



Republic of the Philippines
Philippine Statistics Authority

Monthly Integrated Survey of Selected Industries and Producer Price Survey

Operations Manual (Part 1)

F O R E W O R D

This Operations Manual for the Monthly Integrated Survey of Selected Industries (MISSI) and Producer Price Survey (PPS) was prepared to guide both central office and field office personnel under the Philippine Statistics Authority in the efficient conduct of the 2023 MISSI and 2023 PPS operations.

It presents information on the history, objectives, concepts and definitions used, scope and coverage, survey and questionnaire design, among others. The strategies to be employed during the survey operations are also explained. Examples are presented in the computation of the MISSI and PPS indices for a better appreciation of the methods used in its generation.

However, the instructions on the MISSI and PPS Windows-based system that will be used in the machine processing of data to ensure the accuracy and consistencies of results will be discussed in the Machine Processing Manual (part 2).

All users should familiarize themselves with this Operations Manual to ensure continued success of the operations for MISSI and PPS.

This Manual, therefore, will serve as guide to all stakeholders towards a better understanding of the operations and outputs of the two surveys.

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Chapter 1

INTRODUCTION

1.1 Monthly Integrated Survey of Selected Industries (MISSI)

1.1.1 Overview

The Monthly Integrated Survey of Selected Industries (MISSI) is one of the designated statistical activities undertaken by the Philippine Statistics Authority which covers major industries of manufacturing. The main objective of MISSI is to monitor the performance of growth-oriented industries in the manufacturing sector through monthly indicators in the form of indices and growth rates. The survey gathers monthly data on employment, compensation, value of production, revenue/sales, inventories and capacity utilization rate from manufacturing establishments.

The MISSI generates and disseminates four industrial indices generated from data on production and revenue/sales, namely: *a) Value of Production Index (VaPI), b) Value of Net Sales Index (VaNSI), c) Volume of Production Index (VoPI) and d) Volume of Net Sales Index (VoNSI)*. The indices on volume, VoPI and VoNSI, are two derived indicators which are estimated using the Producer Price Index (PPI) generated from the Producer Price Survey (PPS). The average capacity utilization rate by industry division/group is also included in the dissemination of MISSI results.

1.1.2 Objective

The MISSI continues to regularly provide timely flash indicators that monitor the performance of growth-oriented industries in the manufacturing sector. The indicators generated by the MISSI are in the form of indices and growth rates of value of production and net sales data. Indices on volume of production and volume of net sales are derived using the producer price index as deflator.

1.1.3 Historical Background

The predecessor of the MISSI is the Survey of Key Enterprises in Manufacturing or SKEM. Through the years of its operation, the SKEM and later on the MISSI continued to utilize the shuttle type questionnaire for data collection.

The MISSI milestones are shown below:

- | | |
|------|--|
| 1981 | The SKEM started as a project of the National Accounts Staff (NAS) of the National Economic and Development Authority (NEDA). Indices generated from the SKEM had 1981 as base period. |
|------|--|

- 1986 The responsibility for the SKEM was transferred to the Economic Census Branch of the National Census and Statistics Office (National Statistics Office or NSO).
- 1988 The SKEM was reassigned to the Manufacturing Division of the same agency. Rebasing of the SKEM series to 1985 was completed during the year.
- 1997 Following the reorganization of the NSO, responsibility of the SKEM was again transferred to the newly created Economic Indices and Indicators Division (EIID).

Integration of the SKEM and Department of Trade and Industry's Monthly Industrial Survey (MIS) was finalized and the new survey was renamed as MISSI. The MISSI expanded to include additional information like inventory and capacity utilization. Rebasing of the MISSI series to 1994 also started.
- 2001 The responsibility of the MISSI was again transferred to the Manufacturing Section of the Industry Statistics Division.

The MISSI data series with 1994 as the new base period was released during the year, in parallel with the 1985-based series. The 1994-based series had January 1998 as its earliest series.

A pre-test survey on the Current Survey of Production (CSP) was conducted as a part of the "Study on the Development of Industrial Statistics in the Philippines" by a joint work of JICA (Japan International Cooperation Agency) Study Team and the NSO. The CSP was a field trial of basic design of commodity-based and volume-based survey for the manufacturing industry, which was expected to further improve the existing MISSI. The CSP was later renamed MSP (Monthly Survey on Production).
- 2002 The 1985-based MISSI data series was discontinued beginning January.

The plan to improve the methodology in the calculation of the monthly industrial production indices, specifically the volume of production index (VoPI) using the direct method, the NSO conducted the MSP, which aimed to collect commodity-based and volume-based data on production, sales and inventory.
- 2005 The rebasing of the MISSI series to base year 2000 started.
- 2006 The MSP was discontinued due to budgetary constraints.
- 2007 The MISSI data series with 2000 as the new base period was released in August, in parallel with the 1994-based series.

New indicators in the 2000-based series were generated. These were Value of Net Sales Index (VaNSI) and Volume of Net Sales Index (VoNSI). In the 1994-

based series, only year-on-year and month-on-month growth rates were generated from the Net Sales value and volume data.

- 2008 The 1994-based MISSI data series was discontinued beginning January. Only the 2000-based series was published.
- 2011 The rebasing of the MISSI series to base year 2006 started. This is in accordance to NSCB Resolution No. 2, series of 2009 which approves the synchronized rebasing of the price indices to base year 2006.
- 2014 The rebasing of the MISSI series to base year 2006 was halted. Instead, rebasing of the MISSI series to base year 2012 started since the results of the 2012 Census of Philippine Business and Industry (CPBI) was available as source for the weights.
- 2015 The use of geometric average of short-term value relatives of responding sample establishments was used as the imputation technique for the missing data of non-responding samples.
- 2017 The rebasing of the MISSI series to base year 2012 began. The industry classification followed the Amended 1994 PSIC (20 major sectors) which was the same as the 2000-based series.
- 2019 The computation for the 2012-based series continued but the industry classification used was according to the 2009 PSIC (22 industry division).
- 2020 The rebasing of the 2012-based MISSI series was stopped. Instead, it was decided that the MISSI series be rebased to 2018. The rebased MISSI series which followed the 2009 PSIC as industry classification was approved by the PSA Board in December 2020. The index computation methodology at the higher aggregates was changed from Chained Laspeyres-type to Chained Paasche-type index computation.

The computation of the average capacity utilization used a simpler and direct estimation that considered the impact of establishments that were temporarily closed during the reference period to the production and sales of the manufacturing sector.

1.2 Producer Price Survey (PPS)

1.2.1 Overview

The Producer Price Survey (PPS) is conducted by PSA to collect monthly producer prices of industry products produced by sample establishments in the manufacturing sector. The PPS is the source of producer prices which are used in the generation and compilation of the monthly Producer Price Index (PPI) for the manufacturing sector.

The PPI for the manufacturing sector measures the average change over time in the prices of products or commodities produced by domestic manufactures and sold at factory gate prices to wholesalers and/or other consumers in the domestic market relative to a base period.

1.2.2 Uses of Producer Price Index

The PPI serves various purposes, the most important of which are the following:

- to measure monthly or yearly changes in the producer price of key products/commodities in the manufacturing sector
- to serve as deflator to VaPI and VaNSI in the estimation of the VoPI and VoNSI for the MISSI, respectively
- to serve as a deflator in the estimation of manufacturing production in real terms (at constant prices) in the system of national accounts.

1.2.3 Historical Background

The PPI milestones are presented below:

- 1980 Studies on the generation of the PPI started when the Index of Physical Volume of Production series being generated by the then Central Bank of the Philippines (now the Bangko Sentral ng Pilipinas) was discontinued. This came about because of the transfer of responsibility of operations and processing of the Monthly Survey of Establishments (MSE) for manufacturing from the Central Bank to the National Census and Statistics Office (National Statistics Office-NSO).

Work on the original PPI started with 1978 as the base year and was later revised to 1985. The source of data for the PPI was then the Monthly Survey of Establishments (MSE) for manufacturing. The MSE has a rider questionnaire, which asked for data on production of major products of the sample establishments. However, the PPI series were never released as official statistics. It was later felt that the components of the PPI were no longer reflective of the

prevailing production structure of the manufacturing sector that the PPI operations were halted.

1992-1993 The compilation of the PPI with 1992 as the base year was revived in a project “Improvement of the Producer Price Index of Selected Manufactured Products” through the Grants-in-Aid Program of the National Statistical Coordination Board (NSCB).

The NSO with guidance from the Technical Committee on Price Statistics of NSCB worked for further improvements to the PPI to make it more reflective of the actual situation of the manufacturing sector. The conduct of the Producer Price Survey started as the source of data for the PPI.

Starting with this new base year, the PPI was officially released simultaneous with the SKEM indicators. The SKEM was later renamed to MISSI.

2001 The NSO released the rebased series of PPI with 1994 as the new base year. The 1992-based series continued on until December 2001 and was discontinued the year after. The 1994-based series had January 1998 as the earliest series.

2005 The work on the rebasing of the PPI to base year 2000 started.

2007 The PPI data series with 2000 as the new base period was released in August, in parallel with the 1994-based series. The 2000-based had January 2001 as its earliest series.

2008 The 1994-based PPI data series was discontinued beginning January.

2011 The rebasing of the PPI series to base year 2006 started. This is in accordance with NSCB Resolution No. 2, series of 2009 which approves the synchronized rebasing of the price indices to base year 2006.

2014 The rebasing of the PPI series to base year 2006 was halted. Instead, rebasing of the PPI series to base year 2012 started since the results of the 2012 Census of Philippine Business and Industry (CPBI) was available as source of the weights.

2015 The use of geometric average of short-term price relatives of responding sample establishments was used as the imputation technique for the missing data of non-responding samples.

2017 The rebasing of the PPI series to base year 2012 began. The industry classification followed the Amended 1994 PSIC (20 major sectors) which was the same as the 2000-based series.

2019 The computation for the 2012-based series continued but the industry classification used was according to the 2009 PSIC (22 industry division).

2020 The rebasing of the 2012-based PPI series was stopped. Instead, it was decided that the PPI series be rebased to 2018. The rebased PPI series which followed the 2009 PSIC was approved by the PSA Board on December 2020. The index computation methodology was still the same, Chained-Paasche type.

1.3 Legal Authority

- **Republic Act 10625** known as the **Philippine Statistical Act of 2013** dated 12 September 2013 - (Reorganizing and strengthening of the Philippine Statistical System (PSS), its agencies and instrumentalities). It shall be the policy of the State to effect the necessary and proper changes in the organizational and functional structures of the PSS in order to rationalize and promote efficiency and effectiveness in the delivery of statistical services.

Section 25 of Republic Act No. 10625 (*Obligation to Provide Information*) states that:

“... The respondents under this Act are required to give truthful and complete answers to statistical inquiries or surveys of the PSA and other statistical offices of the PSS. The respondent is considered to have complied with the obligation only upon receipt of the duly completed statistical inquiry or survey forms. The government shall provide franking privileges, charges and postings to the survey offices, unless otherwise disallowed by law. The PSA is authorized to gather data from other government agencies for statistical purposes.”

Section 27 of Republic Act No. 10625 (*Penalties*) states that:

“Respondents of primary data collection activities such as censuses and sample surveys are obliged to give truthful and complete answers to statistical inquiries. The gathering, consolidation and analysis of such data shall likewise be done in the most truthful and credible manner. To ensure compliance, any violation of this Act shall result in the imposition of the penalty of one (1) year imprisonment and a fine of One hundred thousand pesos (P100,000.00). In cases where the respondent fails to give truthful and complete answer to such statistical inquiries is a corporation, the above penalty shall be imposed against the responsible officer, director, manager and/or agent of said corporation. In addition, such erring corporation or any other juridical entity, depending on the category of the enterprise or business concerned whether small, medium or large, shall be imposed a fine ranging from One hundred thousand pesos (P100,000.00) to Five hundred thousand pesos (P500,000.00).”

1.4 Confidentiality of Information

➤ Republic Act No. 10625 (Philippine Statistical Act of 2013)

Section 26 of RA 10625 and Article 55 of the Implementing Rules and Regulations of RA 10625 state that:

“Individual data furnished by a respondent to statistical inquiries, surveys and censuses of the PSA shall be considered privileged communication and as such shall be inadmissible as evidence in any proceeding. The PSA may release aggregated information from statistical inquiries, surveys and censuses in the form of summaries or statistical tables in which no reference to an individual, corporation, association, partnership, institution or business enterprise shall appear...”

Section 27 of RA 10625 states that:

“...Any person, including parties within the PSA Board and the PSA, who breach the confidentiality of information, whether by carelessness, improper behavior, behavior with malicious intent, and use of confidential information for profit, are considered guilty of an offense and shall be liable to fines as prescribed by the PSA Board which shall not be less than Five thousand pesos (P5,000.00) nor more than Ten thousand pesos (P10,000.00) and/or imprisonment of three (3) months but not to exceed one (1) year, subject to the degree of breach of information...”

➤ Republic Act 6713 (Code of Conduct and Ethical Standards for Public Officials and Employees) dated February 20, 1989.

Section 7 of RA 6713 states that:

“...(c) Disclosure and/or misuse of confidential information. Public officials and employees shall not use or divulge confidential or classified information officially known to them by reason of their office and not made available to the public, either: (1) to further their private interest, or give undue advantage of anyone, or (2) to prejudice the public interest...”

1.5 Reference Period

All information collected in MISSI and PPS refers to current month of the reference year, except for the employment data, which is as of the 15th of the reference month.

Chapter 2

CONCEPTS AND DEFINITION OF TERMS

Manufacturing includes the physical or chemical transformation of materials, substances, or components into new products. The raw materials are products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities. Substantial alteration, renovation or reconstruction of goods is generally considered as manufacturing.

Manufacturing establishments that transform materials into new products by hand in the worker's home, or sell products made on the same premises from which they are sold are also included. Manufacturing units may process materials or may contract with other units to process their materials for them. Both types of units are included in manufacturing sector.

Examples of manufacturing establishments are shop, factory, bakery, mill work, distillery, refinery, cannery, abattoir, brewery, foundry, printing press, tannery or plant engaged in the processing, fabricating or finishing of products, mechanically or manually, including the assembly of the component parts of a product and the substantial alteration, reconstruction or repair of special type of goods.

Establishment is 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. An establishment is categorized by its **Economic Organization (EO)**, **Legal Organization (LO)**, **Industrial Classification (IND)**, **Employment Size (SZ)**, and **Geographic Classification (GEO)**.

Economic Organization (EO). This relates to the organizational structure or role of the establishment in the organization. The following are the types of **EO**:

- **Single establishment (EO=1)** is an establishment which has neither branch nor main office. It may have ancillary unit/s, other than main office, located elsewhere.
- **Branch only (EO=2)** is an establishment which has a separate main office located elsewhere.
- **Establishment and main office (EO=3)** is one where the establishment is located in the same address as the main office and with branch/es elsewhere.
- **Main office only (EO=4)** is a unit which controls, supervises and directs one or more establishments of an enterprise.
- **Ancillary unit other than Main office (EO=5)** is the unit that operates primarily or exclusively for a related establishment or group of related establishments or its parent establishment and provides goods or services that support but do not become part of the output of those establishment.

Examples of ancillary units are warehouses of manufacturing establishments, research laboratories of pharmaceutical companies and administrative offices which primarily serve their parent units in the Philippines.

Legal Organization (LO). This provides the legal basis for ownership of the establishment. The following are the types of **LO**:

- **Single Proprietorship (LO=1)** – a business establishment organized, owned and managed by one person, who alone assumes the risk of the business enterprise.
- **Partnership (LO=2)** – an association of two or more individuals for the conduct of a business enterprise based upon an agreement or contract between or among them to contribute money, property or industry into a common fund with the intention of dividing profits among themselves.
- **Government Corporation (LO=3)** – a corporation organized for private aim, benefit or purpose with the government as the majority stockholder, regardless of whether they are stock or non-stock corporations.
- **Stock Corporation (LO=4)** – an ordinary business corporation organized by private persons, created and operated for the purpose of making a profit which may be distributed in the form of dividends to stockholders on the basis of their invested capital.
- x ➤ **Non-Stock, Non-Profit Corporation (LO=5)** – a business corporation who do not issue stock to its members and are created not to profit but for the public good and welfare. Of this character are most of the religious, social, literary, scientific, civic and political organizations and societies.
- **Cooperative (LO=6)** – an organization composed primarily of small producers and/or consumers who voluntarily join together to form a business enterprise, which they themselves own, control and patronize.
- **Others (LO=7)** – an organization not classified in any of the above classification.

Industrial Classification (IND) is determined by the activity from which it derives its major income or revenue. The **2009 Philippine Standard Industrial Classification (PSIC)** is utilized to classify economic units according to their economic activities. Out of 477 manufacturing industries classified in the 2009 PSIC, 22 industry divisions (2-digit PSIC) and 48 industry groups (3-digit PSIC) are grouped as the industry domain.

Employment Size (SZ) of the establishment is determined by its **total employment** as of specific date.

The following are the size codes with corresponding total employment used in establishment-based census and surveys:

SZ Code	Total Employment
0	1 - 4
1	5 - 9
2	10 - 19
3	20 - 49
4	50 - 99
5	100 - 199
6	200 - 499
7	500 - 999
8	1000 - 1999
9	2000 and over

Geographic Classification. Establishments are also classified by geographic area using the latest Philippine Standard Geographic Code (PSGC) classification. The PSGC contains the latest updates on the official number of regions, provinces, cities, municipalities and barangays in the Philippines.

Establishment Control Number (ECN) is a unique 14 alpha-numeric code assigned to each establishment listed in the List of Establishment (LE).

The ECN and all other characteristics of an establishment discussed above are indicated in the address stub of the sample establishment expressed in codes. *Refer to Section 4.3.1 of Chapter 4 for the address stub.*

2.1 MISSI Concepts and Definition of Terms

Total employment is the total number of persons who work in or for the establishment during pay periods nearest the 15th of each reference month. Total employment consists of working owners and/or unpaid workers, and paid officials and workers. Workers who are working on a sub-contractual arrangement with the establishment are excluded in employment. The payment for this arrangement is accounted as industrial services under total cost. Total cost, however, is not being collected in MISSI.

Working owners are owners who are actively engaged in the management of the establishment but do not receive regular pay, i.e., not included in the payroll.

Unpaid workers are persons working for at least 1/3 of the working time normal to the establishment who do not receive regular pay. It includes all apprentices and learners without regular pay.

Paid employees are full-time or part-time workers, on sick or maternity leave and on paid vacation or holiday, and employees working away from this establishment paid by and under the control of this establishment. Paid employees are managers and executives, production workers, and other employees.

Managers and executives refer to all salaried directors, managers, executives, administrative and other officials of the same category. Working owners receiving regular pay should be included in this category.

Production workers refer to all employees directly engaged in the production activities of the establishment. Included are manual workers, clerical personnel, working foreman and seasonal workers who fabricate, process, assemble, construct, install, etc. Excluded are supervisory employees above working foreman level.

Other employees refer to all other employees not included above.

Total compensation refers to the sum of salaries and wages before deductions of employees' SSS contribution, withholding taxes, etc. and employer's contribution to SSS/GSIS, Philhealth, PAG-IBIG, and other similar schemes.

Salaries and Wages consist of basic pay, overtime pay, cost-of-living allowances, vacation and sick leave pay, commissions, bonuses, dismissal or retirement pay, back pays and other benefits prior to deduction of employees' SSS/GSIS contribution, PAG-IBIG, Philhealth, withholding taxes and the like.

Total Employer's contribution to SSS/GSIS, ECC, etc. refers to all payments made by the employer on behalf of his employees to SSS/GSIS, ECC, PAG-IBIG, Philhealth, pension and similar schemes.

Total Value of Production is the value of all goods produced and work-in-progress during the reference month. Valuation is at producer prices, that is, the unit price (ex-plant) of a product or commodity as it leaves the establishment of the producer. It includes any indirect tax paid by the producer less any subsidies on products received by the producer.

Value of production for domestic market refers to products/by-products produced by the establishment for another local establishment of a different enterprise. i.e., producer, wholesaler and retailer.

Value of production for direct exports refers to products/by-products produced and shipped directly outside the country by the establishment.

Value of production sold to exporters refers to products/by-products produced locally to exporters by the establishment.

Total Revenue/ Sales is the total cash received and receivables for goods sold and services rendered.

Sales from manufacturing activity includes the value of shipments of products manufactured by the establishment whether or not they were produced during the reference month. Inter-plant transfer and goods transferred from one establishment to another of the same enterprise should be valued as though sold. Valuation of goods shipped is at ex-plant price (producer price) and net of discounts, allowances and returned goods.

Sales to domestic market refers to sales of products/by-products of the establishment to another establishment of a different enterprise i.e., producer, wholesaler, and retailer.

Direct exports refer to products sold and shipped directly outside the country by the establishment.

Sales to exporters refers to the products/by-products sold locally to exporters by the establishment.

Other income includes income from activities other than manufacturing, such as investment interest, foreign exchange gains, rent income, and profit from the sale of non-inventory assets.

Inventory of finished product is the value of stocks of goods owned by or under the control of the establishment as of a fixed date of the reference month which are ready for shipment, regardless of where the stocks are located.

Inventory of work-in-progress is the value of stocks of all materials which have been partially processed by the establishment as of a fixed date of the reference month, but which are not usually sold or turned over to other establishment without further processing.

Inventory of raw materials is the value of stocks of raw materials as of a fixed date of the reference month. It includes materials and fuels that enter into the product.

Capacity utilization is the ratio of total output to the maximum rated capacity of the establishment.

Rated capacity refers to the largest volume of output possible at which the factory can operate with an acceptable degree of efficiency taking into consideration unavoidable losses of productive time (i.e., vacations, holidays, and repairs to equipment) and availability of raw materials.

Value of Production Index (VaPI) measures the average change over time of the value of production of the manufacturing sector relative to a base period.

Volume of Production Index (VoPI) measures the average change over time of the volume of production of the manufacturing sector relative to a base period. This is a derived indicator with PPI as the deflator.

Value of Net Sales Index (VaNSI) measures the average change over time of the value of sales of the manufacturing sector relative to a base period.

Volume of Net Sales Index (VoNSI) measures the average change over time of the volume of sales of the manufacturing sector relative to a base period. This is a derived indicator using the PPI as deflator.

2.2 PPS Concepts and Definition of Terms

Producer Price is the unit price (ex-plant) of a product or commodity as it leaves the establishment of the producer. It includes any indirect tax paid by the producer **less** any subsidies on the products received by the producer.

Market basket for the PPI refers to a sample of industry products which are produced and sold by manufacturers at factory gate prices.

Sample industry products are the major products of manufacturers during the base year.

Price relative is the ratio of current price to the base price.

Products/Commodities are the goods normally intended for sale in the market at a price that is designed to cover their cost of production.

Brand Name is the name identifying a product including its manufacturer.

Specifications are written statement of an item's required characteristics documented in a manner that facilitates its procurement or production.

Unit of measure is the standard unit or system of units by which a quantity is accounted for and expressed. Examples are meter, kilogram, grams, metric ton, troy ounce, and others.

Producer Price Index (PPI) measures the average change over time in the prices of products or commodities produced by domestic manufactures and sold at factory gate prices to wholesalers and/or other consumers in the domestic market relative to a base period.

Chapter 3

SAMPLING DESIGN & INDEX COMPUTATION

This chapter presents the scope and coverage, survey frame, and sampling design. It also discusses the methodology used in the index computation and estimation of indicator for the MISSI and PPS. Examples are given in deriving the various indicators for better appreciation of the methods presented.

3.1 Unit of Enumeration

The statistical unit of enumeration used by the MISSI and PPS is the establishment. *Refer to Chapter 2 for the definition and classifications of establishment.*

3.2 Scope and Coverage

The MISSI and PPS are nationwide undertaking that covers all manufacturing establishments confined to the formal sector of the economy.

The formal sector is comprised of the following:

1. Corporations and partnerships
2. Cooperatives and foundations
3. Sole proprietorship with employment of 10 and over
4. Single proprietorship with branches

Further, employment size was considered in determining establishments under the formal sector as follows:

1. All establishments with total employment of 10 or more
2. All establishments with total employment of less than 10, except those establishments with LO=1 (single proprietorship) and EO=1 (single establishment)

The scope and coverage for MISSI and PPI are all establishments with EO=1, 2 and 3 engaged in manufacturing activities as classified in the 2009 PSIC.

3.2.1 Industry Structure / Classification

The industry structure or classification for MISSI and PPI follows the Philippine Systems of National Accounts (PSNA) grouping. Further, the PSNA grouping follows the 2009 PSIC for the 2018 base period.

The new grouping consists of 22 industry divisions (2-digit PSIC level) and 48 industry groups (3-digit PSIC level). Table 3.1 shows the list of industry divisions and groups and their corresponding 2009 PSIC code.

Table 3.1 List of Industry Divisions and Industry Groups

	2009 PSIC	INDUSTRY DESCRIPTION
	C	Manufacturing
1	C10	Manufacture of food products
	C101	Processing and preserving of meat
	C102	Processing and preserving of fish, crustaceans and mollusks
	C103	Processing and preserving of fruits and vegetables
	C104	Manufacture of vegetable and animal oils and fats
	C105	Manufacture of dairy products
	C106	Manufacture of grain mill products, starches and starch products
	C107	Manufacture of other food products
	C108	Manufacture of prepared animal feeds
2	C11	Manufacture of beverages
3	C12	Manufacture of tobacco products
4	C13	Manufacture of textiles
5	C14	Manufacture of wearing apparel
6	C15	Manufacture of leather and related products, including footwear
7	C16	Manufacture of wood, bamboo, cane, rattan articles and related products
	C161	Sawmilling and planing of wood
	C162	Manufacture of products of wood, cork, straw and plaiting materials
8	C17	Manufacture of paper and paper products
9	C18	Printing and reproduction of recorded media
10	C19	Manufacture of coke and refined petroleum products

	2009 PSIC	INDUSTRY DESCRIPTION
11	C20	Manufacture of chemical and chemical products
	C201	Manufacture of basic chemicals
	C202, C203	Manufacture of other chemical products, n.e.c.
12	C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
13	C22	Manufacture of rubber and plastic products
	C221	Manufacture of rubber products
	C222	Manufacture of plastics products
14	C23	Manufacture of other non-metallic mineral products
	C231	Manufacture of glass and glass products
	C239	Manufacture of non-metallic mineral products, n.e.c.
15	C24	Manufacture of basic metals
	C241	Manufacture of basic iron and steel
	C242	Manufacture of basic precious and other non-ferrous metals
	C243	Casting of metals
16	C25	Manufacture of fabricated metal products, except machinery and equipment
	C251	Manufacture of structural metal products, tanks, reservoirs and steam generators
	C252	Manufacture of weapons and ammunition
	C259	Manufacture of other fabricated metal products; metal working service activities
17	C26	Manufacture of computer, electronic and optical products
	C261	Manufacture of electronic components
	C262	Manufacture of computers and peripheral equipment and accessories
	C263	Manufacture of communication equipment

	2009 PSIC	INDUSTRY DESCRIPTION
	C264	Manufacture of consumer electronics
	C265-C268	Manufacture of computer, electronic and optical products, n.e.c.
	C27	Manufacture of electrical equipment
	C271	Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus
	C272	Manufacture of batteries and accumulators
18	C273	Manufacture of wiring and wiring devices
	C274	Manufacture of electric lighting equipment
	C275	Manufacture of domestic appliances
	C279	Manufacture of other electrical equipment
	C28	Manufacture of machinery and equipment except electrical
19	C281	Manufacture of general purpose machinery
	C282	Manufacture of special purpose machinery
	C29, C30	Manufacture of transport equipment
20	C291-C293	Manufacture of motor vehicles, trailers and semi-trailers
	C301-C309	Manufacture of other transport equipment
21	C31	Manufacture of furniture
22	C32, C33	Other manufacturing

3.3 Survey Frame

The main source of the sampling frame was all manufacturing establishments of the 2019 ASPBI with Total Employment (TE) of 20 and over whose characteristics was updated using the List of Establishments (LE). A total of 11,253 manufacturing establishments with TE 20 is in the 2019 ASPBI.

3.4 Sampling Design

MISSI and PPS utilize a cut-off sampling design.

“Cut-off sampling is a sampling procedure in which a predetermined threshold is established with all units in the universe at or above the threshold being included in the sample and all units below the threshold being excluded. The threshold is usually specified in terms of the size of some known relevant variable. In the case of establishments, size is usually defined in terms of employment or output” (*United Nations, Producer Price Index Manual, 2004, p.650*).

For the MISSI and PPS, the threshold is based on value of production. Value of production is equal to the value of products sold adjusted for the changes in inventories of finished products and work-in-progress (ending less beginning). The establishments’ value of production was computed from the 2019 ASPBI and was used as basis in the selection of samples.

3.5 Sample Selection

3.5.1 MISSI

The responding sample establishments of the 2019 ASPBI with TE 20 and over were grouped according to the 22 industry divisions and 48 industry groups. Value of production by establishment were computed and arrayed from largest to smallest value of production within each industry group or division. Concentration ratios by industry group or division were computed to determine the industry leaders or establishments that were within the top 50 percent to 100 percent contributors to value of production by industry group or division. These industry leaders were taken as samples for the current year.

The number of samples for the 2022 MISSI is 949. See Appendix 10 for the distribution of samples by region/province.

3.5.2 PPS

The PPS will have the same set of samples as the MISSI.

3.5.3 MISSI and Quarterly Survey of Philippine Business and Industry (QSPBI) Samples

Both results from the MISSI and the Quarterly Survey of Philippine Business and Industry (QSPBI) for manufacturing are used as inputs in the compilation and estimation of the quarterly gross domestic product. To ease respondents’ burden, MISSI samples are automatically not selected as samples for the QSPBI.

3.6 Methodology in Generation of Indices

3.6.1 MISSI

The VaPI and VaNSI will utilize the Chained Paasche-type method of index computation where the basic data of weight computation are the value of production and sales, respectively. The sources of these data are the Census of Philippine Business and Industry (CPBI) for the base year and the Annual Survey of Philippine Business and Industry (ASPBI) for the succeeding years until the next rebasing.

3.6.1.1 Weights Computation

The weight of the industry group is the percent share of the industry to the total value of production for the industry division. The sum of the weights of all industry groups within an industry division is equal to one (1).

The weight of the industry division is the percent share of the industry to the total value of production for the manufacturing sector. The sum of the weights of all industry divisions is equal to one (1).

The same methodology is used in the computation of the weights for sales, but instead of value of production, data on sales is used.

3.6.1.2 Index Generation

The formula in the computation of indices are as follows:

A. Value of Production Index

i. Computation of Index for Industry Group Level

Monthly Index at the base year

$$VaPI_{ijm} = \frac{V_{ijm}}{V_{ijo}} \times 100$$

where:

- $VaPI_{ijm}$ = VaPI for industry group j in industry division i at current month m
- V_{ijm} = total value of production for all sample establishments of industry group j in industry division i at current month m of the base year
- V_{ijo} = average monthly value of production at the base year

Monthly Index after the base year

$$VaPI_{ijm} = \frac{V_{ijm}}{V_{ij(m-1)}} \times VaPI_{ij(m-1)}$$

where:

$VaPI_{ijm}$ = VaPI for industry group j in industry division i at current month m

$VaPI_{ij(m-1)}$ = VaPI for industry group j in industry division i for the previous month m-1

V_{ijm} = total value of production for all sample establishments of industry group j in industry division i at current month m

$V_{ij(m-1)}$ = total value of production for all sample establishments of industry group j in industry division i for the previous month m-1

ii. Computation of Index for Industry Division Level

$$VaPI_{im} = \frac{1}{\sum_{j=1}^{p_i} \left(W_{ij} \times \frac{1}{VaPI_{ijm}} \right)}$$

where:

$VaPI_{im}$ = VaPI for industry division i at current month m

$VaPI_{ijm}$ = VaPI for industry group j in industry division i at current month m

W_{ij} = weight for industry group j in industry division i

p_i = number of industry groups in industry division i

Note: Industry divisions with no industry groups uses the same computation of index as that for industry group level.

iii. Computation of Index for Total Manufacturing

$$VaPI_m = \frac{1}{\sum_{i=1}^{22} \left(W_i \times \frac{1}{VaPI_{im}} \right)}$$

where:

$VaPI_m$ = VaPI for the current month m

$VaPI_{im}$ = VaPI for industry division i at current month m

W_i = weight for industry division i

B. Value of Net Sales Index

The same methodology used in VaPI computation is applied to generate the Value of Net Sales Index (VaNSI).

C. Volume of Production Index

i. Computation of Index for Industry Group Level

$$VoPI_{ijm} = \frac{VaPI_{ijm}}{PPI_{ijm}}$$

where:

$VoPI_{ijm}$ = VoPI for industry group j in industry division i at current month m

$VaPI_{ijm}$ = VaPI for industry group j in industry division i at current month m

PPI_{ijm} = PPI for industry group j in industry division i at current month m

ii. Computation of Index for Industry Division Level

$$VoPI_{im} = \frac{VaPI_{im}}{PPI_{im}}$$

where:

$VoPI_{im}$ = VoPI for industry division i at current month m

$VaPI_{im}$ = VaPI for industry division i at current month m

PPI_{im} = PPI for industry division i at current month m

iii. Computation of Index for Total Manufacturing

$$VoPI_m = \frac{VaPI_m}{PPI_m}$$

where:

$VoPI_m$ = VoPI for total manufacturing at current month m

$VaPI_m$ = VaPI for total manufacturing at current month m

PPI_m = PPI for total manufacturing at current month m

D. Volume of Net Sales Index

The same methodology used in VoPI computation is applied to generate the Volume of Net Sales Index (VoNSI).

E. Average Capacity Utilization Rate

Capacity Utilization Rate is the ratio of total output to the maximum rated capacity of the establishment. The formulas in obtaining the Average Capacity Utilization Rate (AveCU) are the following:

i. Computation of AveCU for Industry Group Level

$$AveCU_{ijm} = \frac{\sum_{c=1}^k (X_c \times f_{cijm})}{n_{rijm} + n_{tijm}}$$

where:

- AveCU_{ijm} = average capacity utilization rate for industry group j in industry division i at current month m
- X_c = midpoint of capacity utilization rate at interval c
- f_{cijm} = frequency of responding samples at interval c for industry group j in industry division i at current month m
- n_{rijm} = total number of responding (good) establishments for industry group j in industry division i at current month m
- n_{tijm} = total number of temporarily closed/closed establishments for industry group j in industry division i at current month m
- k = total number of capacity utilization intervals

ii. Computation of AveCU for Industry Division Level

$$AveCU_{im} = \sum_{i=1}^{p_i} (W_{ij} \times AveCU_{ijm})$$

where:

- AveCU_{im} = average capacity utilization rate for industry division i at current month m
- W_{ij} = weight for industry group j in industry division i
- AveCU_{ijm} = average capacity utilization rate for industry group j in industry division i at current month m
- p_i = number of industry groups in industry division i

iii. Computation of AveCU for Total Manufacturing

$$AveCU_m = \sum_{i=1}^{22} (W_i \times AveCU_{im})$$

where:

AveCU_m = average capacity utilization rate for total manufacturing at current month m

W_i = weight for industry division i

AveCU_{im} = average capacity utilization rate for industry division i at current month m

3.6.2 PPS

The PPI utilizes the Chained Paasche-type method of index computation where the basic data for weight computation is the value of production. The sources of these data are the Census of Philippine Business and Industry (CPBI) for the base year and the Annual Survey of Philippine Business and Industry (ASPBI) for the succeeding years until the next rebasing.

3.6.2.1 Weights Computation

The weight of the industry group is the percent share of the industry to the total value of production for the industry division. The sum of the weights of all industry groups within an industry division is equal to one (1).

The weight of the industry division is the percent share of the industry to the total value of production for the manufacturing sector. The sum of the weights of all industry divisions is equal to one (1).

3.6.2.2 Index Generation

The formula in the computation of indices are as follows:

A. Producer Price Index

i. Computation of Index for Industry Group Level

Normalized Monthly Index at the base year

$$PPI_{ijm} = \frac{H_{ijm}}{H_{ij0}} \times 100$$

where:

PPI_{ijm} = PPI for industry group j in industry division i at current month m

H_{ijm} = harmonic mean of price relatives of products for industry group j in industry division i at month m of the base year computed as:

$$H_{ijm} = \frac{n_{ij}}{\sum_{h=1}^{n_{ij}} \frac{1}{\frac{p_{hijm}}{p_{hijo}}}} \times 100$$

H_{ijo} = average of the harmonic mean of price relatives of products for industry group j in industry division i at base year

p_{hijm} = producer price of commodity h for industry group j in industry division i at current month m

p_{hijo} = average monthly producer price of commodity h for industry group j in industry division i at base year

n_{ij} = total number of representative commodities for industry group j in industry i

Monthly Index after the base year

$$PPI_{ijm} = PPI_{ij(m-1)} \times \frac{N}{\sum_{h=1}^N \frac{1}{\frac{p_{hjm}}{p_{h(m-1)}}}}$$

where:

PPI_{ijm} = PPI for industry group j of industry division i at current month m

$PPI_{ij(m-1)}$ = PPI for industry group j of industry division i for the previous month

p_{hjm} = producer price of commodity h for industry group j of industry division i at current month m

$p_{h(m-1)}$ = producer price of commodity h for industry group j of industry division i for the previous month

N = total number of representative commodities for industry group j

ii. Computation of Index for Industry Division Level

$$PPI_{im} = \frac{1}{\sum_{j=1}^{p_i} \left(W_{ij} \times \frac{1}{PPI_{ijm}} \right)}$$

where:

PPI_{im} = PPI for industry division i at current month m

PPI_{ijm} = PPI for industry group j in industry division i at current month m

W_{ij} = weight for industry group j in industry division i

p_i = number of industry groups in industry division i

Note: Industry divisions with no industry groups uses the same computation of index as that for industry group level.

iii. Computation of Index for Total Manufacturing

$$PPI_m = \frac{1}{\sum_{i=1}^{22} \left(W_i \times \frac{1}{PPI_{im}} \right)}$$

where:

PPI_m = PPI for total manufacturing at current month m

PPI_{im} = PPI for industry division i at current month m

W_i = weight for industry division i

3.6.3 Examples of Index Generation

3.6.3.1 MISSI

A. Value of Production Index

i. Index Computation for Industry Group Level

Sample monthly production data from November to December 2021 of establishments under PSIC C221: Manufacture of rubber products (sub-industry of PSIC C22: Manufacture of rubber and plastic products) are presented in Table 3.2.

Table 3.2 Sample Monthly Production Data of Establishments under Manufacture of Rubber Products

Establishment	September 2022	December 2021
Establishment A	141,686,000	142,645,000
Establishment B	5,556,000	6,096,000
Establishment C	94,060,000	91,417,000
Establishment D	23,611,000	30,818,000
Establishment E	148,373,000	145,877,000
Total	413,286,000	416,853,000
Index	88.4	89.2

The VaPI for Manufacture of rubber products on December 2021 is computed as:

$$VaPI_{ijm} = \frac{V_{ijm}}{V_{ij(m-1)}} \times VaPI_{ij(m-1)}$$

$$VaPI_{C221_Dec2021} = \frac{416,853,000}{413,286,000} \times 88.4 = 89.2$$

$$VaPI_{C221_Dec2021} = 89.2$$

ii. Index Computation Industry Division Level

Weights and sample VaPI for September 2022 of the industry groups under PSIC C22: Manufacture of rubber and plastic products are presented in Table 3.3.

Table 3.3 Weights and Sample VaPI of Industry Groups under Manufacture of Rubber and Plastic Products

Industry Characteristics	Weights	VaPI
C22 Manufacture of rubber and plastic	1.0000	98.6
C221 Manufacture of rubber products	0.1601	88.4
C222 Manufacture of plastic products	0.8399	101.2

The VaPI for Manufacture of rubber and plastic products on September 2022 is computed as:

$$VaPI_{im} = \frac{1}{\sum_{j=1}^p \left(W_{ij} \times \frac{1}{VaPI_{ijm}} \right)}$$

$$VaPI_{C22_Nov2021} = \frac{1}{\left(0.1601 \times \frac{1}{88.4} \right) + \left(0.8399 \times \frac{1}{101.2} \right)}$$

$$VaPI_{C22_Nov2021} = 98.9$$

iii. Index Computation for Total Manufacturing

Weights and sample VaPI for September 2022 of the 22 industry groups of the Manufacturing Sector are presented in Table 3.4.

Table 3.4 Weights and Sample VaPI of Industry Divisions of the Manufacturing Sector

Industry Description	Weights	VaPI
C10 Manufacture of food products	0.1925	90.38
C11 Manufacture of beverages	0.0817	108.35
C12 Manufacture of tobacco products	0.0139	110.37
C13 Manufacture of textiles	0.0068	82.16
C14 Manufacture of wearing apparel	0.0117	115.22
C15 Manufacture of leather and related products, including footwear	0.0028	105.08
C16 Manufacture of wood, bamboo, cane, rattan articles and related products	0.0092	97.34
C17 Manufacture of paper and paper products	0.0228	108.57

Industry Description	Weights	VaPI
C18 Printing and reproduction of recorded media	0.0147	93.16
C19 Manufacture of coke and refined petroleum products	0.0945	99.11
C20 Manufacture of chemical and chemical products	0.0445	105.64
C21 Pharmaceuticals & medicinal products	0.0062	90.66
C22 Manufacture of rubber and plastic products	0.0340	95.1
C23 Manufacture of other non-metallic mineral products	0.0417	103.48
C24 Manufacture of basic metals	0.0598	106.99
C25 Manufacture of fabricated metal products, except machinery and equipment	0.0434	117.87
C26 Manufacture of computer, electronic and optical products	0.1562	99.33
C27 Manufacture of electrical equipment	0.0167	87.75
C28 Manufacture of machinery and equipment except electrical	0.0158	106.78
C29, C30 Manufacture of transport equipment	0.1039	105.41
C31 Manufacture of furniture	0.0093	109.94
C32, C33 Other manufacturing	0.0180	108.93

The VaPI for the Manufacturing Sector on September 2022 is computed as:

$$VaPI_m = \frac{1}{\sum_{j=1}^{22} \left(W_i \times \frac{1}{VaPI_{im}} \right)}$$

$$VaPI_{C_Nov2021} = \frac{1}{\left(0.1925 \times \frac{1}{90.38} \right) + \dots + \left(0.0180 \times \frac{1}{108.93} \right)}$$

$$VaPI_{C_Nov2021} = 100.4$$

B. Value of Net Sales Index

The methodology for the computation of VaNSI at the industry group, division, and sector level is same with VaPI but only using net sales data.

C. Volume of Production Index

i. Index Computation Industry Group Level

Sample VaPI and PPI for September 2022 of industry groups under PSIC C22: Manufacture of rubber and plastic products are presented in Table 3.5.

Table 3.5 Sample VaPI and PPI of Industry Groups under Manufacture of Rubber and Plastic Products

Industry Characteristics	VaPI	PPI	VoPI
C22 Manufacture of rubber and plastic	102.8	101.9	100.9
C221 Manufacture of rubber products	88.4	102.4	86.3
C222 Manufacture of plastic products	101.2	101.8	99.4

To compute for the VoPI of Manufacture of rubber products (PSIC C221) on September 2022:

$$VoPI_{ijm} = \frac{VaPI_{ijm}}{PPI_{ijm}} * 100$$

$$VoPI_{C221_Nov2021} = \frac{88.4}{102.4} * 100 = 86.3$$

$$VoPI_{C221_Dec2021} = \frac{89.2}{102.9} * 100 = 86.3$$

ii. Index Computation Industry Division Level

VoPI at the industry division level is computed similarly as VoPI at the industry group level. The only difference is that the VaPI and PPI inputs for industry division VoPI are group level.

iii. Index Computation for Total Manufacturing

VoPI for total manufacturing is computed similarly as VoPI at the industry group and division level. The only difference is that the VaPI and PPI inputs for VoPI of total manufacturing are division level.

D. Volume of Net Sales Index

The computation of VoNSI is similar to that of VoPI.

E. Average Capacity Utilization Rate

i. Index Computation Industry Group Level

Sample capacity utilization rates for September 2022 of establishments under PSIC C221: Manufacture of rubber products (sub-industry of PSIC C22: Manufacture of rubber and plastic products) are presented in Table 3.6.

Table 3.6 Sample of Capacity Utilization Rates for September 2022 of Establishments Under PSIC C221: Manufacture of Rubber Products

Range of CU	Midpoint	Frequency
0 - 49.9%	25.00	2
50-59.9%	54.95	0
60-69.9%	64.95	8
70-79.9%	74.95	15
80-89.9%	84.95	21
90-100%	95.00	17
Total		63

Assuming there are 5 closed establishments, the Average CU rate for September 2022 of Manufacture of rubber products is computed as:

$$AveCU_{ijm} = \frac{\sum_{c=1}^k (X_c \times f_{cijm})}{n_{rijm} + n_{tijm}}$$

$$AveCU_{C221_Nov2021} = \frac{(25 * 2) + (54.95 * 0) + \dots + (95 * 17)}{63 + 5}$$

$$AveCU_{C221_Nov2021} = 74.89$$

ii. Index Computation Industry Division Level

Weights and sample Average CU for September 2022 of the industry groups under PSIC C22: Manufacture of rubber and plastic products are presented in Table 3.7.

Table 3.7 Weights and Sample Average CU for September 2022 of Industry Groups Under PSIC C22: Manufacture of Rubber and Plastic Products

Industry Characteristics	Weights	Average CU
C22 Manufacture of rubber and plastic	1.0000	73.50
C221 Manufacture of rubber products	0.1601	74.89
C222 Manufacture of plastic products	0.8399	73.18

The Average CU rate for September 2022 of Manufacture of rubber and plastic products is computed as:

$$AveCU_{im} = \sum_{i=1}^{pi} (W_{ij} \times AveCU_{ijm})$$

$$AveCU_{C22_Nov2021} = (0.1601 * 74.89) + (0.8399 * 73.18)$$

$$AveCU_{C22_Nov2021} = 73.46$$

iii. Index Computation Industry for Total Manufacturing

Weights and sample VaPI for September 2022 of the 22 industry groups of the Manufacturing Sector are presented in Table 3.8.

Table 3.8 Weights and Sample VaPI of Industry Divisions of the Manufacturing Sector

Industry Description	Weights	Average CU
C10 Manufacture of food products	0.1925	73.95
C11 Manufacture of beverages	0.0817	63.86
C12 Manufacture of tobacco products	0.0139	72.46
C13 Manufacture of textiles	0.0068	73.22
C14 Manufacture of wearing apparel	0.0117	72.33
C15 Manufacture of leather and related products, including footwear	0.0028	75.61
C16 Manufacture of wood, bamboo, cane, rattan articles and related products	0.0092	70.21
C17 Manufacture of paper and paper products	0.0228	74.70
C18 Printing and reproduction of recorded media	0.0147	68.08

Industry Description	Weights	Average CU
C19 Manufacture of coke and refined petroleum products	0.0945	54.98
C20 Manufacture of chemical and chemical products	0.0445	74.60
C21 Pharmaceuticals & medicinal products	0.0062	84.97
C22 Manufacture of rubber and plastic products	0.0340	73.50
C23 Manufacture of other non-metallic mineral products	0.0417	80.08
C24 Manufacture of basic metals	0.0598	69.35
C25 Manufacture of fabricated metal products, except machinery and equipment	0.0434	65.40
C26 Manufacture of computer, electronic and optical products	0.1562	80.75
C27 Manufacture of electrical equipment	0.0167	70.21
C28 Manufacture of machinery and equipment except electrical	0.0158	67.16
C29, C30 Manufacture of transport equipment	0.1039	68.84
C31 Manufacture of furniture	0.0093	71.27
C32, C33 Other manufacturing	0.0180	73.90

The average CU of the manufacturing sector for September 2022 is computed as:

$$AveCU_m = \sum_{i=1}^{22} (W_i \times AveCU_{im})$$

$$AveCU_{C_Nov2021} = (0.1925 * 73.95) + \dots + (0.0180 * 73.90)$$

$$AveCU_{C_Nov2021} = 71.22$$

3.6.3.2 PPS

A. Producer Price Index

i. Index Computation Industry Group Level

Sample producer prices from November to December 2021 of a sample establishment under PSIC C105: Manufacture of Dairy Products (sub-industry of PSIC C10: Manufacture of food products) are presented in Table 3.9.

Table 3.9 Sample Producer Prices of a Sample Establishment Under PSIC C105: Manufacture of Dairy Products

Product/Commodity	September 2022	December 2021
1 Product/Commodity A	1,042.99	1,445.75
2 Product/Commodity B	63.28	61.29
3 Product/Commodity C	462.08	480.64
4 Product/Commodity D	336.60	347.04

To compute the PPI for December 2021, the price relative of each sample product in an industry is computed first:

$$PR = \frac{\text{current month producer price}}{\text{previous month producer price}}$$

Using the harmonic mean of the price relatives and the previous month's PPI (98.93) the December 2021 PPI is computed as:

$$PPI_{ijm} = PPI_{ij(m-1)} \times \frac{n_{ij}}{\sum_{h=1}^{n_{ij}} \frac{1}{\frac{p_{hijm}}{p_{hij(m-1)}}}}$$

$$PPI_{C105_Dec2021} = 98.93 \times \frac{4}{\frac{1}{\left(\frac{1,445.75}{1,042.99}\right)} + \frac{1}{\left(\frac{61.29}{63.28}\right)} + \frac{1}{\left(\frac{480.64}{462.08}\right)} + \frac{1}{\left(\frac{347.04}{336.60}\right)}}$$

$$PPI_{C105_Dec2021} = 107.38$$

ii. Index Computation for Industry Division Level

Weights and sample PPI for December 2021 of the industry groups under PSIC C10: Manufacture of food products are presented in Table 3.10.

Table 3.10 Weights and Sample PPI for September 2022 of Industry Groups Under Manufacture of Food Products

Industry Description	Weights	PPI
C101 Processing and preserving of meat	0.0757	104.73
C102 Processing and preserving of fish, crustaceans and mollusks	0.0481	95.83
C103 Processing and preserving of fruits and vegetables	0.0685	96.75
C104 Manufacture of vegetable and animal oils and fats	0.1022	89.78
C105 Manufacture of dairy products	0.2091	107.38
C106 Manufacture of grain mill products, starches and starch products	0.1038	89.97
C107 Manufacture of other food products	0.2954	101.96
C108 Manufacture of prepared animal feeds	0.0971	106.71

The PPI for December 2021 of Manufacture of food products is computed as:

$$PPI_{im} = \frac{1}{\sum_{j=1}^{p_i} \left(W_{ij} \times \frac{1}{PPI_{ijm}} \right)}$$

$$PPI_{C10_Dec2021} = \frac{1}{\left(0.0757 * \frac{1}{104.73} \right) + \dots + \left(0.0971 * \frac{1}{106.71} \right)}$$

$$PPI_{C10_Dec2021} = 100.21$$

iii. Index Computation for Total Manufacturing

Weights and sample PPI for September 2022 of the 22 industry groups of the Manufacturing Sector are presented in Table 3.11.

Table 3.11 Weights and sample PPI of Industry Divisions of the Manufacturing Sector

Industry Description	Weights	PPI
C10 Manufacture of food products	0.1925	98.96
C11 Manufacture of beverages	0.0817	101.77
C12 Manufacture of tobacco products	0.0139	107.62
C13 Manufacture of textiles	0.0068	94.32
C14 Manufacture of wearing apparel	0.0117	88.61
C15 Manufacture of leather and related products, including footwear	0.0028	91.36
C16 Manufacture of wood, bamboo, cane, rattan articles and related products	0.0092	92.33
C17 Manufacture of paper and paper products	0.0228	95.38
C18 Printing and reproduction of recorded media	0.0147	105.83
C19 Manufacture of coke and refined petroleum products	0.0945	73.63
C20 Manufacture of chemical and chemical products	0.0445	93.91
C21 Pharmaceuticals & medicinal products	0.0062	79.89
C22 Manufacture of rubber and plastic products	0.0340	100.31
C23 Manufacture of other non-metallic mineral products	0.0417	103.44
C24 Manufacture of basic metals	0.0598	81.22
C25 Manufacture of fabricated metal products, except machinery and equipment	0.0434	96.26
C26 Manufacture of computer, electronic and optical products	0.1562	94.31
C27 Manufacture of electrical equipment	0.0167	99.12
C28 Manufacture of machinery and equipment except electrical	0.0158	95.21
C29, C30 Manufacture of transport equipment	0.1039	87.76
C31 Manufacture of furniture	0.0093	89.40
C32, C33 Other manufacturing	0.0180	99.85

The PPI of the manufacturing sector for December 2021 is computed as:

$$PPI_m = \frac{1}{\sum_{i=1}^{22} \left(W_i \times \frac{1}{PPI_{im}} \right)}$$

$$PPI_{C_Dec2021} = \frac{1}{\left(0.1925 * \frac{1}{98.96} \right) + \dots + \left(0.0180 * \frac{1}{99.85} \right)}$$

$$PPI_{C_Dec2021} = 92.49$$

Chapter 4

QUESTIONNAIRES AND OTHER FORMS

The two (2) questionnaires used to capture the data set for MISSI and PPS are discussed in this chapter. Other forms utilized in the operation are also presented.

4.1 Questionnaires

The MISSI and PPS use a shuttle-type of questionnaire.

A shuttle-type of questionnaire is a kind of survey instrument used to capture a data set. This is the type of survey instrument that is administered to respondents in order to collect data at more frequent intervals of time to provide a running account of past responses. It includes definition of terms and specific instructions in filling-out the questionnaire to assist the respondent in understanding the questions and for ease in accomplishment. Furthermore, the questionnaire design ensures and enhances the consistency and accuracy in reporting past data.

The MISSI questionnaire collects monthly figures on employment, compensation, production, net sales/revenue, inventories of raw materials, finished products and work-in-progress, capacity utilization of the establishment and reason/s for the increase/decrease both on production and net sales/revenue. On the other hand, the PPS collects monthly prices of the top five products according to the product specification. A running account of the monthly figures from January to December of the year for all the data items for an establishment are in one questionnaire.

The clearance numbers and expiry dates are located on the upper right hand corner of the cover page of the questionnaires. The clearance numbers for the 2021 MISSI and PPS are listed in Table 4.1.

Table 4.1 Form Numbers and Clearance Numbers for MISSI and PPS

Form Number	Survey	Clearance Number/ Approval Number	Expiry
MISSI FORM 1	Monthly Integrated Survey of Selected Industries	PSA – <u>2202</u>	31 January 2023
PPS FORM 1	Producer Price Survey	PSA – <u>2203</u>	31 January 2023

4.1.1 Different Versions of MISSI/PPS Questionnaires

The 2021 MISSI and 2021 PPS questionnaires are available in two versions, printed and electronic copy in excel file format.

The **printed shuttle questionnaires** are distributed to sample establishments by PSA personnel and will be collected starting on the 10th day of every month.

The **electronic copy questionnaires in excel format** is to be sent to the official email address of the sample establishment. The PSO focal person will send electronic questionnaires during distribution of questionnaires.

Further, refer to Sections 6.2 and 6.3 of this Manual for the instructions on distribution and collection of questionnaires.

4.2 Data Items

4.2.1 Data Items for MISSI

Table 4.2 lists the data items for MISSI which are collected every month of the year.

Table 4.2 MISSI Data Items

ITEM NO.	DESCRIPTION	LINE NO.
Identification Information of Establishment	Name and Address of the Establishment and its Reporting Unit in the address stub	
	Tax Identification Number of the Establishment	
	Top Five Products/Commodities Manufactured by this Establishment	
	Name, Designation and Telephone Number of the Contact Person	
The following items must be filled up every month for the year		
I	Total Employment	01
I.A	Working Owners/Unpaid Workers	02
I.B	Paid Employees	03
I.B.1	Managers and Executives	04
I.B.2	Production Workers	05
I.B.3	Other Employees	06
II	Total Compensation (PhP)	07
II.A	Total Salaries and Wages	08
II.A.1	Salaries of Managers and Executives	09
II.A.2	Salaries and Wages of Production Workers	10
II.A.3	Salaries and Wages of Other Employees	11
II.B	Total Employer's Contribution to SSS/GSIS, ECC, etc.	12
III	Total Value of Production (PhP)	13

ITEM NO.	DESCRIPTION	LINE NO.
III.A	Value of Production for Domestic Market	14
III.B	Value of Production for Direct Exports/Sold to Exporters	15
III.C	Presence of increase/decrease in production for the month	16
III.D	Reason/s for the increase/decrease in production for the month	17
IV	Total Revenue/Sales (Php)	18
IV.A	Sales from manufacturing activity	19
IV.A.1	Sales to Domestic Market	20
IV.A.2	Sales to Exporters/Direct Exports	21
IV.B	Presence of increase/decrease in Sales from Manufacturing Activity for the month	22
IV.B.1	Reason/s for the increase/decrease in Sales from Manufacturing Activity for the month	23
IV.B	Other Income	24
V	Inventory	
V.A	Finished Products	25
V.B	Work-In-Progress	26
V.C	Raw Materials	27
VI	Capacity Utilization Rate	28
-	Remarks	29

The top five products/commodities manufactured by the establishment will be collected for MISSI in the beginning of the year to ensure that the sample establishment is engaged in manufacturing industry.

4.2.2 Data Items for PPS

The survey collects prices and the percentage share of each of the top five products to the total value of products manufactured by the sample establishments. The percentage share by products and industry domain will be used as weights in the index calculation. The top five products manufactured by the establishment must have the following characteristics:

- Product Name
- Brand Name
- Specification
- Unit of measure
- Percent share of the product to total value of products manufactured
- Reason for the increase/decrease in producer price for the month

The remarks portion is provided in order for the respondent/s or the field staff to indicate explanations for sudden increase or decrease in producer price.

4.2.3 Instructions in accomplishing the questionnaire

1. The reports should cover the activities or the operations of the manufacturing establishment referred to in the printed address stub.
2. Values should be reported in Philippine Peso (PhP). Omit centavos.
3. Preliminary estimates are acceptable if final figures are not available for the reference month. However, provide the final figures as soon as they are available.

➤ Definitions and specific instruction in accomplishing the MISSI Questionnaire

ITEM DESCRIPTION	SPECIFIC INSTRUCTIONS
Total Employment	Report the total number of persons by type of worker who worked in or for this establishment during the period nearest the 15 th of each reference month
Working Owners	Report owners who are actively engaged in the management of the establishment but do not receive regular pay, i.e., not included in the payroll. Working owners who are managers and directors of establishments working for pay should be reported as Managers in Item IB1.
Unpaid Workers	Report persons working without regular pay for at least 1/3 of the working time normal to the establishment. It includes all apprentices and learners without regular pay
Paid Employees	Report all full-time or part-time workers, on sick or maternity leave and on paid vacation or holiday, and employees working away from this establishment paid by and under the control of this establishment. Exclude workers <u>not in the payroll</u> of this establishment
Managers and Executives	Report all salaried directors, managers, executives, administrative and other officials of the same category. Working owners who are receiving regular pay should be included in this category.
Production Workers	Report all employees <u>directly engaged</u> in the production activities of the establishment, including manual workers, clerical personnel, working foreman and seasonal workers who fabricate, process, assemble, construct, install, etc. Excluded are supervisory employees above working foreman level
Other Employees	Report all other employees not included above

ITEM DESCRIPTION	SPECIFIC INSTRUCTIONS
Total Compensation	Report the salaries and wages before deductions of employees' SSS contribution, withholding taxes, etc. and employer's contribution to SSS/GSIS, PhilHealth, PAG-IBIG and other similar schemes
Salaries and Wages	Report basic pay, overtime pay, cost-of-living allowances, vacation and sick leave pay, commissions, bonuses, dismissal or retirement pay, back pays and other benefits prior to deduction of employees' SSS/GSIS contribution, PAG-IBIG, PhilHealth, withholding taxes and the like.
Total Employer's Contribution to SSS/GSIS, ECC, etc.	Report all payments made by the employer on behalf of his employees to SSS/GSIS, ECC, PAG-IBIG, PhilHealth, pension and similar schemes.
Total Value of Production	Report in Philippine Peso (PhP) the total value of production by the establishment during the reference month. Value of production is the value of all goods <u>produced</u> and <u>work-in-progress</u> during the reference month. Valuation should be at producer prices, that is, the unit price (ex-plant) of a product or commodity as it leaves the establishment of the producer. It includes any indirect tax paid by the producer less any subsidies on products received by the producer
Value of Production for Domestic Market	Report products/by-products produced by the establishment for another local establishment of a different enterprise, i.e., producer, wholesaler and retailer.
Value of Production for Direct Exports	Report products/by-products produced and shipped directly outside the country by the establishment
Value of Production Sold to Exporters	Report products/by-products produced locally to exporters by the establishment
Reasons for the increase/decrease in production	Compared to previous month's production report, check the code corresponding to the reasons for the increase/decrease in production for the reference month given the choices (codes 1 to 4) and code 5 for others, specify.
Total Revenue/Sales	Report in Philippine Peso (PhP) the total cash received and receivables for goods sold and services rendered.

ITEM DESCRIPTION	SPECIFIC INSTRUCTIONS
Sales from manufacturing activity	Report the value of <u>shipments</u> of products manufactured by the establishment whether or not they were produced during the reference month. Inter-plant transfer and goods transferred from one establishment to another of the same enterprise should be valued as though sold. Valuation of goods shipped is at ex-plant price (producer price) and net of discounts, allowances and returned goods
Sales to Domestic Market	Report sales of products/by-products of the establishment to another establishment of a different enterprise, i.e. producer, wholesaler and retailer
Direct Exports	Report products sold and shipped directly outside the country by the establishment
Sales to Exporters	Report products/by-products sold locally to exporters by the establishment.
Reasons for the increase/decrease in net sales	Compared to previous month's net sales report, check the code corresponding to the reasons for the increase/decrease in sales for the reference month given the choices (codes 1 to 4) and code 5 for others, specify.
Other Income	Report income from activities other than manufacturing, such as investment interest, foreign exchange gains, rent income, and profit from the sale of non-inventory assets
Inventory	Report the value of stocks of goods owned by or under the control of the establishment as of a fixed date of the reference month, regardless of where the stocks are located. Valuation of goods is at ex-plant price (producer price)
Finished Products	Report the total value of products produced/manufactured by the establishment that are ready for shipment
Work-In-Progress	Report the total value of all materials which have been partially processed by the establishment but which are not usually sold or turned over to other establishment without further processing
Raw Materials	Report the total value of materials and fuels that enter into the product

ITEM DESCRIPTION	SPECIFIC INSTRUCTIONS
Capacity Utilization Rate	Enter check mark corresponding to the estimated capacity utilization rate of the establishment
Capacity Utilization Ratio	The ratio of output to the maximum rated capacity
Rated Capacity	The largest volume of output possible at which the factory can operate with an acceptable degree of efficiency taking into consideration unavoidable losses of productive time (i.e., vacations, holidays and repairs to equipment) and availability of raw materials

➤ **Specific instruction in accomplishing the PPS Questionnaire**

ITEM DESCRIPTION	SPECIFIC INSTRUCTIONS
Producer Price	Report the unit price (ex-plant) of a product or commodity as it leaves the establishment of the producer. It includes any indirect tax paid by the producer less any subsidies on products received by the producer
Products/Commodities	Specify the top five (5) products/commodities. Report the producer price of the goods normally intended for sale in the market at a price that is designed to cover their cost of production
Brand Name	Report the name identifying a product including its manufacturer
Specifications	Indicate the written statement of an item/s required characteristics documented in a manner that the facilities its procurement of production
Unit of measure	Indicate the standard unit or system of units by which a quantity is accounted for and expressed. Examples are : meter, kilogram, grams, metric ton, troy ounce and others
Percent share of this product to total value of products manufactured	Indicate the percent share of this product/s or commodity/ies to the total value of production in a particular month
Remarks	Indicate in this portion if there is changes in specification/s in a particular month, phasing out of product/s and other information which may be useful in understanding this report

Note: These instructions are also included at the back of the MISSI/PPS questionnaires.

4.3 Forms

4.3.1 Address Stub

The questionnaire is administered to the sample manufacturing establishment through its plant or a reporting unit. It has an address stub to guide field personnel where it will be administered. The address stub provides information on the business name and the complete address of the sample establishment. It also contains the industry, employment size, legal and economic organization and its location expressed as codes. (Refer to Chapter 2 for the description of specific codes). Moreover, a control number called ECN assigned for every establishment is indicated in the address stub to uniquely identify the establishment from other establishments.

The address stubs are of two types. One is addressed to the sample establishment to its plant and the other to a reporting unit.

An example of an address stub administered for a sample establishment/plant is shown below.

Industry Group	→	Veneer and Plywood
Business/ Registered name	→	THE OWNER/MANAGER JUKEN SANGYO PHILS CORP
Company	→	BLK G-1 SUBIC TECHNOPARK ALONG ARGONAUT H
Address	→	ZAMBALES-Region III
Establishment Control Number (ECN)	→	710700734704D6 - C16212 - 71 - 7 - 17 - 9 - 4 - 1
Industry (IND) Code	→	71
Province (PROV) Code	→	7
Municipality (MUN) Code	→	17
Barangay (BGY) Code	→	9
Employment size (SZ) Code	→	4
Legal Organization (LO) Code	→	1
Economic Organization (EO) Code	→	

On the other hand, below is an address stub for sample establishment administered to a reporting unit.

Industry Group	→	FERTILIZER AND PESTICIDES
Business/ Registered name	→	THE OWNER/MANAGER UNIVERSAL HARVESTER INC
Company Address	→	L C3-11 & C2-8B CIP II, LAGUNA
C/O	→	C/O: UNIVERSAL HARVESTER INC
Address of the reporting unit	→	158 P TUAZON COR 7 TH & 8 TH AVE QUEZON CITY
Establishment Control Number (ECN)	→	340501203004D2 – C20120 – 34 – 05 – 46 – 4 – 4 – 2
Industry (IND) Code	→	
Province (PROV) Code	→	
Municipality (MUN) Code	→	
Barangay (BGY) Code	→	
Employment size (SZ) Code	→	
Legal Organization (LO) Code	→	
Economic Organization (EO) Code	→	

4.3.2 Control List

The **control list** is another type of form used for MISSI and PPS. It is used to keep track of the questionnaires and for recording important information about the sample establishments.

There are two types of control list that are being utilized. The first type is the e-control list that is generated from the Windows-based MISSI and PPS system and the second is a printed copy for the use of provincial offices. The printed copy of the control list will be sent to the provincial office along with the addressed questionnaire before the start of the operation.

The e-control list for MISSI and PPS can be generated from the Control List Module under the Report tab of the system. It shows the ECN and name of the sample establishments sorted alphabetically for convenience. It can be used to automatically record the date when the MISSI and PPS questionnaires were received, encoded and validated in the system.

4.3.3 Administrative Forms

Three other administrative forms are utilized for the MISSI and PPS operation. These are:

1. **General Transmittal Form - ESSS Form 1** (Appendix 3) is used for transmitting MISSI and PPS materials. The form must be signed to acknowledge receipt of MISSI and PPS questionnaires from ISD.
2. **Acknowledgement Receipt Form - ESSS Form 5** (Appendix 7) provides a record of information on the distribution and collection of a questionnaire
3. **Certification for New Referrals - ESSS Form 6** (Appendix 8) is used to provide a standard format for the certification of new referrals. In addition, a referral letter should be attached to inform the receiving Provincial Office about the new referral. See attached Appendix 9 for the Pro-forma Referral Letter.

Chapter 5

ORGANIZATION AND OPERATIONS

This chapter discusses the organizational structure and the various phases of operation to be undertaken for the entire survey cycle. The organizational structure shows the units involved in the surveys. The responsibilities of the units involved are discussed in order to achieve the objectives of the MISSI and PPS according to the timetable of activities.

5.1 Organizational Structure

Figure 5.1 shows the PSA organizational structure while 5.2 illustrates the overall organizational structure in the conduct of MISSI and PPS.

Figure 5.1 PSA Organizational Structure

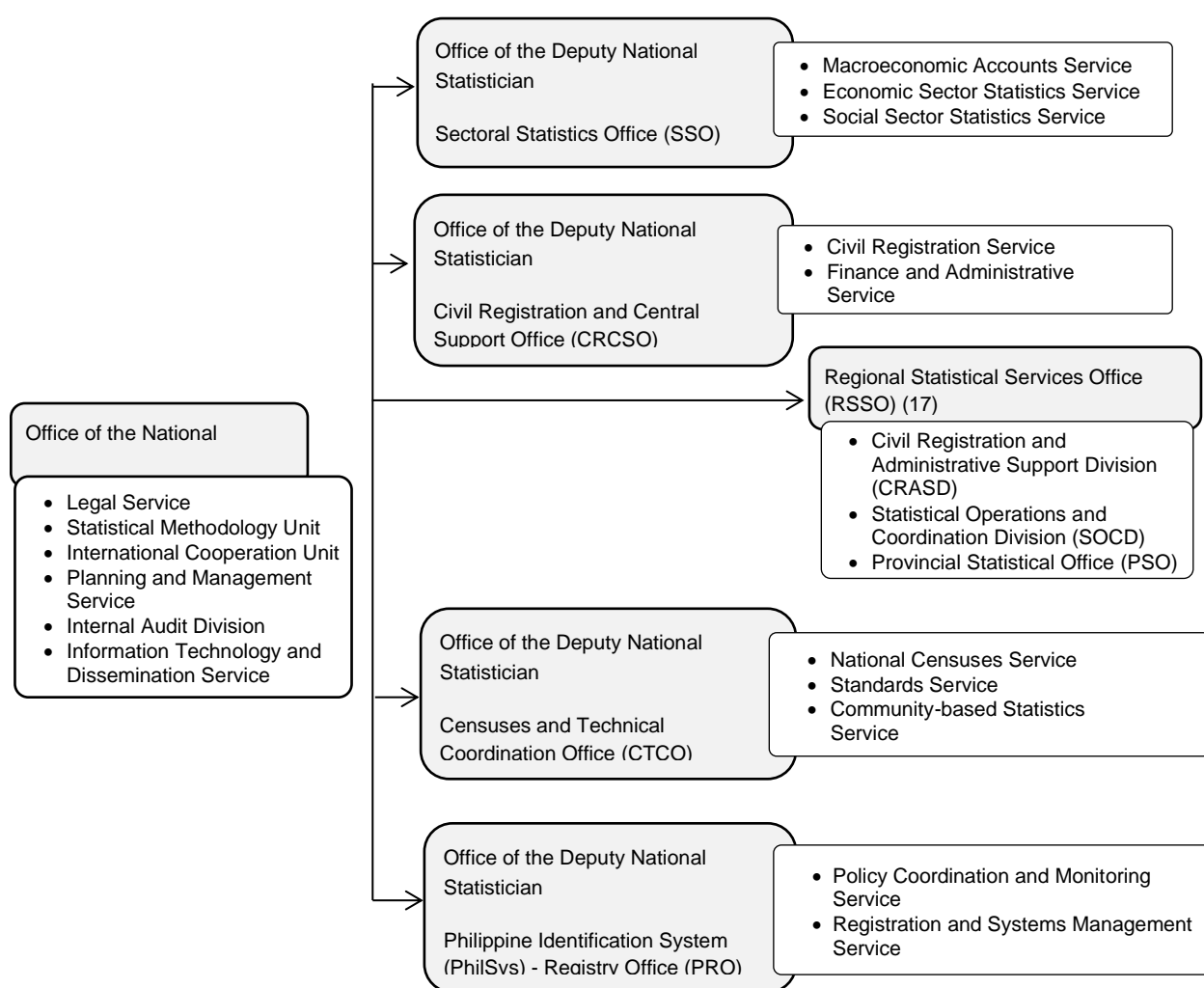
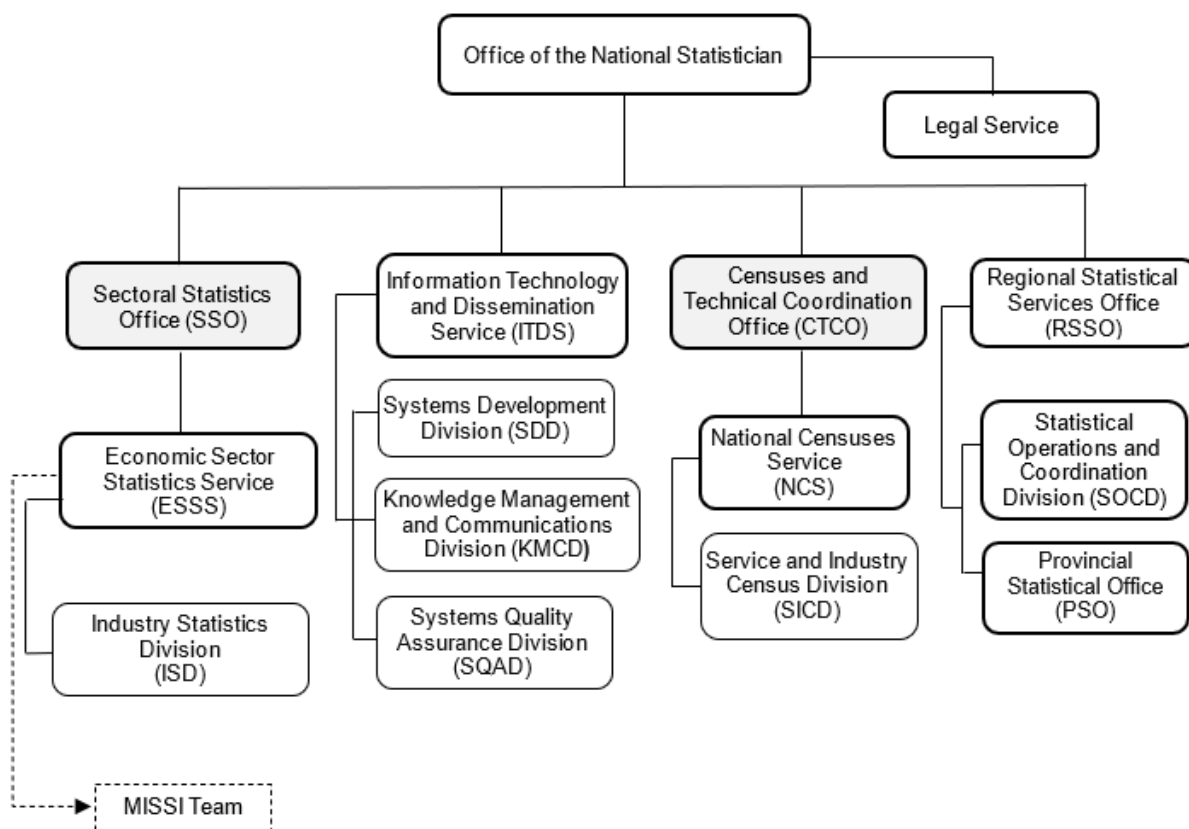


Figure 5.2 PSA Organizational Structure for MISSI and PPS Operation

The overall direction for the full implementation of MISSI and PPS emanates from the National Statistician and Civil Registrar General.

The Industry Statistics Division (ISD) of the Economic Sector Statistics Service (ESSS) shall be responsible for the survey plans and conduct of various preparatory activities such as clearance process, preparation of questionnaires and manuals, determination of scope and coverage, survey design, and selection of samples. More importantly, ISD shall also be accountable in the validation, consolidation, tabulation, analysis, and dissemination of indicators.

The Systems Development Division (SDD) of the Information Technology and Dissemination Service (ITDS) and the Service and Industry Census Division (SICD) shall provide the technical assistance relative to the survey operation. SDD developed a customized MISSI/PPS computer system, as well as, continuously provide the maintenance of the computer system. The SICD, on the other hand, shall be responsible for the maintenance of the frame of establishments that will be the source of samples for MISSI and PPS.

The Regional Statistical Services Office (RSSO) and the Provincial Statistical Office (PSO), on the other hand, shall be responsible for the conduct of field operation. The RSSO shall monitor the overall implementation of the surveys while the PSO shall undertake the field operation. The

PSO shall be responsible for the distribution and collection of questionnaires; field editing, manual editing and machine processing of data; and submission of data files to ISD.

5.2 Duties and Responsibilities of the Units and/or Personnel Involved in the Conduct of MISSI and PPS

Industry Statistics Division (ISD)

- Responsible for the planning and preparatory activities;
- Determine the survey design;
- Select sample establishments for MISSI and PPS;
- Select the market basket of commodities for PPS;
- Validate, consolidate and analyze survey data;
- Generate preliminary and final tables of indicators;
- Present preliminary results to NSCRG
- Prepare monthly report of survey results in the form of Press Release and Annual Publication of Final Data;
- Receive and control transmitted MISSI and PPS data files from PSOs
- Follow-up non-responding sample establishments; and
- Conduct training on field operations.

Regional Statistical Services Office (RSSO)

- Attend training/briefing for field operations;
- Monitor the collection, manual processing and submission of data files;
- Attend promptly to problems that may arise during the survey operation; and
- Ensure that the deadlines are strictly followed by the PSOs.

Statistical Operations and Coordination Division (SOCD)

- Attend training/briefing for field operations
- Coordinate with the PSOs for concerns referred to by the Central Office through the RSSO regarding timely submission of data.

Provincial Statistical Office (PSO)

- Ensure a high monthly response rate of collection and quality of report collected;
- Ensure that the timetable of field operations are met by the province;
- Implement Census Compliance Project, when necessary; and

- Ensure the prompt submission of MISSI and PPS monthly data files to the Central Office copy furnished the RSSO.

Provincial Statistician

- Act as the focal person for the surveys;
- Ensure the prompt submission of data files;
- Manually- and machine-process data collected and verify possible inconsistency; and
- Ensure a high quality of data

Provincial Field Personnel

- Ensure high response rate of collection is achieved;
- Ensure confidentiality of data collected; and
- Field and manual edit all collected accomplished questionnaires and submit to PSO.

5.3 Phases of Operation

In any establishment survey operation, various phases of activities have to be undertaken starting with planning until the preparation of survey reports.

The MISSI/PPS survey cycle consists of six major phases as indicated in the timetable of operation in Section 5.4, as follows:

- Preparatory Activities
- Training/Briefing
- Field Operation
- Data Processing
- Tabulation
- Preparation of Survey Reports (Monthly Press Release and Annual Report)

5.3.1 Preparatory Activities

Preparatory activities for the MISSI/PPS include the following:

- Preparation of survey design, training/briefing and field operations plans;
- Preparation of survey instruments, Field Operations Manual, and Office Memorandum;
- Application for survey clearance;
- Drawing of samples
- Oversee the printing of questionnaires, address stub, cover letter, control list, and transmittal form;
- Addressing of questionnaires; and
- Shipment of questionnaires to the PSOs.

Addressing of Questionnaires

The address stubs for the MISSI and PPS samples are generated using the Windows-based system developed by SSD. The control list of sample establishments as well can be generated using the MISSI/PPS computer system.

Every questionnaire is addressed prior to its transmittal to the PSOs. The addressed questionnaire should be verified by the PSO against the Control List of Sample Establishments for correctness before distribution.

A copy of the cover letter (Appendices 5 and 6), which will be sent by ISD. The cover letter and acknowledgement receipt form (Appendix 7) should be attached to the questionnaire during the distribution.

Shipment of Questionnaires and Other Survey Materials

Pre-addressed questionnaires, printed control lists, and cover letter are to be shipped by ISD to the PSO following the procedures for shipment.

5.3.2 Conduct of Training to Field Staff

For 2022, a whole-day training on MISSI and PPS field operations will be conducted on March 2022. The participants to this training are the Regional Directors, Statistical Operations and Coordination (SOCD) Chief, and Chief Statistical Specialists of PSOs.

Another briefing will be conducted on concepts and definitions, and accomplishing of MISSI and PPS questionnaires on 24 March 2021. The participants to this briefing are the designated focal persons of provinces with MISSI and PPS samples.

5.3.3 Field Operation

The distribution and collection of MISSI and PPS questionnaires will be done according to the prescribe timetable. See Section 5.4 Timetable of Activities.

Distribution of questionnaires is done at the beginning of each year through personal visit by PSA field staff to the sample establishments located in the provinces and cities nationwide.

Collection of accomplished MISSI and PPS questionnaires starts on the 10th day after each reference month.

Submission of data files will be on a staggered basis starting on the 10th after each reference months. The deadlines on the submission of data files shall be every 23rd day after each reference month for PPS and every 28th day after each reference month for MISSI. However, even if the deadlines for submission of data files had lapsed, reports of all non-responding samples during the reference month should still be collected for inclusion in the revised results of the two surveys.

5.3.4 Data Processing

Data processing involves field editing, manual and machine processing of MISSI and PPS survey results. This will be done by both the field offices and ISD according to editing instructions in MISSI/PPS Machine Processing Manual (Part 2).

Field personnel shall be responsible for the field editing, manual and machine processing of the survey results. These involve coding and checking for completeness and accuracy of the reported data. Data encoding and validation of reports will be done using the MISSI/PPS Windows-based system.

The MISSI/PPS Machine Processing Manual (Part 2) features MISSI/PPS Windows-based system which is a customized computer system utilized to automate the machine processing of the survey. Having the database of the MISSI/PPS would enable the Office to efficiently monitor the results of the survey.

On the other hand, ISD shall be accountable in the validation and consolidation of data, ensuring the consistency of report by industry; generation of tables using the MISSI/PPS system; and analysis.

5.3.5 Tabulation

Generation of preliminary tables for PPS is done beginning the 24th day after each reference month, while preliminary tables for MISSI are generated starting the 32nd day after each reference month. Table 5.1 shows the statistical tables that are generated for the MISSI and PPS.

Table 5.1 Statistical Tables Generated for MISSI and PPS

Survey	Table Number	Description
PPS	1	Producer Price Index, Year on Year and Month on Month growth rates for manufacturing sector
	2	Distribution of sample and responding establishment by major industry group: PPS
MISSI	1	Value of production Index (2018=100), Year on Year Growth Rates for Manufacturing Sector
	2	Volume of production Index (2018=100), Year on Year Growth Rates for Manufacturing Sector
	3	Value of Net Sales Index (2018=100), Year on Year Growth Rates for Manufacturing Sector
	4	Volume of Net Sales Index (2018=100), Year on Year Growth Rates for Manufacturing Sector

Survey	Table Number	Description
	5	Producer Price Index (2018=100), Year on Year and Month on Month Growth Rates for Manufacturing Sector
	6	Average Capacity Utilization Rate by Major Industry Division: MISSI
	7	Distribution of Samples and Responding Establishments by Major Industry Division: MISSI
	8	Distribution of Samples and Responding Establishments by Major Industry Division: PPS

5.3.6 Preparation of Survey Reports

The monthly preliminary reports of MISSI and PPS are presented to the National Statistician before these are disseminated to the public. The preliminary reports are published in the form of Press Releases which are posted at the PSA website: www.psa.gov.ph. Posting preliminary results for PPS is every 30th day after each reference month and every 37th day after the reference month for MISSI.

The final figures of the MISSI and PPS are tabulated and are jointly published in an Annual Report nine months after the reference year.

5.4 Timetable of Activities

The timetable of activities for the MISSI/PPS is presented below:

Table 5.2 Timetable of Activities for MISSI and PPS

Project/Activity		Schedule	Responsible Unit
1. Preparatory Activities			
a. Updating of characteristics of sample establishments	b. Redesigning of PPS and MISSI questionnaires and selection of samples	4 th Quarter 2021	ISD
c. Preparation of requirements for survey clearance			
d. Finalization and printing of questionnaires		1 st week to 4 th week of January 2022	
e. Shipment of questionnaires and other materials to field offices		1 st week of February 2022 to 2 nd week of February 2022	ISD
2. Conduct of Briefing to Field Office Staff		Whole day on 25 of March 2022	ISD/PSO
3. Distribution of questionnaires	PPS/ MISSI	2 nd week of February 2022 to 3 rd week of February 2022	PSO
4. Collection and field editing of accomplished questionnaires	PPS	10 th to 23 rd day after the reference month	PSO
	MISSI	10 th to 28 th day after the reference month	PSO
5. Manual and machine processing of questionnaires in the Field Office	PPS	10 th to 23 rd day after the reference month	PSO
	MISSI	10 th to 28 th day after the reference month	PSO
6. Submission of data files to Central Office	PPS	10 th to 23 rd day after the reference month	PSO
	MISSI	10 th to 28 th day after the reference month	PSO

Project/Activity		Schedule	Responsible Unit
7. Data processing, tabulation and analysis of data	PPS	12 th to 24 th day after the reference month	ISD
	MISSI	15 th to 32 nd day after the reference month	ISD
8. Preparation of presentation materials and presentation of preliminary results to NSCRG	PPS	25 th to 27 th day after the reference month	ISD/ESSS
	MISSI	32 th to 34 th day after the reference month	ISD/ESSS
9. Preparation and review of Monthly Press Release	PPS	every 28 th day after the reference month	ISD/ESSS
	MISSI	every 35 th day after the reference month	ISD/ESSS
10. Submission of embargo copy	PPS	every 29 th day after the reference month	ISD
	MISSI	every 36 th day after the reference month	ISD
11. Posting of Press Release at PSA Website	PPS	every 30 th day after the reference month at 9:00AM	ISD
	MISSI	every 37 th day after the reference month at 9:00 AM	ISD

Note: -MISSI is a 37-day survey cycle, while PPS is a 30-day survey cycle

Chapter 6

STRATEGIES AND INSTRUCTIONS

This chapter presents some suggested strategies and procedures to be implemented during the survey operation.

6.1 Monitoring of Priority Establishments for the 22 Major Industries

Priority establishments are sample establishments that contributed at least 80 percent of the total production per industry group/division. These priority establishments are monitored because they influence the industry's general trend.

The list of priority establishments will be provided to provincial offices by ISD at the start of the survey year for monitoring purposes so that their reports are always collected.

The following are the suggested instructions for an effective monitoring of the industry leaders.

1. Ensure that priority establishments among the industry groups/divisions have complete reports for each month.
2. Report the major reason if there is any abrupt increase/decrease in the production/sales reported figures from the choices (codes 1 to 4) or specify (code 5) if others
3. For non-response of more than one month, the following procedures may be utilized:
 - a. Coordinate with the industry association on how to collect the data required if the concerned establishment is a member.
 - b. Apply compliance project, as the case maybe, for uncooperative sample establishment.
 - c. Schedule a saturation drive, if necessary, for non-responding samples particularly those located in an economic zone.
4. For ISD, compare data of sample establishments with the data of export and import from Foreign Trade Statistics (FTS) for each month.
 - a. Check whether the sample establishment undertakes importation and/or exportation.
 - b. Validate reported net sales/revenue with the value of exports for the month.
 - c. Analyze reported total production against the import data for the month.

6.2 Distribution of Questionnaires

Initial distribution of questionnaires is to be done every February of each survey year and a monthly visit to the establishment shall be undertaken to collect the monthly reports.

1. Distribute the addressed questionnaires personally to the sample establishments. Each MISSI sample establishment shall receive three questionnaires. One copy of the questionnaire shall serve as copy for the sample establishment, the second will be provided as back-up copy for the province and the third will be used to process the data during manual and machine processing.
2. Request an endorsement letter from industry associations for members selected as samples and attach to the questionnaire.
3. Meet with the Administrator of special areas such as economic zones and ask for assistance in the distribution of questionnaires.
4. Ensure that acknowledgement receipt is completely filled out and signed by the receiving personnel of the sample establishment with the name, designation, telephone number, and receipt date. Inform respondent of the dates when the accomplished questionnaires shall be collected and inquire from whom it shall be collected.
5. E-mail the soft copy of the questionnaire to the sample establishments aside from personal distribution to serve as reminder and facilitate response.

6.3 Collection of Questionnaires

Submission of data files shall be done on or before the 28th day after each reference month for MISSI while for PPS data files should be submitted on or before the 23rd day after each reference month.

1. For prompt submission of data, the Provincial Offices are encouraged to submit reports and/or data files thru e-mail.
2. To achieve a high response rate, exhaust all possible means to collect all accomplished questionnaires on or before the set monthly submission dates.
3. Review the accomplished questionnaire for completeness and consistency of entries to avoid revisits or callbacks. Make corrections on the spot or secure the needed information from the respondent before leaving the establishment. Never leave the establishment until all the required items have been verified.
4. For ALL sample establishments with no collected accomplished questionnaires, exhaust all means to determine their status. These information are critical in the estimation of indices. Those in operation but no report yet will be imputed for the meantime, but those that are not temporarily closed/closed will not be imputed.

6.4 Treatment of Special Cases

Specific instructions in handling special cases are discussed below.

1. Referrals

In any establishment survey operation, cases of “new” referrals exist and cannot be avoided. The main reason is the dynamic organization of an establishment.

Referral of information to be collected occurs when questionnaires are referred by a sample establishment to another unit for proper accomplishment.

Referrals in any establishment surveys are of two types: Identified and New. The questionnaire of a referral is to be distributed and collected in the address of their reporting unit. Identified referrals are the establishments listed in the “C/O FROM” and “C/O TO” portion of the Control List of Samples.

New referrals are establishments which are made known only during field operations. Included also are partially accomplished questionnaires for which the items with missing data are to be collected from another unit.

New Referrals

- a. At the start of survey operation, ascertain cases of referrals within five calendar days after distribution.
- b. Ask for a certification duly signed by the responding establishment to include information on the name and address, including telephone number and e-mail address of the new contact person by using a Certification Form (Appendix 8). Attach the certification to the questionnaire for transmittal to Central Office.
- c. Like any survey or census of establishment, new referrals to any province within the region shall be transmitted directly to the RSSO who in turn shall transmit the questionnaires to the concerned province within the region copy furnished ISD.
- d. Unlike any survey or census of establishment, new referrals outside the region of the MISSI and PPS, the questionnaires shall be transmitted directly to ISD seven calendar days after distribution for immediate action as the operation is done on a monthly basis. ISD shall then forward the questionnaires to the concerned province. The RSSO of the receiving province will be furnished a copy of the transmittal letter.
- e. For partially accomplished questionnaires, the partially filled-up form shall be transmitted by ISD to the new reporting unit c/o the receiving province. The receiving province will then be responsible on data encoding and validation of reports using the MISSI/PPS windows-based system. The workload will be adjusted to accommodate the referral as an additional sample of the receiving province.

2. Uncooperative Sample Establishments

Refusal to respond to MISSI and PPS has been observed for some sample establishments due to respondent fatigue in providing data to the survey. These establishments will not yield even to a possible conviction and penalty due to non-compliance.

These refusals are not being encouraged by the Office as they are obliged to provide the required information.

6.5 Dissemination of Results

Presentation of preliminary results to NSCRG shall be done every 27th day and 33rd day after each reference for MISSI and PPS, respectively.

Web-posting of the Press Release of MISSI shall be done every 37th day after each reference month. While for the PPS, web-posting is done on the 30th day after each reference month. The Press Releases disseminate the preliminary figures for the survey.

Specific schedule of submission of data for Press Release web-posting is on Table 6.1 for MISSI and PPS.

Table 6.1 Advance Release Calendar for MISSI

Reference month	CUT-OFF DATE for Provinces (based on PSA Field Awards Criteria)	POSTING DATE of Press Release (37 days after the reference month)
January	28 February 2023	09 March 2023
February	28 March 2023	11 April 2023
March	28 April 2023	09 May 2023
April	29 May 2023	08 June 2023
May	28 June 2023	07 July 2023
June	28 July 2023	08 August 2023
July	28 August 2023	07 September 2023
August	28 September 2023	06 October 2023
September	27 October 2023	09 November 2023
October	28 November 2023	07 December 2023

Table 6.2 Advance Release Calendar for PPS

Reference month	CUT-OFF DATE for Provinces (based on PSA Field Awards Criteria)	POSTING DATE of Press Release (30 days after the reference month)
January	23 February 2023	02 March 2023
February	23 March 2023	30 March 2023
March	24 April 2023	03 May 2023
April	23 May 2023	30 May 2023
May	23 June 2023	30 June 2023
June	24 July 2023	01 August 2023
July	23 August 2023	30 August 2023
August	22 September 2023	29 September 2023
September	23 October 2023	31 October 2023
October	23 November 2023	29 November 2023
November	22 December 2023	29 December 2023

6.6 Publication for MISSI and PPS

Final data of both the MISSI and PPS shall be compiled in an annual publication. It contains the final monthly data for the current survey year and the previous year.

Publication for MISSI and PPS is released ten months after the reference year.

Chapter 7

EDITING INSTRUCTIONS

This chapter discusses the general and specific editing instructions, consistency check between and among data items and the imputation procedures for missing values.

Editing is a quality control tool used to check for completeness, consistency and reasonableness of data reported in the MISSI and PPS questionnaires.

Consistency check is the verification of the internal and external relationship between two or more data items. Furthermore, based on the Organization for Economic Cooperation and Development (OECD) Glossary of Statistics, it detects whether the value of two or more data items are not in contradiction.

For MISSI and PPS, **internal consistency check** refers to the verification of the relationship of data items within a month's survey report while **external consistency check** is the verification of the relationship of data items with previous month's survey report.

7.1 General Editing Instructions

1. Check that all data items for the reference month of the survey have entries.
2. Ensure that reported data pertains only to the Philippine-based activities, including exports of the establishment.
3. Ensure that reported values are in Philippine Peso (PhP). If entries in the questionnaires are in foreign currency, use the exchange rate on the last day of the reference month as published by the Bangko Sentral ng Pilipinas in their website, <https://www.bsp.gov.ph/SitePages/Statistics/ExchangeRate.aspx>
4. Check the entry/entries in the top five products/commodities manufactured by the establishment located at the back page of the questionnaire to ensure that the sample establishment is engaged in manufacturing. If the establishment is not engaged in manufacturing, immediately inform ISD about the "new" economic activity. For ISD, fill-out ULE Form 9 and submit it to SICD for updating.
5. Ensure that the top five products/commodities manufactured by the establishment indicated in the MISSI and PPS questionnaires are the same.

6. Use pencil in field editing while blue/black pen in manual editing and in accomplishing the names and other information of Contact Person and Provincial Office Staff found at the bottom of the front page of the questionnaire.
7. Line-out entries written in words and enter the corresponding numeric figures.
8. Do not erase illegible entries supplied by the respondent. If there are changes or corrections, line out the original entry and write the correction on the space nearest it.
9. Line-out centavo figures and do not round off. Totals should sum up to details.
10. For each reference month, indicate the questionnaire status on the cell provided at the lower portion of the cover page of the questionnaire after manual processing. Listed below are the questionnaire status and its corresponding codes and description:

1 – Good

A good questionnaire should have non-zero entries in all data items or if not, the reasons as to why some data items have no entries must be indicated in the remarks portion.

2 – Closed

The sample establishment was verified to be closed or had ceased business operation.

3 – Duplicate

Duplicates are two or more establishments that have the same Business Name and/or Address but with different ECN.

4 – No Response

No response means that the sample establishment did not submit report.

6 – Temporarily Stopped Operation (TSO)

Temporarily stopped operation happens when an establishment closes down its business operation for a certain period of time but with the intention of opening up again in the future.

7 – Out of Scope (OS)

Out of scope are sample establishments not in the scope and coverage of the survey. It includes establishments with EO = 4 (Main Office only) or EO = 5 (Ancillary Unit).

8 – Cannot be Located (CBL)

Cannot be located means that the establishment was not found in the given address, or may not contain the “correct address”.

11 – Under New Management

Under new management occurs when the establishment changed management or ownership

13 – Merged with Others

Merged with others happens when the establishment merged with another establishment or enterprise (mergers).

17 – Others/Refusal

The establishment submitted questionnaire with no entry due to refusal or for referral to another establishment or simply without entry

18 – Changed sector

Changed sector means that the establishment changed its main economic activity to another main economic activity.

11. Take note of any remarks supplied by the respondent in the questionnaire such as temporary stopped operation, no production, establishment moved out, etc., as this may provide information on the current status of the sample establishment. For ISD, submit any changes in establishment's characteristics to SICD for updating to BRIMPS.
12. Copy the IND, PRV, MUN, and ECN codes from the address stub to the corresponding cells found at the front page of the questionnaire.
13. All verifications made from the establishment should be indicated in the remarks portion of the questionnaire.

7.2 Specific Editing Instructions

7.2.1 Specific Instructions for MISSI

ITEM I – TOTAL EMPLOYMENT

1. Do not accept zero entry in Item I.B (Paid Employees) if Legal Organization (LO) is 3 (Government Corporation) or 4 (Stock Corporation) or 5 (Non-Stock, Non-Profit Corporation).
2. Ensure that entry in Item I (Total Employment) is equal to the sum of Items I.A (Working Owners and Unpaid Workers) and I.B (Paid Employees).

3. Ensure that entry in Item I.B (Paid Employees) is equal to the sum of entries in Items IB.1 (Managers and Executives), IB.2 (Production Workers) and IB.3 (Other Employees).
4. Entry in Item IB.1 (Managers and Executives) should be less than the entry in Item IB.2 (Production Workers).

ITEM II – TOTAL COMPENSATION

1. Item II.A (Total Salaries and Wages) should have non-zero entry, if Item I.B (Paid Employees) has a non-zero entry.
2. Item II.B (Total Employer's Contribution to SSS/GSIS, ECC, etc.) should have a non-zero entry, if Item II.A (Total Salaries and Wages) has a non-zero entry. A non-zero entry in Item II.B should be less than the entry in Item II.A.
3. Compute the monthly salaries and wages of paid employees by type and check for reasonableness of entries using the formula below:

$$\text{Monthly Salaries and Wages} = \frac{\text{Salaries and Wages}}{\text{Paid Employees by type}}$$

4. Average monthly salaries of Managers and Executives should be greater than the average monthly salaries and wages of Production Workers and Other Employees.
5. Entry in Item II (Total Compensation) is equal to the sum of entries in Item II.A (Total Salaries and Wages) and Item II.B (Total Employer's Contribution to SSS/GSIS, ECC, etc.).

ITEM III – TOTAL VALUE OF PRODUCTION

1. There should be a non-zero entry in Item III (Total Value of Production) if the establishment is engaged in Manufacturing (Section C) or if Item IB.2 (Production workers) has a non-zero entry.
2. Ensure that the non-zero entry in this item refers to the **actual value** in peso and **not** in thousand pesos or in terms of quantity.

3. There should be a non-zero entry in Item III (Total Value of Production) if there is an entry in Item IV.A (Sales from manufacturing activity) or vice versa, otherwise verify from the establishment.
4. Ensure that the reported value is in PhP. If the reported entry in this item is in foreign currency, convert it to PhP using the exchange rate on the last day of the reference month as published by the Bangko Sentral ng Pilipinas in their website, <https://www.bsp.gov.ph/SitePages/Statistics/ExchangeRate.aspx>.
5. Compare the production value of the previous month against the current month. Note for any abrupt increase/decrease in value. An abrupt increase or decrease may refer to a growth rate of 30 percent or more. Any reason for such occurrence should be identified in Item III.A (Compare to previous month, is there an increase/decrease in production of this establishment?) and Item III.B (If yes, what is the major reason for the increase/decrease in production?). However, if the establishment is a new sample, start the comparison in the following month.

For example the following industries were observed to have seasonality:

- a. Sugar
- b. Tobacco
- c. Coconut Products

As such, a month-on-month growth may tend to be abrupt in some months. Imputation, moreover, using the previous month data is not appropriate because the peak and lean months should be considered. The whole year report is necessary to establish the figures for non-operational months.

ITEM IV – TOTAL REVENUE/SALES

1. Ensure that entry in Item IV (Total Revenue/Sales) is equal to the sum of Items IV.A (Sales from manufacturing activity) and IV.B (Other income).
2. There should be a non-zero entry in Item IV.A (Sales from manufacturing activity) if the establishment is engaged in Manufacturing (Section C) and the establishment is in operation.
3. There should be a non-zero entry in Item IV.A (Sales from manufacturing activity) if there is an entry in Item III (Total Value of Production) or vice versa, otherwise verify from the establishment.

4. Ensure that the non-zero entry in this item refers to the **actual value** in peso and **not** in thousand pesos.
5. Ensure that the reported value is in PhP. If the reported entry in this item is in foreign currency, convert it to PhP using the exchange rate on the last day of the reference month as published by the Bangko Sentral ng Pilipinas in their website, <https://www.bsp.gov.ph/SitePages/Statistics/ExchangeRate.aspx>. Ensure that the reported revenue/sales/income is the **actual value**.
6. Compare the previous month data of Item IV.A (Sales from manufacturing activity) against its current month data. Note for any abrupt increase/decrease in value. An abrupt increase or decrease may refer to a growth rate of 30 percent or more. Any reason for such occurrence should be identified in Item IV.A.1 (Compare to previous month, is there an increase/decrease in production of this establishment?) and Item IV.A.2 (If yes, what is the major reason for the increase/decrease in production?). However, if the establishment is a new sample, start the comparison in the following month.

ITEM V – INVENTORY

1. Zero is acceptable.
2. Ensure that a non-zero entry in this item refers to the **actual value** in PhP.
3. There should be a non-zero entry in Item V.C (Raw Materials) if the sample is in operation, otherwise verify from the establishment and indicate in the remarks portion of the questionnaire the reason for such.

ITEM VI – CAPACITY UTILIZATION RATE

1. For each reference month, there should be one check mark on the appropriate box if the sample is in operation, otherwise verify from the establishment and indicate the findings in the remarks portion of the questionnaire.

7.2.2 Specific Instructions for PPS

1. Ensure that the specified commodity is the same as those reported in the MISSI questionnaire.
2. Ensure that the price of the commodity corresponds to the brand name, specification and unit of measure indicated in the questionnaire. Otherwise, verify from the establishment and this may be treated as new product of the same establishment.
3. See to it that the change in price of commodity does not exceed 25 percent from the previous month's price. Otherwise, verify from the establishment and indicate in the remarks portion the reason for the abrupt change in price.
4. Ensure that the price reported by the establishment is in PhP. If the price is in foreign currency, convert it to PhP using the exchange rate on the last day of the reference month as published by the Bangko Sentral ng Pilipinas in their website, <https://www.bsp.gov.ph/SitePages/Statistics/ExchangeRate.aspx>.
5. Percentage share of the commodity to the total value of products manufactured should have an entry for every product listed.
6. The sum of percentage shares of all commodities listed may or may not be equal to 100.

7.3 Consistency Check

Inconsistent entry or entries in the questionnaire should be verified from the establishment and indicate in the remarks portion of the questionnaire the explanation for such deviation. The following should be verified for MISSI:

1. Sales from manufacturing activity + Total Inventory of Finished Products and Work-in-Progress of the current month > Total Inventory of Finished Products and Work-in-Progress of the previous month.
2. Total Value of Production should be approximately equal to Sales from manufacturing activity + Change in Inventories (current less previous month) of Finished Products and Work-in-Progress.
3. If Sales from manufacturing activity > 0, then Total Value of Production + Inventories of Finished Products and Work-in Progress > 0.

7.4 Imputation Procedure

The reason for missing data items should be explained in the remarks portion of the questionnaire. Moreover, missing data on prices, production and sales from manufacturing activity of non-responding establishments are to be estimated using either **last observation carried forward (LOCF)** or the **short-term price/value relatives** of available products/responding establishments in an industry group/class for the month.

Imputation shall be undertaken by ISD.