

# TECHNICAL NOTES

## 2020 Occupational Wages Survey

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## I. Introduction

### I.1. Background of the Survey

As a designated statistics under Executive Order (EO) No. 352 (System of Designated Statistics) dated 01 July 1996, the Occupational Wages Survey (OWS) is recognized as one of the most important statistical activities in the country that will generate critical data as inputs to decision-making of the government sector and the private sector as well.

The 2020 OWS measures the wage differential across occupations and industries in the country. It likewise determines inequalities in typically low-wage occupations and high-wage occupations among workers.

### I.2. Objectives

The Occupational Wages Survey (OWS) aims to generate wage statistics as critical inputs to policies on wage and salary administration and wage determination particularly in wage-fixing, price policies, and collective bargaining negotiations.

Statistics on wage rates are useful economic indicators and inputs to wage, income, productivity and price policies, and wage fixing in collective bargaining. Occupational wage rates are used to measure wage differences across occupations and industries

specifically wage differentials and wage inequality in typically low wage and high-wage occupations. Industry data on basic pay and allowances can be used to measure wage differentials across industries, for investment decisions, and as reference in periodic adjustments of minimum wages. The wage data collected from the OWS can be used for international comparability as the industry codes and occupation codes used in the survey are the current standard codes used internationally.

Specifically, the OWS data on the Average Monthly Occupational Wage Rates of Selected Occupations is included as one of the variables listed and committed by the Philippine government to be regularly generated and disseminated under the Special Data Dissemination Standard (SDDS) of the International Monetary Fund. The SDDS serves as reference to member countries in the dissemination of economic and financial data.

### **I.3. Historical Information on the Survey**

From 1989 to 1995, the OWS was conducted by the then Bureau of Labor and Employment Statistics (BLES) now Philippine Statistics Authority (PSA) to monitor the wage rates of 22 low-paid occupations in 21 non-agricultural industries. Its objective then in general was only to generate wage estimates in aid to minimum wage determination.

In order to improve the response rate during that time, field operations were contracted out by the BLES to the National Statistics Office (NSO) beginning 1994. In 1996, however, no survey operations were conducted for OWS as its survey design then underwent thorough review.

Recent developments towards globalization like the approval of the General Agreement on Tariffs and Trade - World Trade Organization (GATT-WTO) and the creation of the Brunei Darussalam, Indonesia, Malaysia, Philippines East ASEAN Growth Area (BIMP-EAGA) however, brought about the pressing need to generate employment and wage estimates that would address the emerging concerns of planners and policymakers at that time. The BLES has, therefore, decided to redesign the OWS to focus on the wage rates of selected or key occupations,

particularly in industries likely to be affected by the changing local and global economic structures. Thus, in 1997 the OWS was redesigned to yield more precise wage estimates for an expanded set of occupations in each industry. The updated design is based on the 1992 Philippine Standard Occupational Classification (PSOC) and the 1994 Philippine Standard Industrial Classification (PSIC). From 1997 to the 2004 survey rounds, the OWS was a complete enumeration of non-agricultural establishments in the country employing 50 persons or more except in 2002 when OWS coverage was limited to Metro Manila due to budget cuts. Starting the 2006 OWS, employment size cut-off was lowered to 20 persons.

A total of 69 industries were covered in the 2014 and 2012 OWS, up from 65 industries in 2010 and 2008 OWS, 60 in 2006, 58 in the 2004 and 2002 rounds, 57 in 1999, and 52 in 1997 OWS. The number of selected industries for wage monitoring increased over the years with 46 in 2010 and 2008 OWS, 45 in 2006 OWS, 43 in 2002 and 2004, and 41 in 1997 and 1999 rounds.

In 2012, pre-determined industries totaled to 50 due to the inclusion of agriculture, forestry, and fishery; and the splitting and merging of original domains with the adoption of the 2009 PSIC.

Inclusion of new domains:

- Crop and Animal Production, Hunting, and Related Service Activities; Forestry and Logging (A01/A02)
- Fishing and Aquaculture (A03)
- Manufacture of Basic Pharmaceutical Products and Pharmaceutical Preparation (C21)

Splitting of original domains:

- Publishing and Printing (D221/D222/D223 of 1994 PSIC as amended) into Printing and Reproduction of Recorded Media (C18); and Publishing Activities (J58)
- Supporting and Auxiliary Transport Activities; Activities of Travel Agencies (I63 of 1994 PSIC as amended) into Warehousing and Support Activities for Transportation (H52); and Travel Agency, Tour Operator, Reservation Service, and Related Activities (N79)

### Merging of original domains

- Banking Institutions except Central Banking (J65 excl. J6510 of 1994 PSIC as amended) and Non-Bank Financial Intermediation (J66 of 1994 PSIC as amended) into Financial Service Activities except Insurance, Pension Funding, and Central Banking (K64 excl. K6411)
- The selected industries numbered 71 industries in 2020 OWS, 60 in 2018 OWS, 59 in 2016, 50 in 2012 and 2014 OWS, 46 in 2010 and 2008 OWS, 45 in 2006 OWS, 43 in 2002 and 2004 and 41 in 1997 and 1999 rounds.

A total of 188 occupations were covered in the pre-determined industries in the 2014 and 2012 OWS rounds, from 180 occupations in 2010 and 2008 OWS rounds; from 169 occupations in 2006; from 168 occupations in 2002 and 2004 rounds; and from 161 occupations in 1999 and 1997 rounds. Meanwhile, starting with the 2002 survey round, the wage rates of two (2) benchmark occupations, namely, accounting and bookkeeping clerks; and unskilled laborers except janitors, messengers, and freight handlers were monitored in all industries covered.

From 1989 to 1995, the OWS provided average monthly wage rates of 22 low-paying/prevalent occupations in 21 non-agricultural industries and monthly median wage rates in all major non-agricultural industries. Covering time-rated workers on full-time basis (in non-agricultural establishments employing at least 5 workers in 1989-1993 and those employing at least 10 workers in 1994-1995), its purpose then was to provide statistics in aid to minimum wage determination.

In 1996, the OWS was re-designed to focus on the wage rates of relatively skilled occupations in industries likely to be affected by the changing global and economic structure. The survey aimed then to generate statistics for wage and salary administration and for wage determination in collective bargaining negotiations.

In 2001, the OWS was reviewed relative to the covered industries and occupations and reference period to enhance the relevance and timeliness of the statistics produced. At most 10 occupations were covered in each of the selected industries. The bases for the review were the 2001-2002 Key Indicators of the Labour Market of

the International Labour Organization (ILO), the Occupational Employment Survey of the US Bureau of Labor Statistics, the list of emerging occupations reported in one of the PSA surveys, and results of consultations with the data users/stakeholders.

With the latest 2020 OWS which is the thirteenth survey in the series, covered industries and occupations were carefully reviewed and updated to incorporate new patterns and emerging trends in both business and labor market front to further enhance the relevance of the statistics generated from the survey.

One of the revisions for this survey round is the splitting of the original domain S95/S96 Repair of Computers and Personal Household Goods; Other Personal Service Activities into separate domains. This was done to accommodate the newly identified occupations in Other Service Activities (S96) and to take into account the weights of the said industry and its identified occupations.

Hence, a total of 71 industries with an aggregate of 190 occupations included in the pre-determined industries are covered in the 2020 OWS. The occupation codes used in the survey based on the Philippine Standard Occupational Classification (PSOC) 2002 Update were updated using the latest 2012 PSOC starting the 2018 survey round of the OWS.

Periodicity and Reference Period: The 1989-1995 OWS was conducted every semester except for the 1990 OWS, which was conducted quarterly. For occupational wage data, the reference periods were the end of each calendar quarter while for the distribution of time-rate workers, the reference periods were the end of June and December. Except for the 1994, 1995, and 1997 survey rounds whose data collection was undertaken by the National Statistics Office, the BLES handled the field operations.

For the 1997 and 1999 rounds, October was adopted as the reference period of the survey for international comparability since the Bureau of Statistics of the International Labour Office has an annual inquiry on occupational wage rates and normal hours of work where October is the reference period of the data.

Although the 1997 and 1999 survey rounds of the revised OWS had October as reference, data collection did not commence immediately after the reference point as the fiscal year of the Philippine government ends in December and data collection can only commence in the next year (March/April). Experience from past surveys of the BLES showed that data retrieval from establishments during the last months of the year is quite low or slows down for surveys whose data collection starts late in the year.

Another consideration in the shift of the reference period of the third round of the OWS from October 2001 to June 2002 was the need to capture the effects of minimum wage adjustments. A survey conducted by the BLES revealed that a substantial proportion of establishments based their wage adjustments on government fixed wages. In some instances, minimum wages were being implemented on a staggered basis. In the National Capital Region (Metro Manila) where at least half of time-rate workers are found (based on the 1999 OWS), a Wage Order mandated a staggered adjustment with effectivity dates in November 2001 and February 2002. The shift in the reference period improved the timeliness of the data from 17 to 12 months after reference period.

However, for the 2006 and 2008 survey rounds, the reference periods were moved to August and July, respectively, to take into consideration the new series of regional wage orders that took effect in July and August in 2006 and May and June in 2008. For 2010 survey round, the reference period was again moved to August to consider the series of minimum wage adjustments in July and August 2010. For 2012, 2014, and 2016 survey rounds, the reference period was July. The reference period for the 2018 and 2020 OWS was changed to August to effectively capture minimum wage increases announced from May to July of the same year.

The OWS is one of the designated statistical activities under EO No. 352 (s.1996) that will generate critical data for decision making of the government and the private sector. The OWS data on the Average Monthly Occupational Wage Rates of Selected Occupations is included as one of the variables listed and

committed by the Philippine government to be regularly generated and disseminated under the Special Data Dissemination Standard (SDDS) of the International Monetary Fund. The SDDS serves as reference to member countries in the dissemination of economic and financial data.

#### **I.4. Scope and Coverage**

***Geographical:*** The whole country.

***Industrial:*** Agricultural and non-agricultural industries EXCEPT central banking, public administration and defense, and compulsory social security; retail sale via stalls and markets, jeepney and AUV operation; tricycle, calesas, pedicabs operations; public education services; public medical, dental, and other health services; cockpits operation activities, musical band or band in operation during fiestas; activities of membership organizations; activities of households as employers of domestic personnel; undifferentiated goods-and-services-producing activities of households for own use; and activities of extra-territorial organizations and bodies. For purposes of monitoring occupational wage rates, 55 industries were pre-determined out of the 71 covered by the survey.

The selection of the 55 industries were based on Philippine Development Plan 2017-2022 Priority Sectors; 2017 Investment Priority Plan of the Board of Investments (BOI); Manufacturing Resurgence Program by the Department of Trade and Industry (DTI); Trabaho, Negosyo, at Kabuhayan Key Employment Generating Sectors (KEGS) by DTI and Department of Labor and Employment (DOLE); and areas of cooperation under the Brunei, Indonesia, Malaysia, Philippines – East ASEAN Growth Area (BIMP-EAGA) Vision 2025.

***Establishments:*** Agricultural and non-agricultural establishments employing 20 persons or more.

***Persons:*** Time-rated workers on full-time basis.

**Occupations:** The 2020 OWS likewise gathers under Part C, data on basic pay and allowances of time-rated workers in Benchmark Occupations which refer to occupations that are generally widespread or usually common to all establishments and are usually at or near the bottom of the wage scale. Benchmark occupations, for purposes of this survey, include (1) accounting and bookkeeping clerks; and (2) unskilled workers (except janitors, messengers, and freight handlers).

At most 13 occupations including benchmark occupations are covered in each of the 55 selected industries to represent the nine (9) major occupational groups in the PSOC. The occupations can be classified as managers; professional; technicians and associate professionals; clerical support workers; service and sales workers; skilled agricultural, forestry, and fishery workers; crafts and related trades workers; plant and machine operators, and assemblers; and elementary occupations. More occupations were drawn for a particular major occupation group depending on the relative importance of the occupations in the pre-determined industry. For instance, in mining and quarrying, selected manufacturing industries, and construction, more occupations were taken from plant and machine operators, and assemblers. In trade, telecommunications and most business services, more clerical occupations were selected. In health and social work and in private education services, mostly professional workers were drawn. In accommodation and food service activities, more service occupations were chosen.

The selection of the specific occupations across the 55 industries were based on the relative importance of the occupations in the industry and the 2012 PSOC; consultations with employers' and workers' groups, government agencies and the academe; Initial List of Indicative Offers to the Coordinating Committee on Services--General Agreement on Trade in Services (GATS ASEAN Bloc); Catalogue of the Occupational Skills Standards for National Certification Program of the Technical Education and Skills Development Authority; Occupations covered by the ILO October Inquiry on Occupational Wages and Hours of Work; Key Indicators

of the Labor Market Ninth Edition (2016) of the International Labour Office; Occupational Employment Survey (OES) of the US Bureau of Labor Statistics; 2006 BLES Integrated Survey (BITS) - employment module on vital occupations; and 2013 National Human Resource Conference Summit/JobFit Labor Market Information Report 2013-2020.

In summary, this results to the monitoring of wage rates of time-rated workers in 190 occupations across 71 industries.

## **II. Data Collection**

### **II.1. Data Collection Procedure**

The survey was conducted in coordination with the Regional Statistical Service Offices (RSSOs) and Provincial Statistics Offices (PSOs) of the Philippine Statistics Authority. On a project basis, Statistical Researchers (SRs) were hired to personally deliver and collect the questionnaires from the establishments. In some instances, questionnaires were mailed/e-mailed to establishments in less accessible or conflict prone areas, in which case a self-addressed envelope was provided. Some establishments also submitted the accomplished questionnaires through fax/e-mail. Delivery of questionnaires started in November 2020 for the 2020 OWS and retrieval commenced within 10 working days from delivery to establishment or on a date agreed upon by the contact person and the enumerator.

To assist the respondents in classifying their job titles that have different nomenclatures than the PSOC, an occupational sheet was inserted in the questionnaire of an establishment whose industry belongs to the 71 pre-determined industries that are being monitored on occupational wage rates. This sheet contains a list of the occupations being monitored in each of the industry and their corresponding job descriptions in accordance with the PSOC.

The occupations vary across establishments depending on their industry classification. Establishments that fall outside the 71 industries were not given occupational sheets. However, in the event that the industry of such establishment has been misclassified in the sampling frame and it should have been provided with the corresponding occupational sheet, the field staff was instructed to give the respondent the relevant occupational sheet. The two (2) occupations considered as benchmark (accounting and bookkeeping clerks; and unskilled laborers except janitors, messengers, and freight handlers) and their corresponding job descriptions appear in the pertinent portion of the survey questionnaire. Wage rates of these occupations were monitored in all industries covered by the survey.

Under the “new normal” condition, various schemes that will limit face-to-face engagement of the SRs and the respondents are employed during the distribution, follow-up, and collection/transmittal of questionnaires. These strategies include mail or email, phone calls/facsimile, provision of fillable or softcopy of the questionnaire.

## **II.2. The Instrument**

The instrument used is a five-page questionnaire that captures the necessary data to obtain the objective of the survey:

**Cover page** - This contains the title panel including the address label box, a brief introduction and the authority of PSA to conduct the survey and the assurance of confidentiality of data collected from the survey; contact particulars of PSA Field and Central Office for assistance, spaces for changes in the name and the location of sample establishment, spaces for head office information in case the questionnaire is endorsed to it, and control panel consists of status codes of the establishment to be accomplished by PSA and its field personnel;

**Survey Information (Page 2)** - This contains the survey objectives, uses of data, confidentiality clause, legal authority, coverage, periodicity and reference period, concepts and definition of terms, due date of submission and availability of results of the 2020 OWS;

**Part A: General Information (Pages 3-4)** - inquires on the main economic activity or business of the establishment; major products/goods produced or sold, or type of service rendered; legal organization (LO) of the establishment; economic organization (EO) of the establishment; and total employment as of 31 August 2020;

**Part B: Employment and Wage Rates of Time-Rated Workers on Full-Time Basis (Pages 5-6)** - inquires data on the number of time-rated workers on full-time basis by time unit (hour, day or month) and by basic pay and allowance intervals disaggregated by sex;

**Part C: Employment and Wage Rates of Time-Rate Workers on Full-Time Basis in Selected Occupations (Pages 7-12)** - inquires on the amount of basic pay and allowances received per time unit (hour, day, or month) and the corresponding number of time-rated workers on full-time basis in: (A) Two (2) benchmark occupations as (1) accounting, bookkeeping clerks, and; (2) unskilled workers except janitors, messengers, and freight handlers and (B) monitored occupations as listed in the OWS occupational sheet enclosed in the questionnaire.

**Part D: Certification (Page 13)** - includes the respondents to certify on the accuracy of data provided in the questionnaire as given by the contact person with his/her signature over printed name, position, telephone number, fax number, and e-mail address. The time spent by the establishment in answering the questionnaire is also asked in this part to measure respondent's burden in accomplishing the form and appropriate spaces are also provided to elicit comments/suggestions.

**Part E: Survey Personnel (Page 13)** - this portion is allocated for the names of personnel: the SR writes/signs his/her name and the

date when the questionnaire was collected regardless of status and or field edited. The Field Supervisor writes/signs his/her name and date of signing once the questionnaire has been reviewed and manually processed (coded, edited, and checked for completeness and consistency). The Machine Processor and Reviewer to do likewise after all the data in the questionnaire has already been encoded/reviewed. The Assessment Officer, if any, needs also to write/sign his/her name and the date of signing once all the required processes in the questionnaire have already been completed.

**Part F: Industries with Selected Occupations (Page 14)** - this list of industries with selected occupations to be monitored under the OWS has been provided to guide the Statistical Researchers (SRs) in ensuring that the correct occupational sheet has been enclosed in the questionnaire/furnished to the respondent.

**Selected Statistics from the 2018 Occupational Wages Survey and 2016 OWS (Pages 15-16)** - selected statistics from the results of the 2016 and 2018 OWS are presented for information, reference, and appreciation of responding establishments.

### **II.3. Data Items**

- Occupational wage rates (average of current rates) and employment of time-rated workers on full-time basis in selected industries and selected occupations
- Occupational wage rates (average of current rates) and employment of time-rated workers on full-time basis across industries and selected occupations
- Median basic pay and allowances of time-rated workers on full-time basis by industry
- Distribution of time-rated workers on full-time basis by basic pay and allowance intervals by industry/sex

## **III. Methodology**

### **III.1. Sampling Frame**

#### **III.1.1. Statistical unit**

The statistical unit is the establishment. Each unit is classified to an industry that reflects its main economic activity which is the activity that contributes the biggest or major portion of the gross income or revenues of the establishment.

#### **III.1.2. Survey universe**

The frame used for the 2020 OWS was extracted from the 2019 updated List of Establishments (LE) as of 30 July 2020. This frame was used to draw the sample establishments for the surveys.

The LE is the list of all operating establishments nationwide which is the main source of statistical frame for all establishment-based and enterprise-based surveys/censuses conducted by the PSA. The geographic location, industry classification, and total employment of the establishments are the primary variables being considered and used in the sampling design of these surveys/censuses.

The updates for the latest 2019 LE were sourced from survey feedbacks from the 2019 Quarterly Survey of Philippine Business and Industry (QSPBI); the 2018 Census of Philippine Business and Industry (CPBI); and from the list of branches enumerated by sample establishments.

The 2019 LE was extracted from the Statistical Business Register (SBR) which is a database containing the records of business units engaged in various economic activities in the entire country. It is a collection of all business units enumerated/listed and included in the list from previous updating activities which are currently operating or with “other operation” status (i.e., closed, cannot be located (CBL) or moved out to unknown address, duplicates, etc.).

In accordance with the specified scope and coverage (Table 2.2) provided to the Service and Industry Census Division (SICD), the final frame for the 2020 OWS consists of about 40,934 in operation and formal sector establishments nationwide.

### **III.1.3. Sampling design**

The survey uses stratified systematic sampling design with 2- digit, 3-digit, 4-digit, and 5-digit PSIC serving as industry strata and total employment as the second stratification variable.

Stratified systematic sampling is a process of dividing the population into homogeneous groups, called strata, and then selecting independent samples in each stratum systematically. Systematic sampling controls the distribution of the sample by spreading the selections throughout the sampling frame (or stratum) at equal intervals and thus provides implicit stratification. This method ensures that all important subgroups of the population are represented in the sample and increases the precision of “overall” survey estimates.

The design includes determination of sampling units; sampling domains; determination of sample size; sample allocation and sample selection.

Geographical location was not considered in the stratification to allow for detailed industry groupings.

### **III.1.4. Sampling domains**

**Industry Domains** - The industry domains (referred as industry strata) for the 2020 OWS are the 2-digit level (division), 3-digit (group), 4-digit (class) and 5-digit level (sub-class) of the 2009 PSIC. A total of seventy-one (71) industries were considered as domains. Particularly for the 2020 OWS, only selected industries among the 71 are utilized to monitor selected occupations.

**Employment Stratum** - Within the industry domains for each sector, the establishments were further stratified by total employment (TE). The TE sizes were either combined or taken as a group to comprise the employment stratum and were limited to only three (3) employment strata.

This employment size grouping is based on the National Statistics Office and Small and Medium Enterprise Development Council Resolution No. 1, Series 2003 adopting the definition according to employment size, where 1-9 employees are classified as micro, 10-99 as small, 100-199 as medium, and the 200 or more employees as large establishments. Since the threshold in employment for the 2020 OWS is 20 workers, it adopted the “small” category starting with 20 workers, then up to 99, and so on. This grouping was also considered in computing the adjusted weights of the 2020 OWS.

## **III.2. Sample Selection Procedure**

### **III.2.1. Sample size determination**

The primary consideration in the determination of sample size for the surveys was its manageability at the optimum level of estimated budget without compromising the reliability and accuracy of survey results.

For the 2020 OWS round, due to limited budget resources, the sample size was pegged at 8,600 sample establishments. One (1) employment stratum shall be taken with certainty while two (2) of the employment size groups shall be included in the non-certainty strata.

A **certainty stratum** is defined as the stratum whose sampling ratio is 100 percent. In this stratum, all establishments are taken as certainty samples, i.e., the selection probability is 1 and the sampling weight is 1 while **non-certainty stratum** is the stratum where only sample establishments are taken.

**Certainty stratum based on employment size** - Establishments employing 200 or more workers were taken with certainty as their employment represents about 65 percent of total employment in all the establishments covered. These establishments, however, comprise only 10 percent of the reference establishment population. For this survey round, all establishments with 200 or more workers were automatically included in the survey. Hence, establishments with employment size of 20-199 were considered in non-certainty stratum.

**Certainty stratum based on industry** - There are two (2) cases where industry strata are considered in the certainty stratum:

(1) Some industry strata that were pre-determined as certainty units due to few numbers of establishments existing in the whole population. This is to ensure that all of these industry strata will still have reliable estimates in anticipation of unit non-response; and

(2) Based on the computation of sample size for 20-99 and 100-199 employment size groups, denoted as  $n_{20-99}$  and  $n_{100-199}$  (see detailed discussion below). Some industries that have high coefficient of variation (CV) from the previous survey yielded a higher number of samples than the establishment population in the frame. Consequently, these industry strata were automatically considered as certainty units.

Accordingly, a total of 5,331 sample establishments were considered as certainty units.

**Initial sample size determination.** Prior to the industry domain that was identified as certainty, the initial sample size for employment strata 20-99 and 100-199 were computed by taking into account the computed highest Coefficient of Variation (CV) between the average wage rates of the two (2) benchmark occupations, i.e., Accounting and Bookkeeping Clerks and Unskilled Workers from the previous survey round of OWS; the responding units from previous survey; and a target coefficient of variation (CV') of 8%.

The formula used is as follows:

$$n_{hi} = \sum_{h=1}^{70} \frac{CV_{hi} \times r_{hi}}{CV'_{hi}}$$

where:

- $n_{hi}$  - initial sample size for the hth industry and ith employment size stratum
- $h$  - hth industry domain, with a total of 71 specific industry
- $i$  - ith employment size stratum where size 1 (20-99) and size 2 (100-199) employment size group represents the non-certainty strata for this round
- $CV_{hi}$  - highest coefficient of variation
- $r_{hi}$  - number of responding units from previous survey (2018 OWS)
- $CV'_{hi}$  - target coefficient of variation

An additional 10% for each industry domain was applied to accommodate the expected non-response. Further adjustments were made in the sample size for some industry domains based on the available population from the frame. As a result, these industries have been considered in the certainty stratum as mentioned above.

However, due to budget constraints, the initial sample size determined for 20-99 employment size stratum based on CV was not adopted since it required a bigger number of samples. The certainty stratum, i.e., 200 and over employment size group (4,684 establishments) and the initial sample size computation based on CV for the employment stratum 100-199 (2,292 establishments) were then subtracted to the budgeted sample size (8,600). Then, the remainder (1,624 establishments) was distributed to employment size 1 (20-99) using Kish Allocation. Based on the available units in the frame, some adjustments in the sample size for the 20-99 group were made. Hence, the final sample size for 20-99 stratum is 1,597. A sampling rate of approximately 50% were allotted to size 2 (100- 199 employment size group), and approximately 5% to size 1 (20-99 employment size group).

For 20-99 employment size stratum, seven (7) industry domains were taken as certainty after the reduced sample size determination was applied. While 34 industry domains were taken as certainty for 100-199 stratum. Samples were then selected for the remaining 64 and 37 industry groups in the non-certainty strata (size 1 and size 2, respectively).

Thus, the total number of samples for the 2020 OWS and 2019/2020 ISLE is **8,573**.

### **III.2.2. Sample selection**

For each of the sampling strata of TE of 20-199, sample establishments are selected using systematic sampling. The IBM SPSS statistical software was utilized in choosing the samples and in the computation of initial sampling weight. Weights are assigned to respondent records in a survey data in order to make the weighted records represent the population of inference as close as possible.

Systematic sampling was chosen so that the TE values of the sample establishments are spread out, resulting from good representation of samples within the employment stratum, thus avoiding all sample establishments with low TE values or high TE values.

### **III.3. Estimation Procedure**

#### **Weighting Adjustment for Non-Certainty Stratum Non-Response**

Not all of the distributed survey questionnaires will be retrieved or will have a status of “Good” questionnaire. During data collection, there will be reports of permanent closures; non-location; duplicates and shifts in industry and employment size outside the survey coverage. Establishments that fall in these categories are not eligible elements of the frame and their count will not be considered in the estimation. Non-responding eligible units are

made up of refusals; temporary closures; under new management and ownership; consolidated report with other sample establishments; and establishments whose questionnaires contain inconsistent responses but were not able to reply or comply to the verification/follow-ups made by SRs and field personnel by the time output table generation processes had commenced.

Respondents are post-stratified as to industry and employment size classifications. Non-respondents are retained in their classifications. Estimates are obtained by simple expansion, i.e., by multiplying the sample values at the cell level (industry and employment size) by the corresponding blowing-up factor or the adjusted weights which is the ratio of the estimated population of establishments to the number of responding establishments. The formula used is as follows:

$$W'_{hi} = \frac{N_{hi}}{n_{hi}} \times \frac{n''_{hi}}{n'_{hi}}$$

where:

- $W'_{hi}$  - Adjusted weight in the in the hth industry and ith employment stratum
- $N_{hi}$  - Total number of establishments in the frame in the hth industry and ith employment stratum
- $n_{hi}$  - Number of sample establishments in the hth industry and ith employment stratum
- $n'_{hi}$  - Number of responding establishments in the hth industry and ith employment stratum
- $n''_{hi}$  - Number of eligible units (i.e., retrieved/good, refused, on-strike, temporary closed, under new management & ownership, consolidated report, for verification, and unaccounted) in the hth industry and ith employment stratum

or simply, the basic weight (N/n) multiplied by the adjustment factor (n''/n').

These estimates are then aggregated to the desired totals.

For the 2020 OWS, sample values of basic pay and allowances for the monitored occupations whose basis of payment is by Hour (H) or a by Day (D) are converted into a standard monthly equivalent, assuming 309 working days and 8 hours per day. Daily rate is multiplied by 25.75 (days) while hourly rate is multiplied by 206 (hours).

The median monthly basic pay is computed from the estimated distribution of workers by monthly basic pay. On the other hand, the median monthly allowance is computed only for those workers that have allowances.

A 95% level of reliability of national survey estimates is desired. It is to be assessed through the CVs for the average wage rates of benchmark occupations and other monitored occupations by industry.

### **III.4. Other Related Topics**

#### **III.4.1. Adjustments**

- ***Non-response:*** Non-response is taken into account in the weighing procedure.
- ***Other bias:*** No adjustments are made.
- ***Use of benchmark data:*** No benchmark data is used.
- ***Use of other surveys:*** No other survey data are used.
- ***Seasonal variations:*** Not applicable.

#### **III.4.2. Indicators of the Reliability of the Estimates**

- ***Coverage of the sampling frame:*** Partially updated.

- **Sampling error/Sampling variance:** Starting with the 2006 survey round, coefficients of variation on occupational wage rates were published.
- **Non-response rate:** For 2020 OWS, the response rate in terms of eligible units is 79.2 percent.
- **Non-sampling errors:** These may occur due to inaccuracies in reporting by establishments and enumerators, mistakes in coding, editing, and data entry. However, efforts are made to reduce non-sampling errors by careful design of the questionnaire, intensive training of survey personnel, linkages with key informants (employers' and workers' groups, government agencies, and the academe) and through adoption and documentation of efficient operating procedures.
- **Conformity with other sources:** In relation to the reference period of the OWS or a period close to it, the survey results are compared with the earnings data from the Annual Survey of Philippine Business and Industry and the minimum wage rates.
- **Estimates for non-survey years:** Not relevant

#### IV. Concepts and Definitions of Terms

**Establishment** - an economic unit, which engages under a single ownership or control, i.e., under a single legal entity, in one or predominantly one kind of economic activity at a single fixed physical location.

**Time-rated workers on full-time basis** - workers paid on the basis of a time unit of work and who work at jobs with hours of work equal to or more than those considered as normal or regular to the establishment.

**Time unit** - basis of computing, determining, or fixing the basic pay or allowance, i.e., hourly, daily, or monthly. This is different from frequency of payment such as twice a month.

**Wage Rate** - refers to the sum of basic pay and regular/guaranteed cash allowances.

**Basic pay** - includes pay for normal/regular working time before deductions for employees' social security contributions (e.g., SSS/GSIS, PhilHealth, and PAG-IBIG) and withholding taxes, etc. However, basic pay excludes overtime, night shift differential, and other premium pays; commissions, tips, and shares of employees in service charges; payments in kind; allowances; and bonuses and gratuities.

**Allowances** - include cost of living allowances (COLA) and other guaranteed cash payments given regularly. It excludes, however, reimbursements for travel, entertainment, meals, and other expenses, etc. incurred in conducting the business of the employer; cost of uniform/working clothes; bonuses and gratuities; family allowances; and payments in kind.

**Median** - refers to the value that divides the wage distribution into two equal parts. It is the value where half of the distribution receive more while the other half receive less.

**Benchmark occupations:** refer to occupations monitored in all industries covered by the survey. It serves as a standard or point of reference against which other occupations may be compared or assessed. The OWS specifically collects data on these two benchmark occupations: (1) Accounting and Bookkeeping Clerks and (2) Unskilled Workers except Janitors, Messengers, and Freight Handlers.

## V. Dissemination of Results and Revisions

### V.1. Schedule of Release

For 2020 OWS, the schedule of release is as follows:

- Reference Period - 31 August 2020
- Field Operations - November 2020 to March 2021
- Release of Final Results - 30 November 2021

### V.2. Forms of Dissemination

Final results of the survey will be disseminated through a Press Release, Statistical/Publication Tables, and Infographics one year after the reference year. Results will also be made available and posted in the PSA website through Statistical Report and LABSTAT Updates.

## VI. Citation

Philippine Statistics Authority, (November 2021). Technical Notes on 2020 Occupational Wages Survey.

Link: <https://psa.gov.ph/occupational-wages-survey/technical-notes>

## VII. Contact Information

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### **For data request, you may contact:**

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