered milk (except for infants) & condensed or evaporated milk (filled combined or reconstituted)	31122: Manufacture of powdered milk & condensed or evaporated milk (filled recombined or reconstituted)	1,277 (17.5)	6,631,498 (34.4)	1,431,509 (23.2)
	1523: Manufacture of infants powdered milk	15230: Manufacture of infants powdered milk				
	1524: Manufacture of butter & cheese	15240: Manufacture of butter & cheese	31131: Manufacture of butter & cheese	1,185 (16.2)	3,143,673 (16.3)	746,743 (12.1)
	1525: Manufacture of ice cream & sherbet ice drop, ice candy & other flavored ices	15250: Manufacture of ice cream & sherbet ice drop, ice candy & other flavored ices	31132: Manufacture of ice cream & sherbet ice drop, ice candy & other flavored ices	3,187 (43.6)	3,774,362 (19.6)	1,223,114 (19.8)
	1526: Manufacture of milk-base infants and dietetic foods	15260: Manufacture of milk-base infants and dietetic foods	31133: Manufacture of milk-base infants and invalids foods	1,398 (19.1)	5,488,347 (28.4)	2,640,551 (42.8)
	1529: Manufacture of dairy products n.e.c.	15290: Manufacture of dairy products n.e.c.	31139: Manufacture of dairy products, except milk, n.e.c.			
TOTAL				7,313 (100.0)	19,300,904 (100.0)	6,166,592 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 85.8

Commodity Selection Work Sheet

Target Sector 152: Manufacture of Dairy Products

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
15220: Manufacture of powdered milk (except for infants) & condensed or evaporated milk (filled combined or reconstituted)	Manufacture of powdered milk (except for infants) & condensed or evaporated milk (filled combined or reconstituted)	Condensed milk	1	Condensed milk	liter	Condensed milk	case of 48	Condensed milk	303
		Evaporated milk	1	Evaporated milk	liter	Evaporated milk	14.5 oz case of 48	Evaporated milk	12,812
		Powdered milk	1	Powdered milk	liter	Powdered milk	1 lb case of 12	Reconstituted (recombined) milk	22,698
		Instant milk	2	Instant filled milk	grams				
				Instant full cream milk	grams				
				Pasteurized milk	liter				
15250: Manufacture of ice cream & sherbet, ice drop, ice candy & other flavored ices	Manufacture of ice cream & sherbet, ice drop, ice candy & other flavored ices	Ice cream	1	Ice cream	1/2 gallon	Ice cream	Reg. Gallon	Ice cream	665,248
				Regular icedrop	80 pcs/case				
				Regular icepop	12 pks/10 pks/ case				
15260: Manufacture of milk-based infants and dietetic foods	Manufacture of milk-based infants and dietetic foods			Follow-up milk	12 cans/case	Powdered infants milk	case of 12	Exceeding 1.5% other than 0222202 & 0222203	5,156,301
				Routine infant milk	12 cans/case				
				Infants formula	case				
				Adult energy drink	12 cans/case				
15290: Manufacture of dairy products n.e.c.	Manufacture of dairy products n.e.c.	Yacult	1	Cultured milk					
				Chilled products	ml.				

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 210: Manufacture of pulp, paper and paperboard

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
210: Manufacture of pulp, paper and paperboard	2101: Manufacture of pulp, paper and paperboard	21011: Integrated paper and paperboard milling	34111: Integrated Paper and Paperboard Mill Including Fiberboard Mill	803 (4.5)	624,668 (3.6)	99,640 (1.7)
		21012: Pulp milling	34112: Pulp Mill	641 (3.6)	900,484 (5.2)	157,962 (2.7)
		21013: Paper milling other than integrated	34113: Paper Mill	6,873 (38.4)	8,890,344 (51.5)	3,524,016 (60.9)
	2102: Manufacture of containers and boxes of paper and paperboard	21020: Manufacture of containers and boxes of paper and paperboard	34120: Manufacture of Containers and Boxes of Paper and Paperboard	6,083 (34.0)	4,876,727 (28.2)	1,387,968 (24.0)
	2109: Manufacture of other articles of paper and paperboard	21091: Manufacture of articles of paper	34130: Manufacture of Articles of Paper	2,989 (16.7)	1,889,882 (10.9)	585,870 (10.1)
		21092: Manufacture of articles of paperboard	34140: Manufacture of Articles of Paperboard	204 (1.1)	54,195 (0.3)	22,134 (0.4)
			34190: Manufacture of Pulp, Paper and Paperboard, n.e.c.	313 (1.7)	29,565 (0.2)	12,262 (0.2)
TOTAL				17,906 (100.0)	17,265,865 (100.0)	5,789,852 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 84.9

Commodity Selection Work Sheet

Target Sector 210: Manufacture of pulp, paper and paperboard

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
21013: Paper milling other than integrated	Paper milling other than integrated	Bond Paper		Bondpaper, Bookpaper	mt.	Bondpaper, mimeopaper	ream		
		Wrapping Paper				Adding machine paper	piece		
		Kraft Paper				Kraft Paper	kg.	Creped, Crinkled, Embossed or Perforated	133,663
		Tissue Paper						Toilet Paper	56,117
		Newsprint		Newsprint	roll in mt.	Newsprint	mt	Newsprint	17,418,859
		Fine Paper							
21020: Manufacture of containers and boxes of paper and paperboard	Includes manufacture of containers of paper or paperboard; folding or set-up cartons, boxes and cases of non-corrugated paper and paperboard; sacks and bags; and other packing containers including box files and record sleeves.	Onion Skin Paper							
		Coated Paper		Coated Paper	mt.	Wax paper	roll	Cigarette Paper	119,170
						Manila Paper	ream/sheet		
		Corrugated box		Corrugated carton	mt./pc			Paper & Paperboard, Corrugated	2,006,518
		Corrugated cartons						Cartons, Boxes & Cases, of	85,945
		Corrugating tonnage						Corrugated Paper/Paperboard	
		Corrugating medium							
		Boxboard		Inner box	piece	Boxboard	mt.		
		Cardboard		Frozen shrimp inner box	piece				
						Linerboard	mt.	Oth Packing Containers (Inclg Record Sleeves), n.e.s.	442,561

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 241:Manufacture of basic chemicals

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Number of Establishment	Total Employment (%)	Value of Output (%)	Value-Added (%)
241: Manufacture of basic chemicals	2411: Manufacture of basic chemicals except fertilizers and nitrogen	24111: Mfr of inorganic acids, alkalis and chlorine	35111: Mfr of inorganic acids, alkalis and chlorine	12	804 (10.0)	750,369 (7.7)	234,344 (5.5)
		24112: Mfr of inorganic salts and compounds	35112: Mfr of inorganic salts and compounds	12	862 (10.7)	1,524,833 (15.6)	300,138 (7)
		24113: Mfr of industrial gases	35113: Mfr of industrial gases	33	1,592 (19.7)	1,336,701 (13.6)	705,548 (16.5)
		24114: Mfr of alcohol except ethyl	35114: Mfr of industrial alcohol	12	850 (10.5)	3,016,046 (30.8)	1,459,904 (34.1)
		24115: Mfr of organic acids and organic compounds	35115: Mfr of organic acids and organic compounds except indl alcohol				
		24119: Mfr of basic chemicals, n.e.c	35119: Mfr of basic chemicals, n.e.c 35229: Mfr of other chemicals, n.e.c	7	542 (6.7)	2,178,185 (22.2)	351,211 (8.2)
	2412: Mfr of plastics in primary forms and of synthetic rubber	24121: Mfr of synthetic rubber and factice derived from oil					
		24122: Prodn of mixtures of synthetic rubber and natural rubber					
		24123: Mfr of plastic synthetic resins	35131: Mfr of plastic synthetic resins	20	1,800 (22.3)	552,401 (5.6)	1,125,539 (26.3)
		24124: Mfr of plastic matls except man-made fiber and glass fiber	35133: Mfr of plastic matls except man-made fiber and glass fiber	49	1,625 (20.1)	443,949 (4.5)	103,941 (2.4)
		TOTAL				8,075 (100.0)	9,802,484 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 85.1

Commodity Selection Work Sheet

Target Sector 241: Manufacture of basic chemicals

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
24113: Manufacture of industrial gases	Oxygen, acetylene, nitrogen and hydrogen	Oxygen	94 times	Oxygen	cu.m.	**** No sample****		**** No sample****	
		Acetylene	57 times	Hydrogen	cu.m.				
		Nitrogen	36 times						
		Argon	24 times						
		Hydrogen	24 times						
		Nitrous oxide	12 times						
		Carbon dioxide	12 times						
24115: Manufacture of organic acids and organic compounds	Branched alkyl benzene, fatty acids and fatty alcohols	BAB	12 times	Alkyl benzene	MT	**** No sample****		Dodecan-1-ol-	9,219,197
		Fatty acids	12 times	Fatty acids	MT			Fatty alcohols	5,265,115
		Fatty alcohols	12 times					Alkylbenzene	1,484,604
24119: Manufacture of basic chemicals n.e.c.	activated carbon	activated carbon	21 times	**** No sample****		**** No sample****		Activated carbon	14,156,117
24123: Manufacture of plastic synthetic resins	PVC resins, polypropylene, polyethylene, styrene, polystyrene, 'alkyd and acrylic resins	PVC resins	12 times	PVC resins	MT	**** No sample****		Polypropylene	3,883,854
		Synthetic resins	24 times	Synthetic resins	MT			Other acrylic polymer	1,349,231
		Resins	12 times					PVC, plasticized	1,156,425
								polyethylene	722,835
								Styrene	559,747
								Alkyd resins	311,761

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 252: Manufacture of plastic products

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
252: Manufacture of plastic products	2520: Manufacture of plastic products	25201: Manufacture of plastic articles for packing of goods	35609: Manufacture of Other Fabricated Plastic Products, n.e.c.	21,398 (83.4)	13,386,005 (86.3)	4,797,907 (87.5)
		25202: Manufacture of plastic household wares				
		25203: Manufacture of furniture fittings	35601: Manufactures of Plastic Furnitures	352 (1.4)	244,137 (1.6)	77,401 (1.4)
		25204: Manufacture of plastic pipes and tubes	35603: Manufacture of Plastic Industrial Supplies	3,892 (15.2)	1,889,577 (12.2)	607,026 (11.1)
		25205: Manufacture of other plastic industrial supplies				
		25206: Manufacture of primary plastic products	35609: Manufacture of Other Fabricated Plastic Products, n.e.c.			
		25209: Manufacture of plastic products, n.e.c.				
TOTAL				25,642 (100.0)	15,519,719 (100.0)	5,482,334 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 87.5

Commodity Selection Work Sheet

Target Sector 252: Manufacture of plastic products

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
25201: Manufacture of plastic articles for packing of goods	Includes plastic bottles, poly bags (plastic film bags and wrappers) and plastic caps	Plastic packaging	24 times	*****NO SAMPLE*****		Sacks for rice	100 pcs		
		Polybags	48 times						
		Cellophane bags	12 times						
		Plastics caps	48 times						
		Feeding bottles	11 times						
		Plastic bottles	72 times						
		Plastic cranes	12 times						
		Plastic pallet	12 times						
		Sacks	12 times						
25202: Manufacture of plastic household wares	Includes plastic kitchenwares	Plastic cups	12 times	*****NO SAMPLE*****		*****NO SAMPLE*****			
		Plastic kitchenwares	12 times						
		Measuring scoop	11 times						
		Plastic basins	12 times						
25206: Manufacture of primary plastic products	Includes plastic sheets, plates, films and cellophane adhesive tapes	Plastic sheets	24 times	*****NO SAMPLE*****		*****NO SAMPLE*****		Plates, sheets, film , foil and strip Cellophane adhesive tapes	13,052,593 2,633,871
		BOPP film	11 times						
		Adhesive tapes	12 times						
		Fleximat	12 times						
		Tiles	24 times						
25209: Manufacture of plastic products, n.e.c.	Includes plastic buttons			*****NO SAMPLE*****					

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 281- 289: Manufacture of structural metal products and other fabricated metal products

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Total Employment (%)	Value of Output (%)	Value-Added (%)	
281: Manufacture of structural metal products, tanks reservoirs and steam generators	2811: Manufacture of structural metal products	28111: Manufacture of structural steel products and metal components of bridges, smoke stacks and buildings	38121: Mfr of Structural Steel Products and Metal Components of Bridges, Smoke Stacks and Buildings	3,509 (11.9)	1,055,842 (6.6)	226,559 (4.4)	
		28112: Manufacture of other architectural and related metal work	38122: Manufacture of Other Architectural and Related Metal Work	6,738 (22.9)	2,674,008 (16.6)	693,644 (13.5)	
		28119: Manufacture of structural metal products, n.e.c	38129: Manufacture of Structural Metal Products, n.e.c	712 (2.4)	258,766 (1.6)	69,346 (1.3)	
	2812: Manufacture of tanks, reservoirs and containers of metal	28120: Manufacture of tanks, reservoirs and containers of metal	38123: Manufacture of Sheet Metal Components for Broilers Stove, Pipes and Light Tanks	224 (0.8)	99,040 (0.6)	32,793 (0.6)	
	2813: Manufacture of steam generators, except central heating hot water broilers	28130: Manufacture of steam generators, except central heating hot water broilers	New				
289: Manufacture of other fabricated metal products; metal working service activities	2891: Forging, pressing, stamping and roll-forming of metal; working service activities	28911: Forging, stamping and roll- forming of metal products	38141: Metal stamping, pressing and spinning mills	3,865 (13.1)	3,376,669 (21)	1,912,021 (37.2)	
		28912: Powder metallurgy	New				
	2892: Treatment and coating of metals; general mechanical engineering on a fee or contract basis	28920: Treatment and coating of metals; general mechanical engineering on a fee or contract basis	38142: Metal coating and engraving shops and mills	836 (2.8)	251,364 (1.6)	99,259 (1.9)	
		2893: Manufacture of cutlery, hand tools and general hardware	28931: Manufacture of cutlery	38111: Manufacture of Cutlery	332 (1.1)	200,417 (1.2)	80,629 (1.6)
			28932: Manufacture of hand tools	38112: Manufacture of Hand Tools	469 (1.6)	91,739 (0.6)	33,789 (0.7)
			28933: Manufacture of general hardware	38113: Manufacture of General Hardware	408 (1.4)	154,645 (1.0)	27,852 (0.5)
		28934: Manufacture of blacksmithing tools and welding shop operation	38114: Blacksmithing and Welding Shops	309 (1)	101,991 (0.6)	27,730 (0.5)	
	2899: Manufacture of other fabricated metal products, n.e.c.	28991: Manufacture of small hand-operated kitchen appliances	38112: Manufacture of Hand Tools				
		28992: Manufacture of needles, pins and fasteners	39094: Manufacture of Needles, Pins and Fasteners	796 (2.7)	464,842 (2.9)	200,108 (3.9)	
		28993: Manufacture of metal sanitary ware and plumbing fixtures	38191: Manufacture of Metal Sanitary Ware and Plumbing Fixtures	463 (1.6)	219,988 (1.4)	153,665 (3)	
		28994: Manufacture of metal containers used for packing or conveyance of goods	38131: Manufacture of Tin Containers	5,974 (20.3)	4,686,149 (29.1)	1,115,457 (21.7)	
		28995: Manufacture of wire nails, not in steel rolling	38151: Wire Nails Mfg, not in Steel Rolling Mills	787 (2.7)	398,373 (2.5)	67,149 (1.3)	
		28996: Manufacture of fabricated wire products	38159: Other Fabricated Wire Products, n.e.c.	3,199 (10.9)	1,844,939 (11.4)	321,470 (6.3)	
		28999: Manufacture of misc fabricated metal products, n.e.c.	38159: Other Fabricated Wire Products, n.e.c.	819 (2.8)	237,271 (1.5)	76,577 (1.5)	
	38199: Manufacture of Misc Fabricated Metal Products Except Machinery & Equipment, n.e.c						
TOTAL				29,440 (100.0)	16,116,043 (100.0)	5,138,048 (100.0)	

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 83.1

Commodity Selection Work Sheet

Target Sector 281- 289: Manufacture of structural metal products and other fabricated metal products

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
28111: Manufacture of structural steel products and metal components of bridges, smoke stacks and buildings and buildings	Includes pre-fabricated modular structures, iron reservoir and tanks	Structures	12 times	****NO SAMPLE****		****NO SAMPLE****		Pre-fabricated modular type structures joined by shear connectors	3,414,279
								Other structures	3,162,905
								Reservoir, tanks, vats and similar containers exceeding 300 liters	2,038,650
28112: Manufacture of other architectural and related metal work	Includes doors, windows and their frames either metal or aluminum			****NO SAMPLE****		****NO SAMPLE****		Doors, windows and their frames and threes-holds door door, of iron & steel	9,659,667
								Doors, windows and their frames and thres-holds door door, of iron & steel	2,622,244
28911: Forging, stamping and roll- forming of metal products	Includes crowns and metal caps	Crowns	30 times	Crowns		Spoon	gross		
		Metal caps	24 times	Roll-on Filter Proof Caps	thousand pieces	Fork	gross		
				Metal Caps-continuous caps	thousand pieces	Ladle, kitchen	dozen		
28994: Manufacture of metal containers used for packing or conveyance of goods	Includes metal drums and tin cans	Steel drums	12 times	Cans	piece	Drum, metal, 55 gallon	piece	Tanks, cans and similar containers, of iron and steel, 50-300 liters	1,802,373
		tin cans	48 times					Casks, drums, cans boxes	1,473,467
								tin cans close by soldering/crimping, less than 50 liters	1,713,292
28996: Manufacture of fabricated wire products	Includes wire strands and barbed wires	****NO SAMPLE****		Barbed wire	kg	****NO SAMPLE****		Wire strands	945,589

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 291-294: Manufacture of machinery and equipment

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Number of Establishment	Total Employment (%)	Value of Output (%)	Value-Added (%)
291: Manufacture of machinery and equipment, n.e.c.	2911: Manufacture of engines and turbines, except aircraft, vehicle and cycle engines	29111: Manufacture of internal combustion engines (gas and diesel)	38211: Manufacture of internal combustion engines (gas and diesel)	11	na (---)	na (---)	na (---)
		29112: Manufacture of engines and turbines for marine propulsion	38212: Manufacture of engines and turbines		na (---)	na (---)	na (---)
		29113: Manufacture of parts of engines and turbines, except for aircraft, vehicle and cycle engines	38412: Manufacture of marine engines and parts		s (---)	s (---)	s (---)
		29119: Manufacture of engines and turbines, except for transport, n.e.c.	38212: Manufacture of engines and turbines 38219: Manufacture of engines and turbines, except transport, n.e.c.		na (---) na (---)	na (---) na (---)	na (---) na (---)
	2912: Manufacture of pumps, compressors, taps and valves	29121: Manufacture of hydraulic power engines and motors	38291: Manufacture of pumps, compressors and blowers		797 (4.1)	298,321 (2.7)	111,959 (2.8)
		29122: Manufacture of pumps for liquids, vacuum pumps, air or other gas compressors					
		29123: Manufacture of taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like	38191: Manufacture of metal sanitary ware and plumbing fixtures 38212: Manufacture of engines and turbines		463 (2.4) na (---)	219,988 (2.0) na (---)	153,665 (3.8) na (---)
	2913: Manufacture of bearings, gears, gearing and driving elements	29130: Manufacture of bearings, gears, gearing and driving elements	38299: Manufacture of machines and equipment, except electrical, n.e.c.		342 (1.8)	197,457 (1.8)	41,377 (1.0)
	2914: Manufacture of ovens, furnaces and furnace burners	29140: Manufacture of ovens, furnaces and furnace burners	38295: Manufacture of industrial process furnaces and ovens		na (---)	na (---)	na (---)
	2915: Manufacture of lifting and handling equipment	29151: Manufacture of derricks; lifting and handling equipment for construction and mining	38245: Manufacture of heavy machinery and equipment used for construction		557 (2.9)	88,473 (0.8)	40,047 (1.0)
			38246: Manufacture of heavy machinery and equipment used by mining industries		110 (0.6)	53,570 (0.5)	16,791 (0.4)
		29152: Manufacture of lifting and hoisting machinery, cranes, elevators, industrial trucks, tractors, stackers; specialized ports for lifting and handling equipment	38292: Manufacture of mechanical power-transmission equipment, lifting and hoisting machinery 38299: Manufacture of machines and equipment, except electrical, n.e.c.		269 (1.4)	122,301 (1.1)	60,582 (1.5)
		29153: Manufacture of marine capstans, pulleys, tackle, etc.	38412: Manufacture of marine engines and parts				
	2919: Manufacture of other general purpose machinery	29191: Manufacture of weighing machines except scientific weighing apparatus used for laboratories	38254: Manufacture of weighing machines, except scientific weighing apparatus used for		117 (0.6)	201,587 (1.8)	28,455 (0.7)
		29192: Manufacture of refrigerating or freezing equipment for commercial purposes	38298: Manufacture of refrigerators, domestic or industrial, electric or non-electric; manufacture of ranges, electric or non-electric		na (---)	na (---)	na (---)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Number of Establishment	Total Employment (%)	Value of Output (%)	Value-Added (%)
		29193: Manufacture of unit air-conditioners	38291: Manufacture of pumps, compressors and blowers				
		29194: Manufacture of packing and wrapping machinery	38241: Manufacture of food machinery		244 (1.3)	134,909 (1.2)	15,428 (0.4)
			38249: Manufacture of special industrial machinery and equipment, n.e.c.		110 (0.6)	53,570 (0.5)	16,791 (0.4)
		29195: Manufacture of machinery for cleaning or drying bottles or other containers or for aerating beverages	38299: Manufacture of machines and equipment, except electrical, n.e.c.				
		29196: Manufacture of fans intended for industrial applications, exhaust hoods for commercial, laboratory or industrial use	38291: Manufacture of pumps, compressors and blowers				
		29197: Manufacture of calendaring or other rolling machines other than for metals or glass	38249: Manufacture of special industrial machinery and equipment, n.e.c.				
292: Manufacture of special purpose machinery	2921: Manufacture of agricultural and forestry machinery	29211: Manufacture of farm tractors	38221: Manufacture of farm tractors		166 (0.9)	18,651 (0.2)	8,987 (0.2)
		29212: Manufacture of crop implements for crop production	38222: Manufacture of mechanical implements for crop production		216 (1.1)	55,699 (0.5)	12,479 (0.3)
		29213: Manufacture of animal husbandry machinery and equipment	38223: Manufacture of animal husbandry machinery and equipment		s (---)	s (---)	s (---)
		29219: Manufacture of agricultural machinery and equipment, n.e.c.	38229: Manufacture of agricultural machinery and equipment, n.e.c.		729 (3.7)	187,229 (1.7)	65,952 (1.6)
	2922: Manufacture of machine-tools	29221: Manufacture of machine-tools for working metal	38232: Manufacture of metal working machinery		243 (1.2)	129,801 (1.2)	45,778 (1.1)
		29224: Manufacture of gas or electric welding, brazing or soldering machines whether or not capable also of cutting metals					
		29222: Manufacture of hand-held, power-driven tools	38235: Manufacture of hand-held, power-driven tools		203 (1.0)	65,544 (0.6)	27,272 (0.7)
		29223: Manufacture of machine tools and accessories including precision measuring tools	38233: Manufacture of machine tools and accessories, including precision measuring tools		s (---)	s (---)	s (---)
		29225: Parts and accessories for the machine tools classified in this group					
		29229: Manufacture of machine tools, n.e.c.					
	2923: Manufacture of machinery for metallurgy	29230: Manufacture of machinery for metallurgy	38232: Manufacture of metal working machinery	27			
			38234: Manufacture of dies, jigs, fixtures and molds		423 (2.2)	81,990 (0.7)	29,745 (0.7)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Number of Establishment	Total Employment (%)	Value of Output (%)	Value-Added (%)
	2924: Manufacture of machinery for mining, quarrying and construction	29241: Manufacture of heavy machinery and equipment used by mining industries	38246: Manufacture of heavy machinery and equipment used by mining industries				
		29242: Manufacture of heavy machinery and equipment used for construction	38245: Manufacture of heavy machinery and equipment used for construction				
	2925: Manufacture of machinery for food, beverage and tobacco processing	29251: Manufacture of machinery for food processing	38241: Manufacture of food machinery				
		29252: Manufacture of presses, crushers and similar machinery used to make wine, cider, fruit juices or similar beverages					
		29253: Manufacture of machinery for the preparation of tobacco and for the making of cigarettes or cigars, for pipe or chewing tobacco or snuff	38249: Manufacture of special industrial machinery and equipment, n.e.c.				
	2926: Manufacture of machinery for textile apparel and leather production	29261: Manufacture of textile machinery	38242: Manufacture of textile, wearing apparel and tanning machinery		na (---)	na (---)	na (---)
		29262: Manufacture of sewing machines	38293: Manufacture of sewing and embroidery machines		365 (1.9)	148,712 (1.3)	44,853 (1.1)
		29269: Manufacture of machinery for textile apparel and leather production, n.e.c.					
		29263: Manufacture of washing, laundry dry-cleaning and pressing machines	38296: Manufacture of service industry machines		s (---)	s (---)	s (---)
		29264: Manufacture of needles for knitting, sewing machines	39094: Manufacture of needles, pins and fasteners		796 (4.1)	464,842 (4.1)	200,108 (5.0)
	2927: Manufacture of weapons and ammunition	29271: Manufacture of small arms and accessories	35294: Manufacture of explosives and fireworks		450 (2.3)	504,415 (4.5)	276,776 (6.9)
		29279: Manufacture of weapons and ammunitions, n.e.c.					
	2929: Manufacture of other special purpose machinery	29291: Manufacture of machines for man-made textile fibers or yarns	38242: Manufacture of textile, wearing apparel and tanning machinery				
		29292: Manufacture of machinery for working rubber or plastic or for the manufacture of products of these materials	38248: Manufacture of chemical, paint, pharmaceutical, rubber and plastic machinery		na (---)	na (---)	na (---)
		29293: Manufacture of printing-trade machinery and equipment	38244: Manufacture of printing-trade machinery and equipment		107 (0.6)	13,103 (0.1)	8,023 (0.2)
		29294: Manufacture of machinery for pulp, paper and paperboard industries	38243: Manufacture of paper industry machinery		s (---)	s (---)	s (---)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Number of Establishment	Total Employment (%)	Value of Output (%)	Value-Added (%)
		29295: Manufacture of machinery for producing tiles, bricks, shaped ceramic pastes, pipes, graphite, electrodes, blackboard chalk, foundry molds, etc.	38247: Manufacture of cement-making, ceramics- and glass-working machinery		na (---)	na (---)	na (---)
		29296: Manufacture of molding boxes for metal foundry	38234: Manufacture of dies, jigs, fixtures and molds				
		29297: Manufacture of centrifugal clothes driers	38296: Manufacture of service industry machines				
		29298: Manufacture of machines for production or hot-working of glass; glassware or yarn					
		29299: Manufacture of other special purpose machinery, n.e.c.	38236: Manufacture of metal-treating machinery			consolidated with PSIC 38239 & 38235	
			38237: Manufacture of wood-treating machinery		na (---)	na (---)	na (---)
			38239: Manufacture of metal- and wood-working machinery, n.e.c.			consolidated with PSIC 38236 & 38235	
293: Manufacture of domestic appliances, n.e.c.	2930: Manufacture of domestic appliances, n.e.c.	29301: Manufacture of domestic-type refrigerators and laundry equipment (e.g. clothes washers, washer-dryers, dryers)	38296: Manufacture of service industry machines				
		29302: Manufacture of domestic electric fans	38332: Manufacture of electric fans, vacuum cleaners, floor waxes and polishers		4,819 (24.8)	4,031,302 (35.9)	1,251,959 (31.2)
		29303: Manufacture of domestic cooking appliances (e.g. ovens, ranges, cookers, stoves, grillers, etc.)	38298: Manufacture of refrigerators, domestic or industrial, electric or non-electric; manufacture of ranges, electric or non-electric				
			38331: Manufacture of household electric cooking equipment		411 (2.1)	457,335 (4.1)	71,044 (1.8)
		29304: Manufacture of electrothermic domestic appliances (e.g. hair dressing appliances, electric instantaneous storage, heaters, flat-irons, plate warmers, coffee or tea makers)	38333: Manufacture of electrothermic cooking appliances other than household ranges and electromechanical kitchen appliances		s (---)	s (---)	s (---)
		29305: Manufacture of domestic-type water filters and/or purifiers	New				
		29309: Manufacture of domestic appliances, n.e.c.	38339: Manufacture of electrical appliances and housewares, n.e.c.		761 (3.9)	2,429,429 (21.6)	921,172 (23.0)
294: Manufacture of domestic appliances, n.e.c.	2940: Rebuilding or repairing of various kinds of machinery and equipment and associated parts/accessories (machine shops)	29400: Rebuilding or repairing of various kinds of machinery and equipment and associated parts/accessories (machine shops)	38297: Machine shops		6,744 (34.7)	1,272,206 (11.3)	560,000 (14.0)
TOTAL					19,442 (100.0)	11,230,434 (100.0)	4,009,243 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 80.1

Commodity Selection Work Sheet

Target Sector 291-294: Manufacture of machinery and equipment

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
29302: Manufacture of domestic electric fans	Includes wall fan, floor fan, desk fan, ceiling fan, with 125 watts or less	Electric Fan	60	Electric fan	Pc	*** No sample ***		Table, Floor, Wall, Roof/Oth Fans, W/Elect Motor, Output 125W/Less, Oth Thn 7434101	55,015
29309: Manufacture of domestic appliances, n.e.c.	Includes domestic electric appliances, electro-thermic domestic appliances, electric smoothing irons	Gas Stove	36	Gas Stove	Pc	*** No sample ***		Oth Electro-Thermic Domestic Appliances n.e.s.	46,309
				Gas Range	Unit			Oth Refrigerating/Freezing Equipment (Electric/Othws), n.e.s.	2,900,478
				Rice Cooker	Pc				
		Freezers	12	Freezers	Unit			Electric Smoothing Irons	700
		Washing Machines	60	Washing Machine	Unit				
		Refrigerators	60	Refrigerators	Unit				
		Flat Irons	24						
29400: Rebuilding or repairing of various kinds of machinery and equipment and associated parts/accessories (machine shops)	Rebuilding or repairing of various kinds of machinery and equipment and associated parts/accessories (machine shops)	Spare parts	24	*** No sample ***		*** No sample ***		Parts for Appliances	983,040
29271: Manufacture of small arms and accessories	Includes small arms designed for use by the defense forces, the police, other organized services, or by hunters or sports persons; air or gas guns and pistols; firearms which fire blank cartridges, signal flares, captive bolts and other projected firing pistols or other "guns" munitions for the weapons	Shotgun	12	Shotgun	one unit/box	*** No sample ***		Oth Sporting, Hunting/Target-Shooting Shotguns, Combination Shotgun-Rifles	263,839
		Revolver	12	AFP Ammunitions	Per 25 boxes			Revolvers & Pistols (Oth Thn 8913)	200,485
		Ammunition	12	Rifle	one unit/box			Cartridges for Shotguns	106,789
								Cartridges for Sporting, Hunting & Target-Shooting Oth Thn Shotgun Cartridges	911,602
								Sporting, Hunting/Target-Shooting Rifles Caliber 22, Repeating, Bolt Action, etc	1,111,407
29264: Manufacture of needles for knitting, sewing machines	Includes needles use for knitting, sewing machines	*** No sample ***		*** No sample ***		*** No sample ***			

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 300: Manufacture of office, accounting and computing machinery.

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Number of Establishment	Total Employment (%)	Value of Output (%)	Value-Added (%)
300: Manufacture of office, accounting and computing machinery	3000: Manufacture of office, accounting and computing machinery	30001: Manufacture of calculating machines and adding machines	38251: Manufacture of Calculating Machines and Adding Machines	11	na (---)	na (---)	na (---)
		30002: Manufacture of electronic data processing equipment and accessories	38252: Manufacture of Electronic Data Procg Eqpt and Accessories		8,789 (100.0)	8,145,089 (100.0)	1,659,147 (100.0)
		30003: Manufacture of typewriters	38253: Manufacture of Typewriters		na (---)	na (---)	na (---)
		30004: Manufacture of duplicating machines	38255: Manufacture of Duplicating Machines, Except Photocopying Machines		na (---)	na (---)	na (---)
		30005: Manufacture of photo-copying apparatus incorporating an optical system or of the contact type and thermo copying apparatus	38521: Manufacture of Photographic Eqpt and Accessories		na (---)	na (---)	na (---)
		30009: Manufacture of office, accounting and computing machinery, n.e.c.	38259: Manufacture of Office Machines, n.e.c.	27	na (---)	na (---)	na (---)
TOTAL					8,789 (100.0)	8,145,089 (100.0)	1,659,147 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 100.0

Commodity Selection Work Sheet

Target Sector 300: Manufacture of office, accounting and computing machinery.

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
30002: Manufacture of electronic data processing equipment and accessories	Automatic data-processing machines of the digital, analogue or hybrid type; complete digital systems comprising a central processing unit; an input unit and an output unit; analogue data-processing machines; peripheral units for analogue machines such as punch tape readers, curvefollowers, graph plotters, etc; hybrid (analogue/digital) machines; magnetic or optical readers; machines for transcribing data onto data media in coded form; decoding and giving a clear result; word processing machines	*** No sample ***		*** No sample ***		*** No sample ***		Input or Output Units for Automatic Data Processing Machines, Whether or not Presented W/The Rest of	1,576,488,880
								Units of Automatic Data Processing Machines, n.e.s.	39,882,917
								Other Data Processing Equipment, n.e.s.	174,396,499

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 314-5,319 Manufacture of primary cells and batteries, lighting equipment and electric lamps, and other electrical equipment

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES						
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)			
				Total Employment (%)	Value of Output (%)	Value-Added (%)	
314: Manufacture of accumulators, primary cells and primary batteries	3140: Manufacture of accumulators, primary cells and primary batteries	31401: Manufacture of accumulators (storage batteries) including parts	38350: Mfr of Elec Accumulators	1,295 (16.0)	1,515,073 (23.1)	597,799 (26.1)	
		31402: Manufacture of primary cells and batteries	38340: Mfr of Primary Cells and Batteries	1,286 (15.9)	2,758,934 (42.1)	857,701 (37.5)	
315: Manufacture of lighting equipment and electric lamps	3150: Manufacture of lighting equipment and electric lamps	31501: Manufacture of lighting equipment and parts, except for use on cycle and motor equipment	38199: Mfr of Other Fabricated Metal Prods, Except Machy and Eqpt, n.e.c.	819 (10.1)	182,799 (2.8)	76,577 (3.3)	
		31502: Manufacture of electric lamps, fluorescent and fixtures	38391: Manufacture of Elec Lamps and Fluorescent Tubes	3279 (40.4)	1483969 (22.6)	539664 (23.6)	
		31503: Manufacture of lighting sets used for Christmas trees and the like					
319: Manufacture of other electrical equipment, n.e.c.	3190: Manufacture of other electrical equipment, n.e.c.	31901: Manufacture of bicycle lighting equipment	38160: Mfr of Non-Electric Lighting and Heating Fixtures	721 (8.9)	182799 (2.8)	68489 (3.0)	
		31902: Manufacture of apparatus for electroplating, electrolysis and electrophoresis	NEW				
		31903: Manufacture of electric ignition or starting equipment for internal combustion engine	38317: Mfr of Electrical Equipment for Internal Combustion Engine	na (---)	na (---)	na (---)	
		31904: Manufacture of motor vehicle lighting equipment	38392: Manufacture of Elec Signaling Eqpt for Motor Vehicles	s (---)	s (---)	s (---)	
		31905: Manufacture of accelerators (cyclotrons, betatrons)	38450: Manufacture of Motor Vehicle Parts and Accessories	Data consolidated with other PSIC (---)	Data consolidated with other PSIC (---)	Data consolidated with other PSIC (---)	
		31909: Manufacture of other electrical equipment, n.e.c.	38315: Mfr of Electlndl Control Devices	708 (8.7)	430349 (6.6)	149962 (6.5)	
TOTAL				8,108 (100.0)	6,553,923 (100.0)	2,290,192 (100.0)	

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 87.2

Commodity Selection Work Sheet

Target Sector 314-5,319 Manufacture of primary cells and batteries, lighting equipment and electric lamps, and other electrical equipment

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
31401: Manufacture of accumulators (storage batteries) including parts	This group includes electric accumulators including parts of accumulators such as separators, containers, covers, lead plates and grids	Automotive battery	12					Lead-Acid Storage Batteries for Automobiles and Trucks	3,811,883
								Parts, N.E.S., of Electric Accumulators	2,253,426
31402: Manufacture of primary cells and batteries	This group includes manufacture of primary cells and primary batteries; cells containing manganese dioxide, mercuric oxide, silver oxide or other material	Dry cell batteries	12	Dry cell batteries	Pieces	Dry cell battery	Pieces	Primary Cells and primary batteries	928,259
31502: Manufacture of electric lamps, fluorescent and fixtures	This group includes manufacture of electric filament lamps including sealed units; discharge lamps; fluorescent lamps, hot cathode or other discharge lamps; arc lamps	Incandescent lamps	24	Incandescent lamps	Pieces	*** No sample ***		Incandescent lamps	4,855,439
		Fluorescent lamps	36	Fluorescent lamps	Pieces			Fluorescent lamps	619,64
31503: Manufacture of lighting sets used for Christmas trees and the like	Lights for Christmas trees and the like	*** No sample ***		Decorative lamps	Pieces	*** No sample ***		Christmas lights	100,034

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Commodity Selection Work Sheet

Target Sector 359: Manufacture of transport equipment, n.e.c

(Unit: Employees or 1,000 Pesos)

TARGET "SECTOR" < 3-digit of PSIC 1994 > Industry Description	SUB-CATEGORIES					
	<4-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1994> Industry Description	<5-digit of PSIC 1977> Industry Description	Data from 1994 Census of Establishments (Manufacturing)		
				Total Employment (%)	Value of Output (%)	Value-Added (%)
359: Manufacture of transport equipment , n.e.c.	3591: Manufacture of motorcycles	35911: Manufacture of and assembly of motorcycles	38461: Mfr & Assembly of Motorcycles	1,438 (64.5)	7,340,899 (96.3)	2,981,548 (97.5)
		35912: Manufacture of motorcycle engines and parts thereof	38463: Manufacture of Motorcycle Engine and Parts	378 (17.0)	145,904 (1.9)	16,596 (0.5)
		35913: Manufacture of tricycle and parts thereof	38462: Manufactures of Bicycles and Tricycles	412 (18.5)	136,164 (1.8)	59,899 (2.0)
		35914: Manufacture of side cars, parts and accessories of motorcycles				
	3592: Manufacture of bicycles and invalid carriages	35921: Manufacture of invalid carriages, motorized and non-motorized				
		35922: Manufacture of bicycles and bicycles parts	38462: Manufactures of Bicycles and Tricycles			
	3599: Manufacture of other transport equipment, n.e.c	35991: Manufacture of hand-propelled vehicles	38492: Manufacture of Hand-Drawn Vehicles	s (---)	s (---)	s (---)
		35992: Manufacture of animal drawn vehicles	38491: Manufacture of Animal-Drawn Vehicles			
TOTAL				2,228 (100.0)	7,622,967 (100.0)	3,058,043 (100.0)

Note: "S" means suppressed data to avoid disclosure of individual establishment information, and "na" means unavailable data.

COVERAGE: 99.5

Commodity Selection Work Sheet

Target Sector 359: Manufacture of transport equipment, n.e.c

Major Sub-category (1994 PSIC 5-digit)		Commodities reported to MISSI		Commodities reported to PPI		Commodities reported to WPI		Export Goods (Jan-Jun 2000)	
Industry Description	Commodity Description	Name	Frequency ^(*)	Name	Unit	Name	Unit	Name	FOB (US\$)
35911: Manufacture of motorcycles	Includes motorcycle and motor scooter	Motorcycle	60 times		unit			Motorcycle w/ reciprocating engine	5,072,016
35922: Manufacture of bicycles and bicycles parts	Includes bicycles and other cycles not motorized	***No sample***		***No sample***		***No sample***		Bicycles, not motorized	11,976,454

* "Frequency" means how many times each commodity was reported to MISSI in 1999.

Annex-2 Final Target Commodity List

Commodity List for Pretest Survey

Sector Code : 151

Sector Name : Production, processing and preservation of meat, fish and other seafoods, fruit, vegetables, oils and fats

Code	Commodity Name	Description	Unit
101	Dressed / packed poultry	Includes: dressed and fresh (packed) chicken, gallantina, duck, geese, turkey	Ton
102	Dressed / packed red meat	Includes: fresh (packed) and frozen meat, pork, dressed tripe except poultry	Ton
103	Preserved / prepared poultry and poultry products	Includes: chicken ham, canned chicken	Ton
104	Preserved / prepared red meat and red meat products	Includes: hotdog, cooked ham, bacon, chorizo, corned beef, sausages, other canned or processed meat	Ton
105	Canned fish and other aquatic animals	Includes: canned tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	Ton
106	Packed fish and other aquatic animals	Includes: packed tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	Ton
107	Smoked / dried fish and other aquatic animals	Includes: smoked/dried tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	Ton
108	Canned / packed fruits	Includes: processed/canned banana, pineapple, mango, etc., fruit juices, preserved fruits, fruit cocktail, fruit concentrates, fruit jelly	Ton
109	Fruit and vegetable sauces	Includes: tomato sauce, spaghetti sauce, ketchup, tomato paste and soy sauce	Ton
110	Flour of potato and wheat	Includes: potato flour and wheat flour, other flour products except cassava	Ton
111	Coconuts and vegetable oil	Includes: coconut oil, vegetable oil (e.g. corn oil) other than coconut, and cocoa butter, oil/fat, vegetable shortening, edible oil, acid oil, vegetable lard, cooking oil, margarine	Ton

Sector Code : 152

Sector Name : Manufacture of dairy products

Code	Commodity Name	Description	Unit
101	Condensed milk	Includes: condensed whole milk, condensed filled milk, condensed recombined or reconstituted milk	Kilo liter
102	Evaporated milk	Includes: manufactured of evaporated filled milk, recombined & reconstituted filled milk	Ton
103	Powdered milk (including infants milk)	Includes: manufactured of powdered whole milk, powdered skimmed milk, instant filled & full cream milk, follow-up milk, routine infants milk & infants	Ton
104	Pasteurized milk	Includes: manufactured of pasteurized fresh natural whole milk	Kilo liter
105	Ice cream	Includes: manufactured of ice cream and sherbet, ice drop, ice candy and other flavored ices	Ton

Commodity List for Pretest Survey

Sector Code : 155

Sector Name : Manufacture of beverages

Code	Commodity Name		Description	Unit
101	Malt liquor (beer)		Includes: manufacture of malt liquors such as beer, ale, porter and stout	Kilo liter
102	Carbonated drinks			Kilo liter
103	Bottled water		Includes: production, i.e. bottling at the source, of spa or mineral waters	Kilo liter
104	Powder or leaves	Flavored drinks	Not mixed with natural fruit juice	Ton
105		Flavored drinks with natural fruit juice		Ton
106		Powdered / instant coffee	Exceptionally covered by the Questionnaire 155-10, as it belongs to another PSIC 3-digit (=159).	Ton
107		Canned / packed tea leaves	Exceptionally covered by the Questionnaire 155-10, as it belongs to another PSIC 3-digit (=159).	Ton
108	Liquid	Flavored drinks	Not mixed with natural fruit juice	Kilo liter
109		Flavored drinks with natural fruit juice		Kilo liter
110		Pure fruit juices	Exceptionally covered by the Questionnaire 155-10, as it belongs to another PSIC 3-digit (=151).	Kilo liter
111		Coffee / tea		Kilo liter

Sector Code : 160

Sector Name : Manufacture of tobacco products

Code	Commodity Name	Description	Unit
101	Cigarette	Includes: manufactured of cigarettes (Salem, Philip Morris, Marlboro, etc.)	Carton
102	Cigar	Includes: manufactured of cigars, chewing/smoking tobacco	Carton

Commodity List for Pretest Survey

Sector Code : 210

Sector Name : Manufacture of pulp, paper and paperboard

Code	Commodity Name	Description	Unit
101	Printing or writing paper (excluding newsprint)	Includes: bond paper, bookpaper, mimeo paper, adding machine paper, newsprint	Ton
102	Newsprint		Ton
103	Packaging paper	Includes: kraft paper, manila paper	Ton
104	Specialty paper	Includes: wax paper, coated paper, crepe paper, crumpled paper, embossed and perforated paper	Ton
105	Corrugated paper	Includes: corrugated boxes/cartons, corrugating medium, corrugating tonnage	Ton
106	Cardboard	Includes: boxboard, linerboard	Ton

Sector Code : 241

Sector Name : Manufacture of basic chemicals

Code	Commodity Name	Description	Unit
101	Industrial gases	Includes: oxygen, acetylene, nitrogen and hydrogen (compressed & liquefied)	Cubic meter
102	Organic acids and organic compounds	Includes: branched alkyl benzene, fatty acid and fatty alcohols	Ton
103	Activated carbon	Includes: granular and powder	Ton
104	Polyvinyl chloride (PVC)		Ton
105	Polypropylene (PP)		Ton

Sector Code : 242

Sector Name : Manufacture of other chemical products

Code	Commodity Name	Description	Unit
101	Fertilizers and nitrogen compounds	Includes: mixed or composite fertilizers (perfect gro or 14-14-14, 18-46-0, 16-20-0, ammosol or 21-0-0), ammonium nitrate and ammonium sulfate	Ton
102	Drugs and medicines	Includes: antibiotics (penicillin, sulfonamides, tetracyclines, streptomycin, chloromphenicols and other antibiotics combinations), vitamins (vitamin A, D, and E, vitamin B and B complex, vitamin C, multivitamin w/ or w/o minerals, iron preparations, pre and post natal vitamins, vitamin drops, vitamin powder, appetite stimulants and other nutritional preparations) and analgesic and antipyretics	Ton
103	Soap and detergents	Includes: toilet soap (including medicated) and laundry soap (detergent bars and detergent powder)	Ton
104	Other toilet preparations (inc. glycerine, shampoo, etc)	Includes: glycerin (crude or refined), skin lotions, shampoo and body powder (baby powder)	Ton

Commodity List for Pretest Survey

Sector Code : 232

Sector Name : Manufacture of refined petroleum products

Code	Commodity Name		Description	Unit
101	Gasoline	Regular		Kilo liter
102		High octane		Kilo liter
103	Lubricants			Kilo liter
104	Heavy fuel oils		Includes: heavy fuel oil-A, B and C	Kilo liter
105	Kerosene			Kilo liter
106	Naphtha			Kilo liter
107	Liquefied petroleum gas (LPG)		Composed of propane, propylene, butane or butylene	Ton
108	Asphalt		Includes: straight asphalt, blown asphalt and others	Ton
109	Paraffin wax			Ton
110	Crude oil			Kilo liter

Sector Code : 271

Sector Name : Manufacture of iron and steel

Code	Commodity Name		Description	Unit
101	Long products	Wire rods	Includes: ordinary wire rods, special wire rods	Ton
102		Steel bars	Includes: heavy, medium, light	Ton
103		Window section bars / angle bars / channel bars		Ton
104	Flat products	Pipes (GI / Welded)	Steel pipes and tubes	Ton
105		Tin plates		Ton
106		Galvanized sheets (GI)		Ton
107		Prepainted sheets (PPGI)		Ton
108		Hot rolled coils	Steel coils, including bars in coils	Ton
109		Cold rolled coils		Ton

Sector Code : 262

Sector Name : Manufacture of cements

Code	Commodity Name	Description	Unit
101	Portland cement	Ordinary, high early strength and moderate heat, including white portland cement	Ton
102	Pozzolan cement		Ton
103	Other types of cement	Including: fly ash cement, blast-furnace cement and others	Ton
104	Clinker		Ton

Preliminary Selection of Target Commodities for Pretest Survey

Commodity List for Pretest Survey

Sector Name : Manufacture of structural metal products and other fabricated metal products

Code	Commodity Name	Description	Unit
101	Pre-fabricated modular structures	Includes: structural steel products and metal components of bridges, smoke stacks and buildings	Piece
102	Reservoir tanks	Includes: reservoirs, tanks and similar containers of types normally installed as fixtures for storage or manufacturing use of metal	Piece
103	Doors and their frames		Piece
104	Windows and their frames		Piece
105	Crowns		1000 Pieces
106	Metal caps		1000 Pieces
107	Drums		Piece
108	Tin cans		Gross
109	Wire strands		Ton
110	Barbed wire		Ton

Sector Code : 293

Sector Name : Manufacture of domestic electric appliances

Code	Commodity Name		Description	Unit
101	Electric fans		Electric fans for home use	Units
102	Stoves		For domestic cooking	Units
103	Ranges		For domestic cooking	Units
104	Freezers		Freezers for home use	Units
105	Refrigerators	For home use		Units
106		For business use		Units
107	Washing machines		Clothes washers for home use	Units
108	Air conditioning machines	For home use		Units
109		For business use		Units
110	Microwave ovens		For domestic cooking	Units
111	Flat irons		Flat irons for home use	Units
112	Rice cookers		Rice cookers for home use	Units
113	Toasters		Toasters for home use	Units

Commodity List for Pretest Survey

Sector Code : 300

Sector Name : Manufacture of office, accounting and computing machinery

Code	Commodity Name	Description	Unit
101	Personal computer	Includes: note-book type, desk-top type	Units
102	Display monitors (including CRT monitors)	Includes: Monitors for personal computers	Units
103	Projector		Units
104	Printer	Includes: Printers for personal computers	Units
105	Scanner	Includes: scanners for personal computers	Piece
106	Calculator		Piece
107	Hard disc drive		Piece
108	Floppy disc drive		1000 pieces
109	Compact disc drive		1000 pieces

Sector Code : 314

Sector Name : Manufacture of primary cells and batteries, lighting equipment and electric lamps, and other electrical equipment

Code	Commodity Name	Description	Unit
101	Dry cell batteries	Includes: round type carbon zinc batteries, flat type carbon zinc batteries, silver oxide batteries, alkaline manganese dioxide batteries and lithium batteries	1000 pieces
102	Lead-acid storage batteries	Includes: batteries for automobiles and motorcycles, and small-sized sealed lead acid batteries	1000 pieces
103	Parts of electric accumulators		1000 pieces
104	Incandescent lamps	Includes: incandescent lamp for general lighting, for motor vehicles, tungsten halogen lamps, subminiature lamps and others	1000 pieces
105	Fluorescent lamps	Includes: straight type, circular type, and fluorescent lamp for LCD back light	1000 pieces
106	Decorative lamps (including Christmas lights)	Lighting sets for used for Christmas trees and the like, and neon signs	1000 pieces

Commodity List for Pretest Survey

Sector Code : 321

Sector Name : Manufacture of electronic valves and tubes, television and radio transmitters, and apparatus for line telephony and line telegraphy

Code	Commodity Name	Description	Unit
101	Television picture tubes (CRT)	For color televisions, and computers and related equipments	Piece
102	Microwave tubes		Piece
103	Receiver / amplifier valves and tubes		Piece
104	Radio / television transmitters	Includes: radio/television broadcasting equipment, and radio communication equipment (fixed and mobile)	Units
105	Television camera		Units
106	Telephone sets	Includes: standard type and cordless type	Units
107	Cellular phones		Units
108	Fax machines		Units

Sector Code : 324

Sector Name : Manufacture of television and radio receivers, sound or video recording apparatus and associated goods

Code	Commodity Name	Description	Unit
101	Color television set	Includes: color television receivers and liquid crystal television receivers	Units
102	Radio	Radio receivers	Units
103	Karaoke	Karaoke music players	Units
104	Video cassette recorders (VCR)		Units
105	Video cassette players (VCP)		Units
106	Video compact disc (VCD) player		Units
107	Digital video disc (DVD) player		Units
108	Answering machines		Units
109	Cassette players		Units
110	Compact disc (CD) players		Units
111	Pre-recorded tapes / discs		1000 pieces
112	Microphone		1000 pieces
113	Headphones / earphones		1000 pieces

Commodity List for Pretest Survey

Sector Code : 341

Sector Name : Manufacture of motor vehicles and bodies for motor vehicles

Code	Commodity Name		Description	Unit
101	Passenger cars		Includes: private cars and taxi cab whether manual or automatic transmission	Units
102	Utility vehicles	Jeeps including owner type	Includes: passenger jeep and owner type jeep	Units
103		Other utility vehicles	Includes: auxiliary utility vehicles, vans, station wagon	Units
104	Trucks	Light trucks (3-6 tons)	Includes: light and medium trucks for transport of goods	Units
105		Other trucks (over 6 tons)	Includes: heavy trucks for transport of goods	Units
106	Buses		Includes: passenger busses	Units

Sector Code : 359

Sector Name : Manufacture of motorcycles and bicycles

Code	Commodity Name		Description	Unit
101	Motorcycles		Includes: motorcycles and motor scooters	Units
102	Bicycles		Includes: bicycles and other cycles not motorized	Units

Sector Code : 343

Sector Name : Manufacture of parts and accessories for motor vehicles

Code	Commodity Name		Description	Unit
101	Brakes		Includes: brakes for all types of motor vehicles	Units
102	Gear boxes		Includes: gear boxes for all vehicles	Units
103	Radiators		Includes: radiator and caps for motor vehicles	Units
104	Wheel rims		Includes: wheel center discs and center caps	Units
105	Chassis		Includes: chassis for all vehicles	Units
106	Axles		Includes: axles for all types of motor vehicles	Units

Annex-3 QSME Questionnaire

2002 QUALIFICATION STUDY OF MANUFACTURING ESTABLISHMENTS

- Questionnaire No. : _____
- Sector Name : _____

ITEM-1: Confirm the following basic information regarding the establishment.

	(1) NSO's Master List of Establishments	(2) Corrections * In case those specified on the left are incorrect
Company Head Office		
a. Name		
b. Full Address		
Establishment		
c. Name		
d. ATE		
e. ECN		
f. Region Code		
g. Province Code		
h. Full Address		

ITEM-2: Does the establishment produce any of the commodities shown in the list on page-2 ?

(Check only one box among (a), (b) and (c) below. If not applicable, indicate reasons in the "Remarks" portion found on page 2 of this questionnaire.)

(a) ☐ YES. —————> **Go to Commodity List on Page 2.**

< **Note** > In case the establishment has temporarily stopped production due to strike or other reasons for a period of less than 6 months until the survey date and maintained its production line(s), check (a) YES.

(b) ☐ NO, the establishment produces commodities other than those shown in the list on page-2.

—————> **Specify the commodity(ies) being produced.**

(i)	(ii)
(iii)	(iv)

(c) ☐ NO, the establishment is engaged in business other than manufacturing.

—————> **What is the business of the establishment?**

[Check as many as applicable among (i), (ii) and (iii) below.]

- (i) ☐ Repairing or recycling. (ii) ☐ Selling/exporting.
(iii) ☐ Others.

ITEM-3: What is the name and position of the contact person who can provide information for MSP Pilot Survey ?

	(Check only one box.) —————> <input type="checkbox"/> 1) Establishment <input type="checkbox"/> Head Office
a. Contact Person	Name: _____ Position: _____
b. Dept. / Unit	
c. Tel. No. / Fax. No.	Tel: _____ Fax: _____
d. E-mail Address	

(Go to **REMARKS** portion on Page 2)

Commodity List for MSP Pilot Survey

- Questionnaire No. : 151
- Sector Name : Processed meat, fish, fruits and vegetables

Code	Commodity Name (1)	Description (2)	Unit (3)	Check appropriate cells of this column (4)
101	Dressed / packed poultry	Includes: dressed and fresh (packed) chicken, gallantina, duck, geese, turkey	Ton	
102	Dressed / packed red meat	Includes: fresh (packed) and frozen meat, pork, dressed tripe except poultry	Ton	
103	Preserved / prepared poultry and poultry products	Includes: chicken ham, canned chicken	Ton	
104	Preserved / prepared red meat and red meat products	Includes: hotdog, cooked ham, bacon, chorizo, corned beef, sausages, other canned or processed meat	Ton	
105	Canned/packed fish and other aquatic animals	Includes: canned/packed tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	Ton	
106	Canned / packed fruits	Includes: processed/canned banana, pineapple, mango, etc., preserved fruits, fruit cocktail, fruit jelly	Ton	
107	Fruit and vegetable sauces	Includes: tomato sauce, spaghetti sauce, ketchup, tomato paste and soy sauce	Ton	
108	Flour of potato		Ton	

(After accomplishing the above portion, go to **Item 3 on Page 1**)

REMARKS:

Date of Interview: _____

Person Interviewed:

Name: _____

E-mail: _____

Position: _____

Tel No: _____

Interviewer:

Name: _____

Signature: _____

Instructions for Interviewers

1. "2002 Qualification Study of Manufacturing Establishments" is conducted to identify the sample establishments that will qualify for Monthly Survey of Production (MSP) Pilot Survey.
2. MSP Pilot Survey will be conducted as a rider survey of MISSI for 12 months of 2002.
3. MSP Pilot Survey covers only the major products of the Philippine manufacturing industries. The major products / commodities of the industry are listed in the above table.
4. Complete each question item correctly according to the guide.
5. Even if the establishment refuses to answer, confirm the information asked in **ITEM-3**.

Annex-4 MSP Questionnaires



Monthly Survey of Production

Processed Meat, Fish, Fruits and Vegetables

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher : _____
Telephone No : _____

Reference Month:

Year:

NSCB APPROVAL No. NSO-0203-01
Expires 31 March 2003

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
information collected is **CONFIDENTIAL** and
cannot be used for purposes of taxation,
investigation or regulation.

Please return this form properly
accomplished not later than ten (10) days
after the end of the reference month to the
following address:

For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Dressed/packed poultry	Includes: dressed and fresh (packed) chicken, gallantina, duck, geese, turkey	101	Ton									
Dressed/packed red meat	Includes: fresh (packed) and frozen meat, pork, dressed tripe except poultry	102	Ton									
Preserved/prepared poultry and poultry products	Includes: chicken ham, canned chicken	103	Ton									
Preserved/prepared red meat and red meat products	Includes: hotdog, cooked ham, bacon, chorizo, corned beef, sausages, other canned or processed meat	104	Ton									
Canned/packed fish and	Includes: canned/packed tuna, sardines, squid, shrimp, mackerel, bonito, herring, shell, other crustaceans and mollusks	105	Ton									
Canned/packed fruits	Includes: processed/canned banana, pineapple, mango, etc., preserved fruits, fruit cocktail, fruit jelly	106	Ton									
Fruit and vegetable sauces	Includes: tomato sauce, spaghetti sauce, ketchup, tomato paste and soy sauce	107	Ton									
Flour of potato		108	Ton									

II. Number of Employees		
(14)	Code	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!

MSP Form No. 1-158



Republic of the Philippines
NATIONAL
STATISTICS
OFFICE
Manila

Monthly Survey of Production Coconut and Vegetable Oil (Crude and Refined)

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

0203-06 NSCB APPROVAL No. NSO-
Expires 31 March 2003

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
information collected is **CONFIDENTIAL** and
cannot be used for purposes of taxation,
investigation or regulation.

Please return this form properly
accomplished not later than ten (10) days
after the end of the reference month to the
following address:

For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Crude coconut oil		101	Ton									
Copra cake/pellets	Includes: copra cake, meals and pellets	102	Ton									
Acid oil		103	Ton									
Refined coconut and other vegetable oil	Includes: refined coconut and vegetable oil (including corn oil) and margarine Excludes: acid oil	104	Ton									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!

MSP Form No. 1-152



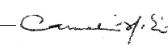
Republic of the Philippines
NATIONAL
STATISTICS
OFFICE
Manila

Monthly Survey of Production Dairy Products

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____ Telephone No : _____
Statistical Researcher: _____ Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO- 0203-02 Expires 31 March 2003 This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation. Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address: <div style="text-align: right;">  For any question, please call up Tel. No.: _____ </div>

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Condensed milk	Includes: condensed whole milk, condensed filled milk, condensed recombined or reconstituted milk	101	1,000 liters									
Evaporated milk	Includes: evaporated filled milk, recombined & reconstituted filled milk	102	1,000 liters									
Powdered milk (including infants' milk)	Includes: powdered whole milk, powdered skimmed milk, instant filled & full cream milk, follow-up milk, routine infants milk & infants formula	103	Ton									
Ice cream	Includes: ice cream and sherbet, ice drop, ice candy and other flavored ices	104	1,000 liters									

II. Number of Employees		
(14)	Code (15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production Animal Feeds and Grain Milling

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____ Telephone No : _____
Statistical Researcher: _____ Telephone No : _____

Reference Month:

Year:

NSCB APPROVAL No. NSO-0203-03 Expires 31 March 2003 This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation. Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address: _____ _____ _____ For any question, please call up Tel. No.:

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Chicken starter		101	Ton									
Chicken growing mash		102	Ton									
Broiler starter		103	Ton									
Hog starter		104	Ton									
Hog starter mash		105	Ton									
Hog grower		106	Ton									
Baby pig starter		107	Ton									
Flour of wheat	Flour milling except cassava flour milling	108	Ton									

II. Number of Employees		
(14)	Code	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

 Signature of official over printed name
 Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production Beverage

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-0203-04
Expires 31 March 2003

This inquiry is authorized by **COMMONWEALTH ACT 591** and all information collected is **CONFIDENTIAL** and cannot be used for purposes of taxation, investigation or regulation.

Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:

Carmina S.

For any question, please call up Tel. No.:

I. Finished Products			V O L U M E									VALUE OF PRODUCTION (In Pesos)
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	
Malt liquor (beer)	Includes: malt liquors such as beer, ale, porter and stout	101	1,000 liters									
Carbonated drinks		102	1,000 liters									
Bottled water	Includes: production, i.e. bottling at the source, of spring or mineral water	103	1,000 liters									
Powder flavored drinks	With or without natural fruit juice	104	Ton									
Liquid flavored drinks	With or without natural fruit juice	105	1,000 liters									
Pure fruit juices and concentrates		106	1,000 liters									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production Milled and Refined Sugar

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____ Telephone No : _____
Statistical Researcher: _____ Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO- 0203-05 Expires 31 March 2003 This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation. Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address: _____ _____ For any question, please call up Tel. No.:
--

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Refined sugar	Includes: granulated refined sugar, refined sugar in cubes or tablets	101	Ton									
Raw cane sugar and centrifugal sugar		102	Ton									
Molasses		103	Ton									

II. Number of Employees		
(14)	Code	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Sugar	301	Ton	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!

MSP Form No.1-160



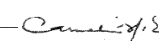
Republic of the Philippines
NATIONAL
STATISTICS
OFFICE
Manila

Monthly Survey of Production Tobacco Products

FOR NSO USE ONLY			
YEAR	YR	MO	FN

Contact Person: _____ Telephone No : _____
Statistical Researcher: _____ Telephone No : _____

Reference Month: Year:

0203-07	NSCB APPROVAL No. NSO- Expires 31 March 2003
This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation.	
Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:	
<div style="text-align: right;">  For any question, please call up Tel. No.: </div>	

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Cigarette	Includes: cigarettes (Salem, Philip Morris, Marlboro, etc)	101	Carton									
Cigar	Includes: cigars, chewing/smoking tobacco	102	1,000 Sticks									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Cigarettes	301	Carton	
Cigars	302	1000 sticks	

NOTE: Assumed operation - 8 hours/day

I hereby certify that the above information is substantially accurate.

Signature of official over printed name
 Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production Paper and Paper Products

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
information collected is **CONFIDENTIAL** and
cannot be used for purposes of taxation,
investigation or regulation.

Please return this form properly
accomplished not later than ten (10) days
after the end of the reference month to the
following address:

For any question, please call up Tel. No.:

Reference Month: Year:

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Packaging paper and board	Includes: kraft paper, manila paper, corrugating medium, boxboard, linerboard, cardboard	101	Ton									
Newsprint		102	Ton									
Printing or writing paper (excluding newsprint)	Includes: bond paper, book paper, mimeo paper, adding machine paper	103	Ton									
Sanitary/tissue paper		104	Ton									
Specialty paper and other types	Includes: wax paper, coated paper, crepe paper, crumpled paper, embossed and perforated paper, abaca paper, cigarette paper, carbon paper	105	Ton									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Packaging paper and board	301	Ton	
Newsprint	302	Ton	
Printing or writing paper	303	Ton	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Basic chemicals

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

Reference Month: Year:

0203-10 NSCB APPROVAL No. NSO-
 Expires 31 March 2003

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
 information collected is **CONFIDENTIAL** and
 cannot be used for purposes of taxation,
 investigation or regulation.

Please return this form properly
 accomplished not later than ten (10) days
 after the end of the reference month to the
 following address:

For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Industrial gases	Includes: oxygen, acetylene, nitrogen and hydrogen (compressed & liquefied)	101	Cubic meter									
Organic acids and organic compounds	Includes: branched alkyl benzene, fatty acid and fatty alcohols	102	Ton									
Polystyrene (PS)		103	Ton									
Polyethylene (PE)		104	Ton									
Polyvinyl chloride (PVC)		105	Ton									
Polypropylene (PP)		106	Ton									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Polysterene (PS)	301	Ton	
Polyethylene (PE)	302	Ton	
Polyvinyl chloride (PVC)	303	Ton	
Polypropylene (PP)	304	Ton	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Chemical products

YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

Reference Month: Year:

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
 information collected is **CONFIDENTIAL** and
 cannot be used for purposes of taxation,
 investigation or regulation.

Please return this form properly
 accomplished not later than ten (10) days
 after the end of the reference month to the
 following address:

For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Fertilizers and nitrogen compounds	Includes: mixed or composite fertilizers (perfect gro or 14-14-14, 18-46-0, 16-20-0, ammonosol or 21-0-0), ammonium nitrate and ammonium sulfate	101	Ton									
Soap and detergents	Includes: toilet soap (including medicated) and laundry soap (detergent bars and detergent powder)	102	Ton									
Other toilet preparations	Includes: glycerin (crude or refined), skin lotions, shampoo and body powder (baby powder)	103	Ton									
Paint		104	Ton									
V A L U E (I N P E S O S)												
Drugs and medicines	Includes: antibiotics (penicillin, sulfonamides, tetracyclines, streptomycin, chloromphenicols and other antibiotics combinations), vitamins (vitamin A, D, and E, vitamin B and B complex, vitamin C, multivitamin w/ or w/o minerals, iron preparations, pre and post natal vitamins, vitamin drops, vitamin powder, appetite stimulants and other nutritional preparations) and analgesic and antipyretics	105	Pesos									

II. Number of Employees		
(14)	Code (15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Refined Petroleum Products

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO- 0203-09 Expires 31 March 2003 This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation. Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address: For any question, please call up Tel. No.:
--

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Gasoline	Regular	/	101	1,000 liters								
	High octane	/	102	1,000 liters								
Lubricants	/	103	1,000 liters									
Heavy fuel oils	Includes: heavy fuel oil-A, B and C	104	1,000 liters									
Kerosene	/	105	1,000 liters									
Naphtha	/	106	1,000 liters									
Liquefied petroleum gas (LPG)	Composed of propane, propylene, butane or butylenes	107	Ton									
Asphalt	Includes: straight asphalt, blown asphalt and others	108	Ton									
Paraffin wax	/	109	Ton									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Gasoline	301	1,000 liters	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Glass products

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-0203-12
Expires 31 March 2003

This inquiry is authorized by **COMMONWEALTH ACT 591** and all information collected is **CONFIDENTIAL** and cannot be used for purposes of taxation, investigation or regulation.

Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:

For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Flat glass	Includes : float glass	101	Ton									
Glass container	Includes: glass bottles	102	Gross									
Tempered glass		103	Ton									
Figured glass		104	Ton									
Fluorescent glass		105	1,000 pieces									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name _____
Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production Cement

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____	
Telephone No : _____	
Statistical Researcher: _____	
Telephone No : _____	

 Reference Month: Year:

NSCB APPROVAL No. NSO-0203-13 Expires 31 March 2003
This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation.
Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:
<div style="text-align: right;"> _____ </div>
For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Portland cement	Includes: white cement	101	Ton									
Pozzolan cement		102	Ton									
Clinker		103	Ton									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Cement	301	Ton	

I hereby certify that the above information is substantially accurate.

 Signature of official over printed name
 Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Basic Iron and Steel

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
 information collected is **CONFIDENTIAL** and
 cannot be used for purposes of taxation,
 investigation or regulation.

Please return this form properly
 accomplished not later than ten (10) days
 after the end of the reference month to the
 following address:

For any question, please call up Tel. No.:

Reference Month: Year:

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)		
Target Commodity		Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Long products	Wire rods	Includes: ordinary wire rods, special wire rods	101	Ton									
	Steel bars	Includes: heavy, medium, light	102	Ton									
	Window section bars/angle bars/channel bars		103	Ton									
Flat products	Pipes (GI / Welded)	Includes: steel pipes and tubes	104	Ton									
	Tin plates		105	Ton									
	Galvanized sheets (GI)		106	Ton									
	Prepainted sheets (PPGI)		107	Ton									
	Hot rolled coils	Includes : steel coils, including bars in coils	108	Ton									
	Cold rolled coils		109	Ton									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name
 Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production Non - ferrous Metals

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-0203-15
Expires 31 March 2003

This inquiry is authorized by **COMMONWEALTH ACT 591** and all information collected is **CONFIDENTIAL** and cannot be used for purposes of taxation, investigation or regulation.

Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:

For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E									VALUE OF PRODUCTION (In Pesos)	
Target Commodity		Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
									Domestic	Export			
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Refined precious metals	Gold		101	Ounce									
	Silver		102	Ounce									
Aluminum foil		Includes: non-ferrous rolling, drawing and extrusion	103	Kilo gram									
Aluminum sheets		Includes: flat sheets and coiled sheets	104	Kilo gram									
Washers, fasteners		Includes: non-ferrous rolling, drawing and extrusion	105	Kilo gram									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name
Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Fabricated Metal Products

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

NSCE APPROVAL No. NSO-0203-16
Expires 31 March 2003

This inquiry is authorized by **COMMONWEALTH ACT 591** and all information collected is **CONFIDENTIAL** and cannot be used for purposes of taxation, investigation or regulation.

Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:

For any question, please call up Tel. No.:

Reference Month: Year:

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Pre-fabricated modular structures	Includes: structural steel products and metal components of bridges, smoke stacks and buildings	101	Piece									
Reservoir tank	Includes: reservoirs, tanks and similar containers of types normally installed as fixtures for storage or manufacturing use, of metal	102	Piece									
Doors and their frames		103	Piece									
Window frame		104	Piece									
Crown		105	1,000 pieces									
Metal cap		106	1,000 pieces									
Drum		107	Piece									
Tin can		108	Piece									
Wire strands		109	Ton									
Barbed wire		110	Ton									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

 Signature of official over printed name
 Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production Domestic Electric Appliances

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
information collected is **CONFIDENTIAL** and
cannot be used for purposes of taxation,
investigation or regulation.

Please return this form properly
accomplished not later than ten (10) days
after the end of the reference month to the
following address:

For any question, please call up Tel. No.: _____

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)		
Target Commodity		Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales			Transfer	Ending Inventory
									Domestic	Export			
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Electric fan			101	Unit									
Stove			102	Unit									
Cooking Range			103	Unit									
Freezer			104	Unit									
Refrigerator			105	Unit									
Washing machine			106	Unit									
Air conditioning machine	For home/business		107	Unit									
	For motor vehicles		108	Unit									
Microwave oven			109	Unit									
Flat iron			110	Unit									
Rice cooker			111	Unit									
Toaster			112	Unit									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Refrigerators	301	Unit	
Washing machines	302	Unit	
Air conditioning units	303	Unit	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name
Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Office, Accounting and Computing Machinery

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-0203-18
Expires 31 March 2003

This inquiry is authorized by **COMMONWEALTH ACT 591** and all information collected is **CONFIDENTIAL** and cannot be used for purposes of taxation, investigation or regulation.

Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:

For any question, please call up Tel. No.:

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Personal computer	Includes: notebook type, desktop type	101	Unit									
Display monitors (including CRT monitors)	Includes: Monitors for personal computers	102	Unit									
Projector		103	Unit									
Printer	Includes: Printers for personal computers	104	Unit									
Scanner	Includes: scanners for personal computers	105	Piece									
Calculator		106	Piece									
Hard disc drive		107	1,000 pieces									
Floppy disc drive		108	1,000 pieces									
Compact disc drive		109	1,000 pieces									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Hard disk drive	301	Unit	

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!

MSP Form No. 1-314



Republic of the Philippines
NATIONAL
STATISTICS
OFFICE
Manila

Monthly Survey of Production Batteries and Lighting Equipment

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-	
0203-19	Expires 31 March 2003
<p>This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation.</p> <p>Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:</p> <p>_____</p> <p>_____ <i>Caridad S.</i></p> <p>For any question, please call up Tel. No.:</p>	

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Domestic	Export	(11)	(12)	(13)
Dry cell battery	Includes: round type carbon zinc batteries, flat type carbon zinc batteries, silver oxide batteries, alkaline manganese dioxide batteries and lithium batteries	101	1,000 Pieces									
Lead-acid storage battery	Includes: batteries for automobiles and motorcycles, and small-sized sealed lead acid batteries	102	Pieces									
Incandescent lamp	Includes: incandescent lamp for general lighting, for motor vehicles, tungsten halogen lamps, subminiature lamps and others	103	1,000 Pieces									
Fluorescent lamp	Includes: straight type, circular type, and fluorescent lamp for LCD back light	104	1,000 Pieces									
Decorative lamp	Includes: christmas lights and other decorative lamps and lights	105	1,000 Pieces									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name
Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Electronic Valves, TV and Radio Transmitters and Line Telephony

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

Reference Year: Year:

NSCB APPROVAL No. NSO-0203-20
Expires 31 March 2003

This inquiry is authorized by **COMMONWEALTH ACT 591** and all information collected is **CONFIDENTIAL** and cannot be used for purposes of taxation, investigation or regulation.

Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:

For any question, please call up Tel. No.:

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Television picture tube	For color televisions, computers and related equipments	101	Piece									
Microwave tube		102	Piece									
Receiver/amplifier valve and tube		103	Piece									
Radio/television transmitter	Includes: radio/television broadcasting equipment, and radio communication equipment (fixed and mobile)	104	Unit									
Television camera		105	Unit									
Telephone set	Includes: standard type and cordless type	106	Unit									
Cellular phone		107	Unit									
Fax machine		108	Unit									

II. Number of Employees		
(14)	Code	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

 Signature of official over printed name
 Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

TV and Radio Receivers, and Sound or Video Recording Apparatus

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-0203-21
Expires 31 March 2003

This inquiry is authorized by
COMMONWEALTH ACT 591 and all
 information collected is **CONFIDENTIAL** and
 cannot be used for purposes of taxation,
 investigation or regulation.

Please return this form properly
 accomplished not later than ten (10) days
 after the end of the reference month to the
 following address:

For any question, please call up Tel. No.:

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Color television set	Includes: color television receivers and liquid crystal television receivers	101	Unit									
Audio component	Any combination of radio, cassette and CD player	102	Unit									
Car audio		103	Unit									
Radio	Radio receivers	104	Unit									
Karaoke	Karaoke music players	105	Unit									
Video cassette tape recorder (VCR)		106	Unit									
Video cassette tape player (VCP)		107	Unit									
Video compact disc (VCD) player		108	Unit									
Digital virtual disc (DVD) player		109	Unit									
Answering machine		110	Unit									
Cassette tape player		111	Unit									
Digital audio disc (CD) player		112	Unit									
Tape/disc (blank)		113	1,000 pieces									
Microphone		114	1,000 pieces									
Headphone/earphone		115	1,000 pieces									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Color television set	301	Unit	

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!

MSP Form No. 1-341



Republic of the Philippines
NATIONAL
STATISTICS
OFFICE
Manila

Monthly Survey of Production

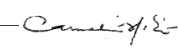
Motor Vehicles and Bodies for Motor Vehicles

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-0203-22	
Expires 31 March 2003	
This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation.	
Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:	
 For any question, please call up Tel. No.:	

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)		
Target Commodity		Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales			Transfer	Ending Inventory
									Domestic	Export			
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Passenger car		Includes: private cars and taxi cab whether manual or automatic transmission	101	Unit									
Utility vehicle	Passenger/owner type jeepney		102	Unit									
	Other utility vehicle	Includes: auxiliary utility vehicles, vans, station wagon	103	Unit									
Truck	Light truck (3-6 tons)	Includes: light and medium trucks for transport of goods	104	Unit									
	Other truck (over 6 tons)	Includes: heavy trucks for transport of goods	105	Unit									
Bus		Includes: passenger buses	106	Unit									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Passenger cars/utility vehicles, excluding jeepney	301	Unit	

Note: Assumed operation - 8 hours/day

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!



Monthly Survey of Production

Parts and Accessories for Motor Vehicles

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
 Telephone No : _____

Statistical Researcher: _____
 Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-	
0203-23	Expires 31 March 2003
<p>This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation.</p> <p>Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:</p> <p>_____</p> <p>_____ <i>Camille S.</i></p> <p>For any question, please call up Tel. No.: _____</p>	

I. Finished Products			V O L U M E								VALUE OF PRODUCTION (In Pesos)	
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/Imported/Received	Internal Consumption	Sales		Transfer		Ending Inventory
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Brake	Includes: brakes for all types of motor vehicles	101	Unit									
Gear box	Includes: gear boxes for all vehicles	102	Unit									
Radiator	Includes: radiator and caps for motor vehicles	103	Unit									
Wheel rim	Includes: wheel center discs and center caps	104	Unit									
Chassis	Includes: chassis for all vehicles except chassis fitted with engines	105	Unit									
Axle	Includes: axles for all types of motor vehicles	106	Unit									
Wire harness		107	Unit									
Transmission		108	Unit									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

Remarks

I hereby certify that the above information is substantially accurate.

 Signature of official over printed name

Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!

MSP Form No. 1-359



Republic of the Philippines
NATIONAL
STATISTICS
OFFICE
Manila

Monthly Survey of Production Motorcycles

FOR NSO USE ONLY			
YEAR	MO	FN	QN

Contact Person: _____
Telephone No : _____

Statistical Researcher: _____
Telephone No : _____

Reference Month: Year:

NSCB APPROVAL No. NSO-0203-24
Expires 31 March 2003
<p>This inquiry is authorized by COMMONWEALTH ACT 591 and all information collected is CONFIDENTIAL and cannot be used for purposes of taxation, investigation or regulation.</p> <p>Please return this form properly accomplished not later than ten (10) days after the end of the reference month to the following address:</p> <p>_____</p> <p>For any question, please call up Tel. No.: _____</p>

I. Finished Products			V O L U M E									VALUE OF PRODUCTION (In Pesos)
Target Commodity	Description of Commodity	Code	Unit of Measure	Beginning Inventory	Production	Purchased/ Imported/Received	Internal Consumption	Sales		Transfer	Ending Inventory	
								Domestic	Export			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Motorcycles	Includes: motorcycles and motor scooters	101	Unit									

II. Number of Employees		
	Code	
(14)	(15)	(16)
Total Number of Employees	201	

III. Monthly Production Capacity			
Specification	Code	Unit of Measure	Volume
(17)	(18)	(19)	(20)
Motorcycles	301	Unit	

Note: Assumed operation - 3 shifts (24 hours/day)

Remarks

I hereby certify that the above information is substantially accurate.

Signature of official over printed name
Date: _____ Tel No: _____

THANK YOU VERY MUCH FOR YOUR COOPERATION!!!

Annex-5 Enumerators' Manual

FIELD OPERATIONS AND EDITING MANUAL

Monthly Survey of Production (MSP) *Pilot Survey*

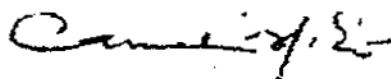


Republic of the Philippines
National Statistics Office
and the
Philippine Statistical Association
Manila

FOREWORD

This **FIELD OPERATIONS and EDITING MANUAL** of the Monthly Survey of Production Pilot Survey serves as a guide to NSO field personnel in the efficient conduct of the survey and processing of the survey questionnaires. Contained in this manual are the scope, objective and survey design, operation and organization, field operation instructions and editing instructions.

It is hoped that this manual will serve its purpose in order that timely and quality data on production of commodities will be collected and generated.



CARMELITA N. ERICTA
Administrator

Manila, Philippines
February 2002

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Chapter 1

INTRODUCTION

1.1. Overview

The Monthly Survey of Production (MSP) is a new undertaking of the National Statistics Office designed to improve the Monthly Integrated Survey of Selected Industries (MISSI). This undertaking aims to convert MISSI from industry and value based survey to a commodity and volume-based survey for twenty-four (24)-selected industries. Hence, the survey is envisioned to produce monthly statistics that will depict the current situation for these selected industries in the country.

For the year 2002, MSP will be undertaken as a pilot survey by the National Statistics Office (NSO) in cooperation with Japan International Cooperation Agency (JICA) through the Philippine Statistical Association Inc. (PSA).

1.2. Background of the Survey

In the advent of globalization, the Philippine Government recognized the need to have a reliable, timely and comparable industrial statistics on commodity and volume-based level for international comparison. For this purpose, the Philippine Government requested the Japanese Government to conduct the "Study on Development of Industrial Statistics". In response, the Japan International Cooperation Agency (JICA) sent experts to the Philippines in February 2000 to confirm this need from both the government and private sectors.

The National Statistics Office is currently conducting the MISSI for manufacturing establishments, which generates indices on production volume using indirect method. Both governments then agreed to explore the possibility of converting MISSI to a commodity and volume-based survey. In June 2000, JICA sent a preliminary study mission for finalization of the details of the Study with the Philippine Government.

The Study, called the Current Survey of Production (CSP), began with the in-depth understanding of the MISSI design and methodology. The survey coverage was then defined and target industries in manufacturing sector were selected. Determination of commodities and sample establishments were done, after which survey instruments were designed. From January to March of 2001, a pre-test survey was conducted by the JICA team and PSA-Assist. Pre-test survey results were analyzed, evaluated and used to improve the CSP design and methodology. In December 2001, the NSO and PSA conducted a Qualification Study of Manufacturing Establishments (QSME) to identify those establishments that will be qualified as samples for the MSP Pilot Survey. It was also agreed to rename Current Survey of Production (CSP) to Monthly Survey of Production (MSP) to be consistent with naming of establishment surveys.

1.3. Legal Authority

Like all censuses and surveys conducted by the National Statistics Office, the MSP Pilot Survey is authorized by various legislative acts and presidential orders namely:

- **Commonwealth Act No. 591 (An Act to Create a Bureau of the Census and Statistics to Consolidate Statistical Activities of the Government Therein)**

Empowers the Bureau, among other things, *'to prepare for and undertake all censuses of population, agriculture, industry and commerce.'*

- ⊛ Section 3 of the Commonwealth Act No. 591 states that:

"... Any person who fails or refuses to accomplish, mail or deliver such questionnaire or form received by him to the Bureau of the Census and Statistics... or any person who in accomplishing any such questionnaire or form, knowingly gives data or information which shall prove to be materially untrue in any particular, or in any person who signs such questionnaire or form after it has been accomplished in the knowledge that it is untrue in any

particular shall upon conviction, be punished by a fine of not more than six hundred pesos or by imprisonment for not more than six months, or by both..."

- **Presidential Decree No.418 (Reconstituting the Bureau of the Census and Statistics of the Department of Trade as a New Agency under the Administrative Supervision of the National Economic and Development Authority to be known as the National Census and Statistics Office.)**

- **Executive Order No. 121 (Reorganization Act of the Philippine System)**

Renames the National Census and Statistics Office (NCSO) to National Statistics Office (NSO) which shall be the major statistical agency responsible for generating general purpose statistics and undertaking such censuses and surveys as may be designated by the National Statistical Coordination Board.

- **Executive Order 5 (Strengthening the National Statistics Office)**

Authorizes the Office to delegate more substantive and administrative functions to the field offices to transform them from a mere data collection arm to statistics-producing units. Refocus the functions of the central office units towards developmental planning, design and analysis of designated statistical activities as well as other surveys and statistical studies requested by government agencies and international organizations.

1.4. Confidentiality of Information

- ⊛ Moreover, Section 4 of Commonwealth Act No. 5 states that:

"... Data furnished to the Bureau of the Census and Statistics will be kept **STRICTLY CONFIDENTIAL** and shall not be used as evidence in court for purposes of taxation, regulation or investigation; nor shall such data or information be divulged to any person except authorized employees of the Bureau of the Census and Statistics Office, nor shall data be published except in the form of summaries or statistical tables in which no

reference to an individual, corporation, association, partnership, institution or business enterprise shall appear. Any person violating the provisions of this section shall upon conviction, be punished by fine of not more than six hundred pesos, or by imprisonment for not more than six months, or by both...”

1.5. Objective of the Survey

The Monthly Survey of Production (MSP) Pilot Survey aims to determine the reliability of the survey instruments, methods and procedures to be used for its implementation. The data collected from the MSP Pilot Survey will form the base year data that will be used to compute commodity-based and volume-based industrial indices.

The indices on production, sales and inventory to be generated from the MSP will be used to monitor monthly production activities of the manufacturing industries.

Specifically, the monthly results would be used:

- to monitor general industrial activities and major trends and as basis for policy making.
- to collect commodity-based data as one of the basis for specific policy decisions.

1.6. Reference Month

For the MSP Pilot Survey, the reference months are from January to December 2002.

Generally, reference month refers to a calendar month. However, respondents are allowed to use their usual accounting period, e.g. 15th day of the month to the 16th of the next month, for ease in operation.

Chapter 2

SURVEY DESIGN

2.1. Scope and Coverage

The Monthly Survey of Production (MSP) is a nationwide undertaking which covers some 156 commodities under 24 industries in the manufacturing sector classified in the 1994 Philippine Standard Industrial Classification (PSIC).

The number of target commodities by industry is shown in Table 1 below.

Table 1. Number of Target Commodities by Industry

1994 PSIC	INDUSTRY DESCRIPTION	NUMBER OF COMMODITIES
D	Manufacturing	156
151	Processed Meat, Fish, Fruits & Vegetables	8
152	Dairy Products	4
154	Animal Feeds and Grain Milling	8
155, 15141	Beverage	6
157	Milled and Refined Sugar	3
158, 15152	Coconut and Vegetable oil (crude & refined)	4
160	Tobacco Products	2
210	Paper and Paper Products	5
232	Refined Petroleum Products	10
241	Basic Chemicals	6
242-3	Chemical Products	5
261	Glass Products	4
262	Cements	3
271	Basic Iron and Steel	9
272	Non-ferrous Metals	5
281, 289	Fabricated Metal Products	10
291-4	Domestic Electric Appliances	12
300	Office, Accounting & Computing Machinery	9
314-5, 319	Batteries and Lightning Equipment	5
321, 323	Electronic Valves, Television, & Radio Transmitters & Line Telephony	8
324	Television & Radio Receivers, Sound or Video Recording Apparatus	15
341-2	Motor Vehicles & Bodies for Motor Vehicles	6
343	Parts & Accessories of Motor Vehicles	8
351-3, 359	Motorcycles	1

2.2. Unit of Enumeration

The unit of enumeration for the MSP Pilot Survey is the "establishment". An establishment is defined as:

"An economic unit under a single ownership or control, i.e., under a single legal entity, engaged in one or predominantly one kind of economic activity at a single fixed location."

2.3. Frame

The sample establishments for the MSP Pilot Survey are the qualified establishments based on the result of Qualification Survey of Manufacturing Establishments (QSME). The 1999 List of Establishment is the frame used for drawing sample for the QSME.

2.4. Sampling Design

An iterative procedure was utilized to determine samples for the MSP Pilot Survey. The section below discusses how the industries and corresponding target commodities and establishments were selected.

2.4.1 Industry Selection

Industries were selected based on their contribution to the value added in manufacturing using the 1997 Annual Survey of Establishments (ASE) results.

The selected industries are the 24 largest industries whose combined contribution to value added in the manufacturing sector accounted for 76.3 percent. Industries such as wearing apparel, plastic and plastic products and microcircuits were excluded in the MSP Pilot Survey as it was ascertained that volume-based data cannot be collected from these industries.

For purpose of MSP, manufacture of pure fruit juices and concentrates under PSIC 15141 is combined with beverage industry under 3-digit PSIC 154. Production of refined coconut oil and other vegetable oil (PSIC 15152) is likewise combined with production of coconut and vegetable oil (PSIC 158) industry.

2.4.2 Commodity Selection

The five-digit PSIC specific industries that contributed at least 80% of the value added to the corresponding 3-digit PSIC were identified. Commodities classified under these industries are the basis for selection of commodities included in MSP. Specific representative commodities for each industry were then determined using the MISSI, export data, Producer's Price Survey (PPS) and Wholesale Price Survey data. When it was ascertained that it is not feasible to collect volume-base data of certain commodities classified under certain industries these industries were excluded for the MSP Pilot Survey.

The adequacy of selected commodities and unit of measure was verified through the results of the CSP pre-test survey and QSME. This was also made possible in consultation with the members of some industry associations.

The lists of target commodities by industry selected are shown in *Appendix 1*.

2.4.3 Establishment Selection

The sample establishments for MSP Pilot Survey were the qualified establishments of the Qualification Study of Manufacturing Establishments (QSME) undertaken last December 2001.

The sample establishments of the QSME were taken from the updated 1999 List of Establishments (LE). The following is a brief description of the selection of QSME samples:

The cut-off criteria for each industry in the QSME was first determined based on the contribution of the responding establishments to value added in the 1994 Census of Establishments (CE). The responding establishments of 1994 CE were sorted by industry and ranked by Average Total Employment (ATE). For each industry, a cumulative table of value added was created. The leading establishments, which accounted for at least 70 percent of the value added of the industry were identified and the lowest ATE was determined. This ATE was used as the cut-off criterion in selecting the samples of QSME.

After the selection of QSME samples from the LE, MISSI samples that meet the ATE criterion not selected in the QSME were included. The samples were also updated based on the results of the CSP Pretest Survey. Directories of some industrial associations were also utilized to check for large establishments that meet the criteria for selection but were missed in the sample selection. Reports from annual and quarterly surveys were also used to finalize the list of sample establishments for QSME.

From the results of QSME, the qualified establishments for MSP were finally identified. All establishments falling within the ATE cut-off criterion and producing the target commodities are considered to be the qualified sample establishments.

The distribution of the number of sample establishments for MSP Pilot Survey by industry is shown in Table 2.

Table 2. Number of MSP Sample Establishments by Industry

1994 PSIC	INDUSTRY DESCRIPTION	NUMBER OF SAMPLES
D	Manufacturing	432
151	Processed Meat, Fish, Fruits & Vegetables	66
152	Dairy Products	8
154	Animal Feeds and Grain Milling	29
155, 15141	Beverage	44
157	Milled and Refined Sugar	14
158, 15152	Coconut and Vegetable oil (crude & refined)	17
160	Tobacco Products	6
210	Paper and Paper Products	35
232	Refined Petroleum Products	3
241	Basic Chemicals	17
242-3	Chemical Products	26
261	Glass Products	6
262	Cements	13
271	Basic Iron and Steel	11
272	Non-ferrous Metals	2
281, 289	Fabricated Metal Products	33
291-4	Domestic Electric Appliances	29
300	Office, Accounting & Computing Machinery	12
314-5, 319	Batteries and Lightning Equipment	9
321, 323	Electronic Valves, Television, & Radio Transmitters & Line Telephony	4
324	Television & Radio Receivers, Sound or Video Recording Apparatus	10
341-2	Motor Vehicles & Bodies for Motor Vehicles	16
343	Parts & Accessories of Motor Vehicles	17
351-3, 359	Motorcycles	5

2.5. Questionnaire Design and Other Forms

2.5.1 Questionnaire (MSP Form1 – 3-digit PSIC Code.)

MSP Form 1 is the questionnaire to be administered to the sample establishments of MSP Pilot Survey. Twenty-four questionnaire types were designed for the 24 industries with pre-printed target commodities for each industry. Each industry grouping will use one questionnaire type. The last three-digit in the MSP form type number corresponds to the 3-digit PSIC of the sector. A multi-activity establishment will be provided with more than one questionnaire type if it produces two or more commodities classified into different industry (3-digit PSIC) groupings.

Refer to Appendix 2 for the twenty-four MSP questionnaire types.

2.5.2 MSP Form No. 2 (Instructions for Accomplishing MSP Form No. 1)

This form will be administered together with MSP Form No. 1-___ to the respondents of the sample establishments. It contains the definition of terms used in the survey as well detailed instructions on how to accomplish the form.

See *Appendix 3* for this form.

2.5.3 Other Forms

The MSP Pilot Survey uses other forms namely: address stubs, control list of sample establishments and administrative forms.

2.5.3.1 Address Stub

The address stub contains the following information: the name, address, establishment control number (ECN) and industry (3-digit PSIC code), province and municipality codes. It also contains the name and address of the reporting unit if different from that of the sample establishment. The MSP Form Type Number is also printed in the upper right corner and the last three-digit number in this stub matches with the last three-digit number of the MSP Form Type No. of the questionnaire.

The Owner/Manager ST JANE INTERNATIONAL INC MEPZ IBO LAPU-LAPU CITY CEBU	MSP Form Type No. 1- 210
22260004496D7 – 210 –22-26	

2.5.3.2 Control List

The control list of sample establishments is a tool for keeping track of the questionnaires and recording important information of the sample establishments. It contains the name, address, ECN, PSIC code, province code, municipality code, barangay code and actual employment of the sample establishments. The MSP Form Type Number to be used for each sample establishment is also printed. It has a portion for recording the date the questionnaire is distributed and collected. A "Remarks" column is also provided to record additional information about the establishment.

Two (2) types of control list are to be generated one for provincial use and another one for central office use.

2.5.3.3 Administrative Forms

For the MSP Pilot Survey two administrative forms are to be used namely: the General Transmittal Form and the Narrative Report Form.

General Transmittal Form

The ITSD-ADM Form 1 (General Transmittal Form) is to be used during transmittal of questionnaires and other materials from Central Office to the Provincial Office and accomplished questionnaires from the Provincial Office to the Central Office.

See Appendix 5 for this form.

Narrative Report for Training

The trainers for all levels of training are required to submit a narrative report within two (2) days after the training using the outline as shown in *Appendix 6*. The narrative report must be submitted to the Chief, ISD Division, copy furnished the RD and the PSO.

2.6. Questionnaire Content

The data items to be collected are listed below:

- Reference Year and Month
- Finished Products
 - Target commodities
 - Description of commodities
 - Code
 - Unit of Measure
 - Volume of Beginning Inventory
 - Volume of Production
 - Volume of Purchased/Imported/Received
 - Volume of Finished Products for Internal Consumption (selected commodities only)
 - Volume of Domestic Sales
 - Volume of Export Sales
 - Volume of Finished Products Transferred
 - Value of Production (in pesos)
- Number of Employees
- Monthly Production Capacity (selected commodities only)

Discussion of the concepts and definitions of data items is contained in Section 2.7 of this manual.

2.7. Definition and Concepts

Target Commodity

These are the pre-printed identified representative products for each industry in the MSP Forms.

Description

This describes the target commodity.

Code

The pre-assigned number for each row in the questionnaire to be used for machine processing.

Unit

The pre-determined unit of measure by target commodity to be used in reporting the volume of inventories, production and sales.

Volume of Beginning Inventories

The quantity by target commodity owned or controlled by the establishment according to a specified unit of measure as of the start of the reference month. This excludes work-in-process.

Volume of Production

The quantity by target commodity produced or manufactured by the establishment according to a specified unit of measure during the reference month. It includes the quantity produced for other establishment on a consignment basis but it excludes products repaired, re-modeled, work-in-process and those made by subcontractors of the establishment under consignment basis.

Volume of Purchased/Imported/Received Finished Products

The quantity by target commodity purchased, imported or received by the establishment from other establishment/s or enterprise or subcontractors of the establishment operating on a consignment basis during the reference month according to a specified unit of measure.

Volume of Internal Consumption

Volume of Internal Consumption is the quantity by target commodity consumed or used by the establishment as input or raw materials for the next production process, whether this commodity is produced, purchased, imported or received by the establishment.

Internal Consumption (Column 8 of Item I) is applicable to the following commodities:

- clinker for MSP Form No.1-262(Cements),
- hot and cold rolled coils for MSP Form No.1-271(Basic Iron & Steel),
- display monitor, hard, floppy and compact disc drive for MSP Form No. 1-300 (Office, Accounting and Computing Machinery),
- TV picture tube, microwave tube, receiver/amplifier valve and tube and radio/TV transmitter for MSP Form No.1-321 (Electronic Valves, TV and Radio Transmitters and Line Telephony).

For MSP Form No.1-343 (Parts and Accessories of Motor Vehicles), this column is applicable for all target commodities.

Domestic Sales

Domestic sales refers to the quantity by target commodity sold by the establishment to another establishment (producer, wholesaler, retailer, etc.), or enterprise according to a specified unit of measure, net of returns.

Export Sales

Export sales refers to the quantity by target commodity shipped directly by the establishment outside the country as well as those sold to exporters according to a specified unit of measure, net of returns.

Transfer

Refers to the quantity by target commodity according to a specified unit of measure which was

- transferred to other establishments of the same enterprise (inter-plant transfer); or
- transferred to other establishment of a different enterprise in case operating on a consignment basis and/or
- consumed or used by establishment as final product and not as input or raw materials for the next production process.

Volume of Ending Inventories

The quantity by target commodity owned or controlled by the establishment according to a specified unit of measure as of the end of the reference month. This excludes work-in-process.

Value of Production

This is equal to the volume multiplied by the producer's price of each commodity. Producer's price refers to sales price charged to the customer, including all duties and taxes which fall on the products when they leave the establishment (ex-plant price).

In MSP Form No. 1-242 (Chemical Products) the value of beginning and ending inventory, production, purchased/imported/received, domestic and export sales and transfer are to be asked for drugs and medicines.

Number of Employees

This refers to the total number of persons who worked in or for the establishment as of the end of the reference month.

Production Capacity

Production capacity refers to the largest production volume possible under a normal employee schedule with the existing equipment and allowing downtime for maintenance repair and clean up.

Monthly Production Capacity (Item III) is asked for some commodities of the following sectors:

- Milled and Refined Sugar (MSP Form No.1-157),
- Tobacco Products (MSP Form No.1- 160),
- Paper and Paper Products (MSP Form No. 1- 210),
- Basic Chemicals (MSP Form No.1-241),
- Refined Petroleum Products (MSP Form No.1- 232),
- Cements (MSP Form No.1- 262),
- Domestic Electric Appliances (MSP Form No.1- 291),
- Office, Accounting and Computing Machinery (MSP Form No.1- 300),
- Motor Vehicles & Bodies of Motor Vehicles (MSP Form No.1- 341) and
- Motorcycles (MSP Form No.1- 351).

Chapter 3

MSP OPERATION AND ORGANIZATION

3.1. Major Phases of Operation

The Monthly Survey of Production consists of four (4) major phases of operation:

1. Planning and preparatory activities;
2. Training;
3. Distribution and collection of questionnaires; and
4. Processing

3.1.1 Planning and Preparatory Activities

The staff of Industry Statistics Division (ISD) of Industry and Trade Statistics Department (ITSD) undertook the planning and preparatory activities of the MSP. These activities include the selection of sectors and commodities, finalization of sample establishments, questionnaire design, preparation of timetable of activities, preparation of budget estimates and processing manual, and machine processing system.

3.1.2 Training

Training on MSP Pilot Survey operation shall be done in four (4) levels. The first-level is the task force training, which involves selected ITSD personnel. It will be conducted in the Central Office for two (2) days.

The second-level training shall be attended by the Regional Statistician of the sixteen (16) regions and will be conducted in the Central Office for a duration of two (2) days. The trainers are the participants of the first level training.

The third-level training shall be conducted also for a duration of two (2) days in all Regional Offices. Those who will attend the second level training shall serve trainers at this level. Participants to this training are the Provincial Statisticians, the District Statistics Officers (DSOs), Statistical Coordination Officer (SCOs) and other statistical staff for provinces located in the regional office.

A fourth level training will be conducted in some provinces as the bulk of the sample establishments are expected in these provinces namely; Bulacan, Cavite, Laguna, Rizal and Negros Occidental. It will be participated by the DSOs and SCOs and will be conducted in their respective provinces for two (2) days. The trainers are the statisticians who attended the third level training.

See the *Timetable of Activities* on Section 3.2 for the specific training schedules.

3.1.3 Distribution and Collection of Questionnaires

Questionnaires for the three months of the quarter are to be personally delivered to the respondent establishments by the provincial staff every third month of the previous quarter. Soft copies (diskettes) of the questionnaire may be provided the establishment if the report can be sent through email. MSP sample establishment that is also a MISSI sample will be given both the MSP and MISSI questionnaires.

Three copies of the MSP questionnaire/s will be given to the sample establishment for each reference month. The field personnel will collect the original and the duplicate copies starting the 10th to 30th day after the reference month simultaneous with MISSI questionnaire if the establishment is also a MISSI sample. The original copy of the MSP questionnaire will be sent to Central Office and the duplicate copy will be kept in the provincial office. The third copy will be will be establishment's file.

To keep track of the distribution and collection of the questionnaires the field office staff should institute control procedures by indicating the date in the Control List of Establishments..

3.1.4 Processing

Processing is to be done manually and by machine. Manual processing is to done in the Provincial Office and this involves field editing of accomplished questionnaires by the DSOs/SCOs following the editing instructions found in Chapter 5 of this manual.

The staff of the Industry Statistics Division will do manual verification of the edited questionnaire and machine processing using microcomputers.

Appendix 4 shows the over-all flow of MSP activities and the unit in-charge for each activity.

3.2. Timetable of Activities

FLOW OF ACTIVITIES		DATE
A. PREPARATORY ACTIVITIES		
1. Preparation of Budget Estimates		November, 2001
2. Design of Questionnaires		Dec., 2001-Jan. 2002
3. Preparation of Field Operation Manual		January 2002
4. Finalization of Sample Establishments		February 2002
5. Printing of Questionnaires, Field Operation Manual, Control Lists of Establishments and Address Stubs		February 2002
6. Addressing of Questionnaires, Matching of the Control List & Packing January - June July - September October - December		March 2002 May 2002 August 2002
7. Shipment of Questionnaires January - June July - September October - December		March 2002 May 2002 August 2002
8. System Design		March -April 2002
B. OPERATION		
1. Training Task Force Training Second-Level Training Third-Level Training Fourth-Level Training		February 8, 2002 Feb. 28 - March 1, 2002 March 4 - 15, 2002 March 4 - 15, 2002
2. Distribution of Questionnaires January - June July - September October - December		April 2002 June 2002 September 2002
3. Collection and Field Editing of Questionnaires January - March April - December		May 10-July 31, 2002 10 th - 30 th days after the reference month
4. Transmittal of Field Edited Questionnaires to Central Office January - March April - December		May 15- Aug 15, 2002 15 th - 45 th days after reference month
5. Receipt and Control of Edited Questionnaires from Prov'l Office January - March April - December		May 15- Aug 15, 2002 15 th - 45 th days after reference month
6. Verification of Edited Questionnaires January - March April - December		May 15- Aug 15, 2002 15 th - 45 th days after reference month
7. Encoding and machine processing of verified questionnaires January - March April - December		May 15- Aug 31, 2002 15 th - 45 th days after reference month

3.3. Organization

The overall direction for the MSP Pilot Survey emanates from the NSO Administrator. However, the overall planning, implementation and supervision is delegated to the ITSD OIC-Director.

Basic responsibilities of the ITSD Staff and Field Office Staff are described below.

3.3.1 Central Office (ITSD)

The Industry Statistics Division of ITSD is primarily responsible for the conduct of MSP Pilot Survey. The following activities are to be implemented under the supervision of the ITSD OIC-Director:

- Preparation of the survey design such as the following: timetable of operation, questionnaires, manual training programs and materials, field operation plans, budget estimate, commodity selection and sample selection;
- Addressing the questionnaires;
- Conduct the task force and second level trainings;
- Assist in the third and fourth level trainings;
- Verify and encode edited questionnaires;
- Assist in the development of data encoding system; and
- Analyze the result of the survey

3.3.2 Regional Office

The Regional Directors (RDs) are responsible for the overall implementation of the field operation in their regions. Specifically, they shall:

- Attend the second-level training and conduct the third-level training;
- Coordinate and supervise the training and travel of the Provincial Statistics Officers (PSOs) and their statisticians and see to it that provinces which need more attention/supervision are accorded such;
- Attend promptly to problems that may arise during the field operation;
- Ensure proper allocation of funds for provincial offices;
- Monitor field operations; and

- Ensure that all provinces comply with the deadline of the submission of edited questionnaires

3.3.3 Provincial Office

The PSOs shall be responsible for the phases of field operation that are to be done in the provinces. They shall:

- Attend the third-level training and conduct the fourth-level training;
- Ensure the smooth conduct of the training in their respective provinces;
- Coordinate and supervise the travel of the DSOs and SCOs and other provincial staff involved in the survey;
- Ensure proper distribution of workload among DSOs and SCOs;
- Monitor the submission of edited questionnaires by the DSOs and SCOs;
- Supervise the receipt and control of questionnaires and ensure their quality as to completeness and reasonableness; and
- Transmit edited questionnaires to ISD and furnish RD of the transmittal.

3.3.4 District Offices

The DSOs and the SCOs shall be responsible for the following:

- Attend the third or the fourth-level training;
- Secure the list of sample establishments and corresponding questionnaires from their respective provincial offices;
- Ensure that all sample establishments have corresponding questionnaire/s with correct addresses;
- Distribute and collect questionnaire of sample establishments;
- Edit the accomplished questionnaires as to completeness and reasonableness;
- Submit edited questionnaires to PSO; and
- Report problems to respective PSOs.

Chapter 4

FIELD OPERATION INSTRUCTIONS

4.1. Overview

With regards to the MSP Pilot Survey field operation, the following are the specific activities to be undertaken:

1. Distribution of questionnaires;
2. Collection of questionnaires;
3. Receipt and control of questionnaires;
4. Field editing of questionnaires; and
5. Transmittal of edited questionnaires to the central office

Detailed instructions for field editing will be discussed in Chapter 5 of this manual.

4.2. Distribution of Questionnaires

4.2.1 Shipment of Forms From Central Office to Field Office

1. The ISD Receipt and Control Unit, following the standard operating procedures for shipment of the Office will send pre-addressed questionnaires and control lists for every quarter to the PSO. Each province will also be provided with the soft copy (diskettes) of the questionnaires.
2. Upon receipt of the forms, the PSO must immediately check the contents of the shipment against ITSD Form 1-General Transmittal Form (*see Appendix 5*) and acknowledge receipt. Any discrepancy in the shipment must be indicated in "REMARKS" portion of the transmittal form.

4.2.2 Verification of Pre-Addressed Questionnaires and Control Lists

Pre-addressed questionnaires received from the Central Office should be checked with the corresponding Control List for the Quarter by ensuring that all sample establishments listed in the control list have corresponding pre-addressed questionnaires.

4.2.3 Instructions for Distribution of Questionnaires

1. Deliver the questionnaire/s to the establishment personally. Make sure that the respondent is aware when the accomplished questionnaire is to be collected.
2. Provide the establishment three (3) copies of the questionnaire including MSP Form 2 (Instructions in Accomplishing MSP Form1-____) for each reference month in a quarter.
3. Leave a diskette copy of the questionnaire/s and the email address of the PSO if the respondent is willing to send their response through email. If possible, secure also the email address of the contact person.
4. Provide the respondent the Office's fax number if available.

4.3. Collection of Questionnaires

Data collection can be done in three methods: first is collecting the accomplished questionnaire personally from the establishment; second is through fax and the last method is via email.

The enumerators are then responsible for the following:

1. Exhaust all possible means in collecting all questionnaires before the monthly deadline.
2. In cases when responses are made through email, acknowledge the receipt of questionnaire at once.

3. Upon collection, review the questionnaire for completeness and consistency of entries to avoid revisits or callbacks.
4. Report immediately unresolved problems encountered during collection to PSO.
5. Exert effort to collect reports of non-responding establishments even after the 30th day of the reference month. The goal is to have 100% collection even after the monthly deadline because the data to be collected would form the baseline for index computation.
6. Take extra effort to get the actual figures if establishments are reporting estimates.
7. Leave one (1) copy of the accomplished questionnaire to the establishment and other two copies for PSO and Central Office.

4.4. Instructions for Controlling the Questionnaires

1. Record in the control list the following information for all establishments:
 - date of distribution
 - date of receipt
2. Indicate in the "REMARKS" portion any action taken for a particular establishment.
3. Write "VIA EMAIL" in the "REMARKS" portion if the establishment responded through email.
4. Write "THRU FAX" in the "REMARKS" portion if the establishment's report was submitted through fax.

4.5. Transmittal of Field Edited Questionnaires to the Central Office

1. All field-edited questionnaires should be transmitted from the Provincial Office to the Central Office. The PSO should address the transmittal as:

<p>The OIC - Director Industry and Trade Statistics Department National Statistics Office R. Magsaysay Blvd., Sta. Mesa, Manila Attention: Industry Statistics Division</p>

2. Four (4) copies of ITSD-ADM Form 1 (General Transmittal Form) must be prepared. (*See Appendix No. 5.*) One copy is to be retained by the PSO, another copy will be sent to RA. The other two (2) copies will accompany the shipment – one is for ITSD file and the other copy will be used by ITSD to acknowledge receipt.
3. In cases when establishment reports are sent through email use the email address ***E.Armonia@mail.census.gov.ph***.

Chapter 5

EDITING INSTRUCTIONS

Editing consists of checking for completeness of entries in the questionnaires and internal consistency of data. This is to be done by the provincial staff or DSOs or SCOs.

5.1. General Edit Instructions

General guidelines for field editing as presented in this section shall apply to all MSP form types.

1. Staple to the questionnaires all enclosures or attachments supplied by the respondent.
2. Read entries in the attachments, enclosures, "REMARKS" portion written in the questionnaire, which may provide important information pertinent to the report.
3. Do not erase nor obliterate entries supplied by the respondent. If there are changes or corrections, line out the original entries and write the corrections above the lined-out figures or on any nearest space.
4. Use pencil in editing.
5. Review the questionnaire for completeness and consistency of entries using instructions discussed in Section 5.2 and 5.3 of this manual. Any unresolved, incomplete or inconsistent entries have to be verified from the establishment.

5.2. Instructions for Completeness Check

1. The reference month and year should be properly filled-up.
2. The name of contact person and statistical researcher and their telephone numbers should be written in the spaces provided for these.

3. For Item I (Finished Products) at least one commodity must have an entry. If the item is left blank, verify from the establishment and indicate explanation in Remarks portion.
4. Ensure that there is an entry for Item II (Number of Employees).
5. For MSP Forms requiring monthly production capacity (Item III), make sure that the establishment provided answer/s if they are producing the specified commodity/ies in the questionnaire.

5.3. Instructions for Checking Consistencies of Entries

1. Check if the target commodity/ies with entry/ies in Item I Col.1 (Finished Products) for the current month is the same with the previous month except for the month of January.
2. Beginning inventory (Item I Col.5) of current month should be equal to the ending inventory (Item I Col.12) of the previous month's report except for the month of January.
3. If the volume of production of commodity (Item I Col. 6) has a non-zero entry; the value of production (Item I Col. 13) should also be non-zero.
4. Compute the unit cost of production per commodity by dividing the value of production (Item I Col. 13) to volume of production (Item I Col.6). Write in pencil the unit cost on the space in the right-hand corner adjacent to the commodity. Compare this figure:
 - against the computed value of the previous month
 - against the computed value for all establishments producing the same commodity.

Growth rate between 0 - 20% is acceptable, otherwise verify from the establishment.

5. For each commodity in all columns in Item I (Finished Products) compute the growth rate for current month report against the previous month report. Acceptable growth rate is between 0-20%, otherwise it should be verified.

6. Check the consistency of entries in Item I (Volume of Finished Products) using this condition:

$$\begin{aligned} &\text{Beginning Inventory} + \text{Production} + \\ &\text{Purchased/Imported/Received} - \text{Internal} \\ &\text{Consumption} - \text{Domestic Sales} - \text{Export Sales} - \\ &\text{Transfer} = \text{Ending Inventory} \end{aligned}$$

Or

$$\begin{aligned} &\text{Column 5} + \text{Column 6} + \text{Column 7} - \text{Column 8} - \\ &\text{Column 9} - \text{Column 10} - \text{Column 11} = \text{Column 12} \end{aligned}$$

If the above condition is not satisfied, this implies that any of the figures are inconsistent. Verify from the establishment.

7. If the figures reported for volume (Item I Columns 5 to 12) do not correspond to the pre-printed unit of measure, convert figures to the required unit. See *Appendix No. 7* for conversion equivalents.
8. Verify from the establishment if entry in Item II (Number of Employees) for the reference month increase or decrease by more than 20% compared to previous month's report.
9. Check that commodity with entry in Item III (Monthly Production Capacity) has an entry for the commodity in Item I (Finished Product). Verify if either one item has an entry and the other has no entry.

APPENDICES



Monthly Survey of Production (MSP)

Instructions in Accomplishing the MSP Form No. 1

Please read the following instructions before filling up the MSP Form 1. Preliminary estimates are acceptable if final figures are not yet available. However, please provide the final figures as soon as they are available. The period of collection of the accomplished questionnaire will be within the 10th and the 30th day of the month after the reference month.

I. FINISHED PRODUCTS

COL. (1) - TARGET COMMODITY

The pre-determined representative products for each industry group.

COL. (2) - DESCRIPTION

This describes the target commodity.

COL. (3) - CODE

The pre-assigned number for each target commodity in the questionnaire to be used for machine processing.

COL. (4) - UNIT

The pre-determined unit of measure by target commodity to be used in reporting the volume of inventories, production and sales.

COL. (5) - BEGINNING INVENTORY

Report the volume of inventory of each commodity specified at the beginning of the reference month. Do not include work-in-process.

COL. (6) - PRODUCTION VOLUME

Report the volume of production of each commodity produced by this establishment during the reference month according to the unit of measure specified. Products repaired, re-modeled, or reproduced should not be included. Do not include work-in-process.

Products produced on a consignment basis should be included whether sold or transferred to the other establishments as far as they are finished products or parts/components traded in the market. On the other hand, do not include those made by subcontractors of the establishment on a consignment basis.

COL. (7) - PURCHASED/IMPORTED/RECEIVED

Report the volume of products purchased, imported or received during the reference month. They may be from: a) other establishments of the same enterprise or b) subcontractors of the establishment operating on a consignment basis.

COL. (8) - INTERNAL CONSUMPTION

Report the volume of products consumed or used by this establishment as input or raw materials or parts/components for the next production process, whether these products are produced, purchased, imported or received by this establishment.

COL. (9) - DOMESTIC SALES

Report the volume of products sold to domestic market directly or through dealers, net of returns.

COL. (10) - EXPORT SALES

Report the volume of products shipped directly by the establishment outside the country, as well as those sold to exporters or wholesalers for international export, net of returns.

COL. (11) - TRANSFER

Report the volume of products:

- (a) transferred to other establishments of the same enterprise (inter-plant transfers); or
- (b) transferred to other establishments of a different enterprise, in case operating on a consignment basis; and
- (c) used by this establishment but not as raw materials or input to the next production process.

COL. (12) - ENDING INVENTORY

Report the volume of inventory of each commodity specified at the end of the reference month. Do not include work-in-process.

****Note:** the entries for columns (5) to (12) should be consistent with the following equation. If not, please give the reason(s) in the "Remarks" portion.

$\text{Column (12)} = \text{col. (5)} + \text{col. (6)} + \text{col. (7)} - \text{col. (8)} - \text{col. (9)} - \text{col. (10)} - \text{col. (11)}$
--

COL. (13) - PRODUCTION VALUE

Report the production value (*equal to the volume of production multiplied by the producer's price*) for each commodity. *Producer's price (or ex-establishment price)* refers to the sales price charged to the customer, including all duties and taxes which fall on the products when they leave the establishment (*ex-establishment*). In case of transfer, report the production value as though sold.

II. NUMBER OF EMPLOYEES

COL. (16) - TOTAL NUMBER OF EMPLOYEES

Report the total number of employees of this establishment at the end of the reference month.

Number of employees refers to the total number of persons who worked in or for the establishment as of the end of the reference month.

III. MONTHLY PRODUCTION CAPACITY

COL. (20) - MONTHLY PRODUCTION CAPACITY

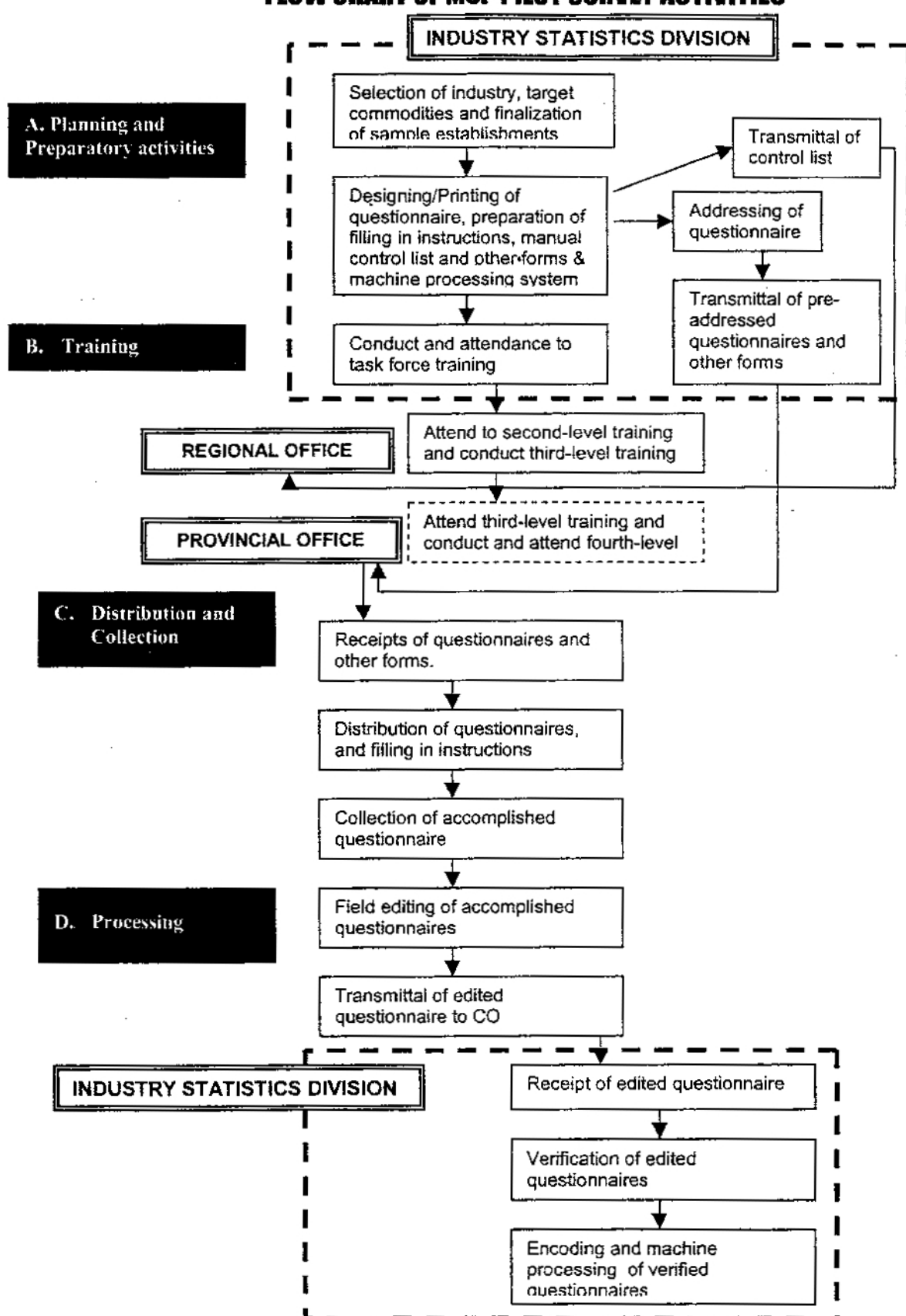
Report the monthly production capacity of the commodities specified in the questionnaire.

Production capacity refers to the largest production volume possible under a normal employee work schedule, with existing equipment, and allowing normal downtime for maintenance, repair and cleanup. Any factor other than production equipment, which hindered production, should not be taken into account. The existing equipment does not include those out of operation for overhauling or upgrading.

IV. REMARKS

Write in this portion any important information pertinent to the report supplied by the establishment.

FLOW CHART OF MSP PILOT SURVEY ACTIVITIES



TO: _____ DATE: _____

[illegible]

TRANSMITTING OFFICER:	RECEIVING OFFICER:
Signature:	Signature:
Full name: LOURDES V. HOMECILLO	Full name:
Designation: Chief, Industry Statistics Division	Designation:
Date:	Date:

NARRATIVE REPORT FOR MONTHLY SURVEY OF PRODUCTION
_____ Level of Training

REGION: _____
PROVINCE: _____

DATE:

VENUE:

TRAINERS:

PARTICIPANTS:

ISSUES AND COMMENTS:

OTHER MATTERS: (Financial, etc.)

SUGGESTIONS:

CONVERSION TABLE

	QUANTITY
1 gross	= 144 pieces = 12 dozens

	WEIGHT
1 gram	= 0.03527 ounce = 0.00220462 lbs
1 kilogram	= 2.20462 lbs = 0.001 ton = 0.0158 picul
1 ounce	= 28.3495 grams = 0.0625 lbs
1 pound	= 453.59237 grams = 16 ounces
1 ton	= 1,000 kilograms = 2,204.62 pounds

	LIQUID MEASURE
1 quart	= 0.25 gallon = 0.9463 liter = 2 pint
1 pint	= 0.568261 quart = 0.125 gallon = 0.4732 liter
1 liter	= 1.75975 pint = 0.879877 quart = 0.219969 gallon = 0.006290 barrel = 0.005 drum
1 gallon	= 3.78541 liters = 8 pints = 4 quarts = 0.0238 barrel = 0.0189 drum
1 drum	= 200 liters = 53 gallons = 1.2619 barrel
1 barrel	= 158.98 liters = 42 gallons = 0.924 drums

TRAINING SCHEDULE FOR THE MSP PILOT SURVEY
SECOND LEVEL TRAINING
 TWO (2) DAYS

FIRST DAY

TOPIC	TIME
Registration and Distribution of Training Materials	8:30 – 9:00 am
Opening Remarks	9:00 – 9:15 am
Introduction of Participants	9:00 – 9:30 am
Chapter 1 - Introduction	9:30 – 10:00 am
Break time	10:00 – 10:15 am
Chapter 2 – Survey Design	10:15 – 12:00 nn
Lunch Break	12:00 – 1:30 pm
Chapter 2 – Survey Design (Continuation) Discussion of Appendix 1, 2, 3 and 6	1:30 – 3:00 pm
Break time	3:00 – 3:15 pm
Chapter 3 – MSP Operations and Organization Discussion of Appendix 4	3:15 – 5:00 pm

SECOND DAY

TOPIC	TIME
Recap	8:30 – 9:00 am
Chapter 4 – Field Operation Instructions Discussion of Appendix 5	9:00 – 10:00 am
Break time	10:00 – 10:15 am
Chapter 5 – Editing Instructions Discussion of Appendix 7	10:15 – 12:00 nn
Lunch Break	12:00 – 1:30 pm
Plant Visit	1:30 – 5:00 pm

TRAINING SCHEDULE FOR THE MSP PILOT SURVEY
THIRD LEVEL TRAINING
TWO (2) DAYS

FIRST DAY

TOPIC	TIME
Registration and Distribution of Training Materials	8:30 – 9:00 am
Opening Remarks	9:00 – 9:15 am
Chapter 1 – Introduction	9:15 – 10:00 am
Break time	10:00 – 10:15 am
Chapter 2 – Survey Design	10:15 – 12:00 nn
Lunch Break	12:00 – 1:30 pm
Chapter 2 – Survey Design (Continuation)	1:30 – 3:00 pm
Break time	3:00 – 3:15 pm
Discussion of Appendix 1, 2, 3 and 6	3:15 – 5:00 pm

SECOND DAY

TOPIC	TIME
Recap	8:30 – 9:00 am
Discussion of Appendix 1, 2 and 3	9:00 – 10:00 am
Break time	10:00 – 10:15 am
Chapter 3 – MSP Operations and Organization Discussion of Appendix 4	10:15 – 12:00 nn
Lunch Break	12:00 – 1:30 pm
Chapter 4 – Field Operation Instructions Discussion of Appendix 5	1:30 – 3:00 pm
Break time	3:00 – 3:15 pm
Chapter 5 – Editing Instructions Discussion of Appendix 7	3:15 – 5:00 pm

Annex-6 Editing Manual

CENTRAL OFFICE

EDITING MANUAL

MONTHLY SURVEY OF PRODUCTION (MSP)

Pilot Survey



Republic of the Philippines
National Statistics Office
Manila

FOREWORD

This **CENTRAL OFFICE EDITING MANUAL** is the second volume intended to guide those involved, particularly the Industry Statistics Division (ISD) personnel, in the manual processing of the Monthly Survey of Production (MSP) Pilot Survey.

It gives instructions and procedures in the various activities to be undertaken during manual processing stage. It also gives detailed editing rules to check the reasonableness and consistency of data reported by establishments.

It is hoped that this manual will serve its purpose in order that timely and quality data on production of commodities will be collected and generated.

CARMELITA N. ERICTA
Administrator

Manila, Philippines
February 2002

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Chapter 1

PROCESSING ACTIVITIES

1.1. Overview

Processing of accomplished questionnaires is done manually and by machine. Instructions for machine processing would be discussed in a separate manual while the manual processing procedures would be discussed in this volume.

This chapter discusses the activities to be undertaken during the manual processing.

1.2. Manual Processing Activities

The manual processing activities to be undertaken by the ISD staff are the following:

- Receipt and control of questionnaires
- Manual editing of questionnaires
- Folioing
- Updating of establishment characteristics in the control list.

1.3. Receipt and Control of Questionnaires

A control list of the MSP samples would be generated specifically for the use of the ISD staff. The following are the instructions to be done upon receipt of the accomplished MSP questionnaires from the field offices:

1. Upon receipt of the questionnaires from the field offices,
 - Match the establishments' names against those listed in the transmittal

- Reflect the date of receipt and affix the signature of the receiving personnel at the bottom portion of the cover page of each questionnaire
 - Reflect the date of receipt and affix the signature of the receiving personnel on the space provided for in ITSD-Adm Form 1A
 - Indicate in the 'Remarks' column of the transmittal if any discrepancy found
2. Staple to the questionnaire all attachments or enclosures supplied by the respondent
 3. Indicate the date of receipt in the control list
 4. Reflect any pertinent information about the establishment in the 'Remarks' portion of the control list
 5. If there are any corrections in the name or address of the establishment, line out the name or address printed in the control list and write above it the correct name or address
 6. Distribute the questionnaires to ISD staff for editing
 7. After editing, the receipt and control unit should folio the questionnaires according to the procedures enumerated in section 1.4
 8. After folioing the questionnaires, reflect the folio numbers and questionnaire numbers corresponding to the establishments in the control list.

1.4. Editing of Questionnaires

To determine the completeness, consistency and reasonableness of entries in the accomplished questionnaires, the ISD staff should edit the questionnaires based on the editing instructions contained in Chapter 3.

1.5. Folioing of Questionnaires

After manually editing the questionnaires, they will be folioed and labeled. Folioing is grouping together edited questionnaires for easy handling of

forms for data encoding and machine processing. A folio shall contain at most 20 questionnaires. The folio cover should contain the following information:

- Sector Code
- Reference Year
- Reference Month
- Folio Number - a two-digit number assigned sequentially per sector per month.

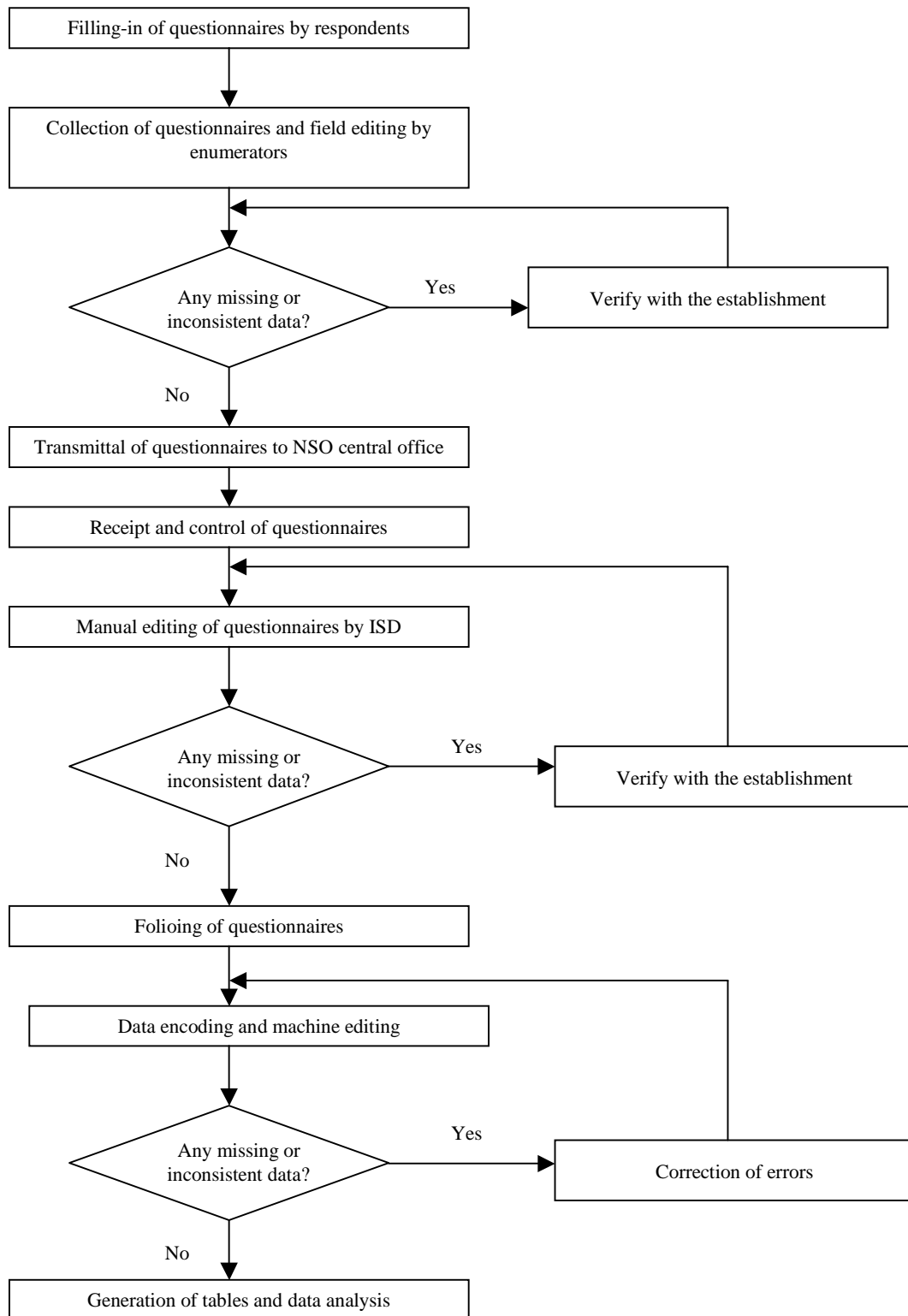
For each reference month of the year, folio numbers shall be assigned sequentially regardless of the sector code. Hence, the folio number of the first folio for sector 151, January of 2002 shall be 151-2002-01-01. The second folio of sector 151, January 2002 shall be 151-2002-01-02 and so on.

In the same manner, the first folio number for sector 151 for February 2002 shall be 151-2002-02-01. The second folio shall be 151-2002-02-02 and so on.

The questionnaires within the folio should be labeled sequentially with a questionnaire number (QN). The first QN of the folio starts with '01', the second '02', the third '03' and so on. A folio may contain up to 20 questionnaires.

The whole flow of the MSP data processing activities is shown by a chart on the next page.

Basic Flow of MSP from Filling-in of Questionnaires to Tabulation



Chapter 2

QUESTIONNAIRE FORMS

2.1. MSP Form 1 – Main Questionnaire

MSP Form 1 is the questionnaire to be administered to the sample establishments of MSP Pilot Survey. Twenty-four forms were designed for the 24 target sectors selected. Each target sector will be using one questionnaire type. The last three-digit in the MSP form type number corresponds to the 3-digit PSIC of the sector. An establishment may be provided with more than one questionnaire type if it produces two or more commodities having different sectors.

2.2. Questionnaire Items of MSP Form 1

The data items in the MSP questionnaire are listed below:

- MSP Form Type Number
- Name and Physical Location of Establishment
- Reference Year and Month
- Finished Products
 - Target commodities
 - Description
 - Code
 - Unit of Measurement
 - Volume of Beginning Inventory
 - Volume of Production
 - Volume of Purchased/Imported/Received
 - Volume of Internal Consumption (selected commodities only)
 - Volume of Domestic Sales
 - Volume of Export Sales
 - Volume of Transfer

- Value of Production (in pesos)
- Number of Employees
- Monthly Production Capacity (selected commodities only)
- Remarks
- Certification

2.2.1 MSP Form Type Number

Found at the upper left portion of the questionnaire, the MSP form type number is the unique identification of the questionnaire. All MSP form type numbers start with '**MSP Form No. 1-**' followed by a 3-digit PSIC code which indicates that the questionnaire is for establishments classified under the specific sector.

2.2.2 Name and Physical Location of Establishment

The name and physical location of the establishment is found at the address stub portion of the questionnaire. There are establishments where the questionnaires should be forwarded to head offices. In this case the address of the establishment indicates a 'C/O' address.

2.2.3 Reference Year and Month

This portion particularly identifies the month and year to which the questionnaire refers.

2.2.4 Finished Products

Finished products are: 1) manufactured goods destined for the consumer market; or 2) intermediate input goods distributed in the market.

- Target commodities – these are the pre-determined products that would represent the sector in the computation of production indices.
- Description – a brief explanation of the target commodity on what are to be included in the report.
- Code – a pre-assigned number for each commodity in the questionnaire to be used for data processing.

- Unit of Measurement - the pre-determined unit of measurement by which the volume of commodity is to be reported.
- Beginning Inventory – the volume of the finished products (excluding work-in-process) still to be sold or used at the beginning of the reference month.
- Volume of Production – the volume of finished products that was manufactured during the month excluding work-in-process. Also excluded are repaired, re-modeled, or reproduced goods. Products made by subcontractors of the establishment on a consignment basis should also be excluded. However, products produced on a consignment basis should be included whether sold or transferred to the other establishments as far as they are finished products or parts/components traded in the market.
- Purchased/Imported/Received – these are products that were received by the establishment during the month from: a) other establishments of the same enterprise or b) subcontractors of the establishment operating on a consignment basis.
- Internal Consumption (selected commodities only) – products that were produced, purchased, imported or received by the establishment and which were consumed internally as input or raw materials or parts/components for the next production process.

Internal Consumption (Column 4 of Item I) is applicable to the following Form Type and commodity: clinker for MSP Form Type No. 262-Cements, hot and cold rolled coils for MSP Form Type No. 271-Basic Iron and Steel, display monitor, hard, floppy and compact disc drive for MSP Form No. 300 - Office, Accounting and Computing Machinery, TV picture tube, microwave tube, receiver/amplifier valve and tube and radio/TV transmitter for MSP Form Type No. 321 - Electronic Valves, TV and Radio Transmitters and Line Telephony. For MSP Form Type No. 343 - Parts and Accessories of Motor Vehicles, this column is required for all sample commodities. On other hand, only this column is not shaded for MSP Form No. 232 - Refined Petroleum Products.

- Domestic Sales – products sold directly in the local market or through dealers.

- Export Sales - products shipped directly by the establishment outside the country, as well as those sold to exporters or wholesalers for international export
- Transfer – products that were:
 - (a) transferred to other establishments of the same enterprise (inter-plant transfers);
 - (b) transferred to other establishments of a different enterprise, in case operating on a consignment basis; and
 - (c) used by this establishment as final product and not as raw materials or input to the next production process.
- Ending Inventory – the volume of products that were not sold or used at the end of the reference month excluding work-in-process.
- Value of Production (in pesos) – this refers to the value of products manufactured (equal to the volume of production multiplied by the producer's price) for each commodity. Producer's price (or ex-establishment price) refers to the sales price charged to the customer, including all duties and taxes which fall on the products when they leave the establishment (ex-establishment). In case of transfer, report the production value as though sold.

In MSP Form No. 242- Chemical Products the value of beginning and ending inventory, production, purchased/imported/received, domestic and export sales and transfer is to be asked for drug and medicine.

2.2.5 Number of Employees

Number of employees refers to the total number of persons working in or for the establishment as of the end of the reference month.

2.2.6 Monthly Production Capacity

Production capacity refers to the largest production volume possible under a normal employee work schedule, with existing equipment, and allowing normal downtime for maintenance, repair and cleanup. Any factor other than production equipment, which hindered production, should not be taken into account. The existing equipment does not include those out of operation for overhauling or upgrading.

Monthly Production Capacity (Item III) is asked for some commodities of the following sectors: Milled and Refined Sugar (MSP Form No.157), Tobacco Products (MSP Form No. 160), Paper and Paper Products (MSP Form No. 157), Basic Chemicals (MSP Form No.241), Refined Petroleum Products (MSP Form No. 232), Cements (MSP Form No. 262), Domestic Electric Appliances (MSP Form No. 291), Office, Accounting and Computing Machinery (MSP Form No. 300), Motor Vehicles & Bodies of Motor Vehicles (MSP Form No. 341) and Motorcycles (MSP Form No. 351).

2.2.7 Remarks

This portion is to be used by the respondents for any information pertinent to the report.

2.2.8 Certification

The name of the person from the establishment who certifies that the information given is accurate.

2.3. MSP Form No. 2 - Instructions for Accomplishing MSP Form 1
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This form will be administered together with MSP Form No. 1 to the respondents of the sample establishments. It contains the definition of terms used in the survey as well as the detailed instructions on how to accomplish the form.

Chapter 3

MANUAL EDITING INSTRUCTIONS

Manual editing of accomplished questionnaires is a very important activity in any survey for the generation of reliable statistics. Editing consists of checking for completeness of entries in the questionnaires and internal consistency of data.

At the central office, editing of the MSP questionnaires is done by the ISD staff.

The editing procedures presented in this chapter are the minimum requirements that the ISD staff should implement in checking the accomplished questionnaires.

This chapter does not cover the imputation procedures for unreported data. Unreported data during editing should be verified with the establishment.

In general, this chapter deals with the editing procedures that follows after the questionnaires are transmitted by the field offices to the central office and received by ISD.

3.1. General Edit Instructions

General guidelines for manual editing as presented in this section shall apply to MSP Form 1.

1. Staple to the questionnaires all enclosures or attachments supplied by the respondent.
2. Read entries in the attachments, enclosures, "REMARKS" portion written in the questionnaire, which may provide important information pertinent to the report.
3. Do not erase nor obliterate entries supplied by the respondent. If there are changes or corrections, line out the original entries and

write the corrections above the lined-out figures or on any nearest space.

4. Use red ball pen in editing.
5. Review the questionnaire for completeness and consistency of entries using instructions discussed in Section 3.2 and 3.3. Any unresolved, incomplete or inconsistent entries have to be verified from the establishment.

3.2. Instructions for Completeness Check

1. The reference month and year should be properly filled-up.
2. The name of contact person and statistical researcher and their telephone numbers should be written in the spaces provided for these.
3. For Item I (Finished Products) at least one commodity must have an entry. If the item is left blank, verify from the establishment and indicate explanation in Remarks portion.
4. Ensure that there is an entry for Item II (Number of Employees).
5. For MSP Forms requiring monthly production capacity (Item III), make sure that the establishment provided answer/s if they are producing the specified commodity/ies in the questionnaire.

3.3. Instructions for Checking Consistency of Entries

3.3.1. Item I – Finished Products

1. Check if the target commodity/ies with entry/ies in Item I (Finished Products) for the current month is the same with the previous month. If not, see remarks or verify from the establishment.
2. Beginning inventory (Item I Col.1) of current month should be equal to ending inventory (Item I Col.8) of the previous month's report.

3. If the volume of a production of commodity (Item I Col. 2) has a non-zero entry, the value of production (Item I Col. 9) should also be non-zero.
4. Compute the unit price per commodity by dividing the value of production (Item I Col. 9) by the volume of production (Item I Col.2). Write in pencil the unit price on the space in the right-hand corner adjacent to the commodity. Compare this figure:
 - against the computed unit price of the previous month
 - against the computed unit price for establishments producing the same commodity.

The ratio of the unit price for the current month against the unit price of the previous month or the unit price for establishments producing the same commodity should be between 0.8 and 1.2. Otherwise, check with the establishment.

5. For each commodity in all columns in Item I (Finished Products) compute the ratio of current month report against the previous month's report. Ratio should be between 0.8 and 1.2. Otherwise, verify from the establishment.
6. Check the consistency of entries in Item I (Volume of Finished Products) using the following condition:

➤ **Beginning Inventory + Production +
Purchased/Imported/Received – Internal Consumption -
Domestic Sales - Export Sales – Transfer = Ending**

Or

➤ **Column 1 + Column2 + Column 3 - Column 4 - Column 5
- Column 6 - Column 7 = Column 8**

If the above condition is not satisfied, this implies that any or all of the figures are invalid. Verify from the establishment.

7. If the figures reported for volume (Item I columns 1 to 8) do not correspond to the pre-printed unit of measure, convert figures to the required unit.

3.3.2. Item II – Number of Employees

1. Verify from the establishment if the ratio for Item II (Number of Employees) for the reference month against previous month's report is not between 0.8 and 1.2.

3.3.3. Item III – Production Capacity

1. Check if the commodity/ies with report in Item III (Monthly Production Capacity) is the same as the commodity/ies with report/s in Item I (Finished Product). Ascertain from the establishment the difference.

Verify from the establishment if the volume of production reported in Item I is more than three (3) times the production capacity.