

## **The Philippines 2015 Enterprise Surveys Data Set**

### **I. Introduction**

This document provides additional information on the data collected in Philippines between November 2014 and May 2016. The objective of the Enterprise Survey is to gain an understanding of what firms experience in the private sector.

As part of its strategic goal of building a climate for investment, job creation, and sustainable growth, the World Bank has promoted improving the business environment as a key strategy for development, which has led to a systematic effort in collecting enterprise data across countries. The Enterprise Surveys (ES) are an ongoing World Bank project in collecting both objective data based on firms' experiences and enterprises' perception of the environment in which they operate.

The ES currently cover over 155,000 firms in 148 countries, of which 139 have been surveyed following the standard methodology. This allows for better comparisons across countries and across time. Data are used to create statistically significant business environment indicators that are comparable across countries. The ES are also used to build a panel of enterprise data that will make it possible to track changes in the business environment over time and allow, for example, impact assessments of reforms.

This report outlines and describes the sampling design of the data, the data set structure as well as additional information that may be useful when using the data, such as information on non-response cases and the appropriate use of the weights.

### **II. Sampling Structure**

The sample for 2015 Philippines ES was selected using stratified random sampling, following the methodology explained in the *Sampling Note*<sup>1</sup>. Stratified random sampling<sup>2</sup> was preferred over simple random sampling for several reasons<sup>3</sup>:

a. To obtain unbiased estimates for different subdivisions of the population with some known level of precision.

b. To obtain unbiased estimates for the whole population. The whole population, or universe of the study, is the non-agricultural economy. It comprises: all manufacturing sectors according to the group classification of ISIC Revision 3.1: (group D), construction sector (group F), services sector (groups G and H), and transport, storage, and communications sector (group I). Note that this definition excludes the following sectors: financial intermediation (group J), real estate and renting activities (group K, except sub-sector 72, IT, which was added to the population under study), and all public or utilities-sectors.

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<sup>1</sup> The complete text can be found at [http://www.enterprisesurveys.org/~media/GIAWB/EnterpriseSurveys/Documents/Methodology/Sampling\\_Note.pdf](http://www.enterprisesurveys.org/~media/GIAWB/EnterpriseSurveys/Documents/Methodology/Sampling_Note.pdf)

<sup>2</sup> A stratified random sample is one obtained by separating the population elements into non-overlapping groups, called strata, and then selecting a simple random sample from each stratum. (Richard L. Scheaffer; Mendenhall, W.; Lyman, R., "Elementary Survey Sampling", Fifth Edition).

<sup>3</sup> Cochran, W., 1977, pp. 89; Lohr, Sharon, 1999, pp. 95

c. To make sure that the final total sample includes establishments from all different sectors and that it is not concentrated in one or two of industries/sizes/regions.

d. To exploit the benefits of stratified sampling where population estimates, in most cases, will be more precise than using a simple random sampling method (i.e., lower standard errors, other things being equal.)

e. Stratification may produce a smaller bound on the error of estimation than would be produced by a simple random sample of the same size. This result is particularly true if measurements within strata are homogeneous.

f. The cost per observation in the survey may be reduced by stratification of the population elements into convenient groupings.

Three levels of stratification were used in this country: industry, establishment size, and region. The original sample design with specific information of the industries and regions chosen is described in Appendix C.

Industry stratification was designed in the way that follows: the universe was stratified into seven manufacturing industries and two services industries- Food and Beverages (ISIC Rev. 3.1 code 15), Garments (ISIC code 18), Chemicals (ISIC code 24), Rubber and Plastics (ISIC code 25), Fabricated Metal (ISIC code 28), Electronic Products (ISIC codes 31 and 32), Other Manufacturing (ISIC codes 16,17,19-23,26,27,29,30,33-37), Retail (ISIC code 52) and Other Services (ISIC codes 45, 50, 51, 55, 60-64, and 72).

For the Philippines ES, size stratification was defined as follows: small (5 to 19 employees), medium (20 to 99 employees), and large (100 or more employees).

Regional stratification for the Philippines ES was done across five regions: Metro Manila, NCR excluding Manila, Metro Cebu, Central Luzon, and Calabarzon.

### **III. Sampling implementation**

Given the stratified design, sample frames containing a complete and updated list of establishments as well as information on all stratification variables (number of employees, industry, and region) are required to draw the sample. Great efforts were made to obtain the best source for these listings.

Mekong Economics was the main contractor and OIJ Business Partners was the subcontractor that implemented the Philippines 2015 ES.

The sample frame consisted of listings of firms from two sources: First, for panel firms the list of 1326 firms from the Philippines 2009 ES was used. Second, for fresh firms (i.e., firms not covered in 2009), economic census data from Philippines Statistics Authority (PSA) was used.

**Table 1: Philippines ES Sample Frame (Fresh and Panel Combined)**

		FOOD PRODUCTS	WEARING APPAREL	CHEMICAL PRODUCTS	RUBBER AND PLASTICS PRODUCTS	FABRICATED METAL	ELECTRONIC PRODUCTS	OTHER MFG	RETAIL TRADE	OTHER SVCS	Grand Total
<b>METRO MANILA</b>	Small	16	28	8	13	11	13	11	29	12	<b>368</b>
	Medium	17	21	9	7	7	11	30	27	20	
	Large	8	2	4	2	2	1	16	8	35	
<b>NCR Excluding Manila</b>	Small	56	71	78	75	36	45	106	66	115	<b>1,706</b>
	Medium	37	65	107	96	53	52	100	59	81	
	Large	49	57	44	70	25	39	50	38	36	
<b>METRO CEBU</b>	Small	35	20	30	26	32	32	30	36	27	<b>730</b>
	Medium	40	13	20	30	24	29	34	16	28	
	Large	45	18	15	10	11	37	30	30	32	
<b>CENTRAL LUZON</b>	Small	25	31	24	22	52	29	25	27	15	<b>736</b>
	Medium	38	54	37	38	39	28	28	14	11	
	Large	54	24	13	12	5	28	16	23	24	
<b>CALABARZON</b>	Small	41	32	48	28	23	32	39	30	34	<b>1,083</b>
	Medium	31	41	72	63	71	43	44	23	17	
	Large	48	54	33	53	49	57	35	21	21	
		<b>540</b>	<b>531</b>	<b>542</b>	<b>545</b>	<b>440</b>	<b>476</b>	<b>594</b>	<b>447</b>	<b>508</b>	<b>4,623</b>

Source: World Bank and Philippines Statistics Authority (PSA).

**Table 2: Philippines Sample Frame (Panel)**

		FOOD PRODUCTS	WEARING APPAREL	CHEMICAL PRODUCTS	RUBBER AND PLASTICS PRODUCTS	FABRICATED METAL	ELECTRONIC PRODUCTS	OTHER MFG	RETAIL TRADE	OTHER SVCS	Grand Total
<b>METRO MANILA</b>	Small	1	5	0	2	0	0	0	7	4	<b>59</b>
	Medium	1	1	3	1	0	1	5	9	7	
	Large	2	0	1	1	0	1	1	2	4	
<b>NCR Excluding Manila</b>	Small	33	41	15	35	1	16	42	42	37	<b>745</b>
	Medium	25	28	48	55	4	18	71	33	36	
	Large	9	17	19	25	1	22	35	19	18	
<b>METRO CEBU</b>	Small	15	4	2	2	1	1	11	11	9	<b>151</b>
	Medium	9	0	3	6	3	2	15	2	11	
	Large	6	5	5	3	1	6	9	2	7	
<b>CENTRAL LUZON</b>	Small	8	6	0	1	0	2	7	12	6	<b>110</b>
	Medium	2	7	5	6	1	7	12	6	4	
	Large	1	1	2	1	0	7	1	2	3	
<b>CALABARZON</b>	Small	14	14	3	4	0	7	9	14	7	<b>261</b>
	Medium	8	6	14	20	2	15	22	6	9	
	Large	5	7	5	15	1	31	17	4	2	
		<b>139</b>	<b>142</b>	<b>125</b>	<b>177</b>	<b>15</b>	<b>136</b>	<b>257</b>	<b>171</b>	<b>164</b>	<b>1,326</b>

The quality of the frame was enhanced by the verification process conducted by OIJ Business Partners. However, the sample frame was not immune from the typical problems found in establishment surveys: positive rates of non-eligibility, repetition, non-existent units, etc.

Given the impact that non-eligible units included in the sample universe may have on the results, adjustments may be needed when computing the appropriate weights for individual observations. The percentage of confirmed non-eligible units as a proportion of the total number of sampled establishments contacted for the survey was 3.7% (135 out of 3649 establishments)<sup>4</sup>.

Breaking down by industry and size, the following sample targets were achieved (based on the sampling information):

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<sup>4</sup> Based on out of target and ineligible contacts

**Table 3: Achieved Interviews (Fresh and Panel Combined)**

		<b>FOOD PRODUCTS</b>	<b>WEARING APPAREL</b>	<b>CHEMICAL PRODUCTS</b>	<b>RUBBER AND PLASTICS PRODUCTS</b>	<b>FABRICATED METAL</b>	<b>ELECTRONIC PRODUCTS</b>	<b>OTHER MFG</b>	<b>RETAIL TRADE</b>	<b>OTHER SVCS</b>	<b>Grand Total</b>
<b>METRO MANILA</b>	Small	4	9	4	6	6	4	5	9	6	<b>123</b>
	Medium	5	3	4	2	3	5	5	9	8	
	Large	4	2	1	1	0	0	2	6	10	
<b>NCR Excluding Manila</b>	Small	12	15	18	15	15	13	25	15	24	<b>421</b>
	Medium	13	15	26	22	21	14	24	10	15	
	Large	17	14	10	24	7	12	6	12	7	
<b>METRO CEBU</b>	Small	10	9	8	8	8	14	6	6	8	<b>202</b>
	Medium	13	4	8	6	6	6	7	1	6	
	Large	13	6	10	3	5	10	8	5	8	
<b>CENTRAL LUZON</b>	Small	8	10	6	8	16	10	6	12	9	<b>239</b>
	Medium	8	15	12	10	14	11	7	6	6	
	Large	14	7	4	7	2	10	6	6	9	
<b>CALABARZON</b>	Small	13	11	17	8	14	13	8	12	11	<b>350</b>
	Medium	9	13	19	18	22	18	9	7	10	
	Large	14	16	11	21	16	17	7	10	6	
		<b>157</b>	<b>149</b>	<b>158</b>	<b>159</b>	<b>155</b>	<b>157</b>	<b>131</b>	<b>126</b>	<b>143</b>	<b>1,335</b>

**Table 4: Achieved Interviews (Panel)**

		FOOD PRODUCTS	WEARING APPAREL	CHEMICAL PRODUCTS	RUBBER AND PLASTICS PRODUCTS	FABRICATED METAL	ELECTRONIC PRODUCTS	OTHER MFG	RETAIL TRADE	OTHER SVCS	Grand Total
<b>METRO MANILA</b>	Small	0	2	0	0	0	0	0	3	3	<b>21</b>
	Medium	0	0	2	0	0	0	3	2	2	
	Large	1	0	0	1	0	0	1	1	0	
<b>NCR Excluding Manila</b>	Small	8	9	2	7	1	7	13	5	5	<b>166</b>
	Medium	7	7	11	12	4	6	14	3	3	
	Large	5	5	7	9	0	6	4	3	3	
<b>METRO CEBU</b>	Small	4	2	1	0	0	1	3	3	4	<b>49</b>
	Medium	3	0	1	1	0	0	3	0	3	
	Large	1	3	4	1	1	3	3	1	3	
<b>CENTRAL LUZON</b>	Small	2	3	0	0	0	0	2	3	3	<b>42</b>
	Medium	0	3	2	2	0	3	4	3	2	
	Large	0	1	2	0	0	3	0	1	3	
<b>CALABARZON</b>	Small	6	6	2	2	0	4	4	4	3	<b>97</b>
	Medium	2	4	3	7	0	6	5	3	5	
	Large	2	2	3	8	1	7	4	3	1	
		<b>41</b>	<b>47</b>	<b>40</b>	<b>50</b>	<b>7</b>	<b>46</b>	<b>63</b>	<b>38</b>	<b>43</b>	<b>375</b>

#### IV. Data Base Structure:

The structure of the data base reflects the fact that 2 different versions of the survey instrument were used for all registered establishments. Questionnaires have common questions (*core* module) and respectfully additional manufacturing- and services-specific questions. The eligible manufacturing industries have been surveyed using the **Manufacturing** questionnaire (includes the *core* module, plus manufacturing specific questions). Retail firms have been interviewed using the **Services** questionnaire (includes the *core* module plus retail specific questions) and the residual eligible services have been covered using the **Services** questionnaire (includes the *core* module). Each variation of the questionnaire is identified by the index variable, *a0*.

All variables are named using, first, the letter of each section and, second, the number of the variable within the section, i.e. *a1* denotes section A, question 1 (some exceptions apply due to comparability reasons). Variable names preceded by the prefix “EA” or “MYA” indicate questions specific to Philippines and other countries in EAP 2015, therefore, they may not be found in the implementation of the rollout in other countries. All other suffixed variables are global and are present in all country surveys over the world. All variables are numeric with the exception of those variables with an “x” at the end of their names. The suffix “x” denotes that the variable is alpha-numeric.

There are 2 establishment identifiers, *idstd* and *id*. The first is a global unique identifier. The second is a country unique identifier. The variables *a2* (sampling region), *a6a* (sampling establishment’s size), and *a4a* (sampling sector) contain the establishment’s classification into the strata chosen for each country using information from the sample frame. The strata were defined according to the guidelines described above.

There are three levels of stratification: industry, size and region. Different combinations of these variables generate the strata cells for each industry/region/size combination. A distinction should be made between the variable *a4a* and *d1a2* (industry expressed as ISIC rev. 3.1 code). The former gives the establishment’s classification into one of the chosen industry-strata based on the sample frame, whereas the latter gives the establishment’s actual industry classification (four digit code) based on the main activity at the time of the survey.

All of the following variables contain information from the sampling frame. They may not coincide with the reality of individual establishments as sample frames may contain inaccurate or outdated information. The variables containing the sample frame information are included in the data set for researchers who may want to further investigate statistical features of the survey and the effect of the survey design on their results.

- a2* is the variable describing sampling regions

- a6a*: coded using the same standard for small, medium, and large establishments as defined above.

- a4a*: coded following the stratification by sector as defined above.

The surveys were implemented following a 2 stage procedure. Typically first a screener questionnaire is applied over the phone to determine eligibility and to make appointments. Then a face-to-face interview takes place with the Manager/Owner/Director of each establishment. However, sometimes the phone numbers were unavailable in the



sample frame, and thus the enumerators applied the screeners in person. The variables *a4b* and *a6b* contain the industry and size of the establishment from the screener questionnaire. Variables *a8* to *a11* contain additional information and were also collected in the screening phase.

Note that there are variables for size (*l1*, *l6* and *l8*) that reflect more accurately the reality of each establishment. Advanced users are advised to use these variables for analytical purposes. Variables *l1* (number of permanent full-time workers at the end of the last complete fiscal year), *l6* (number of full-time seasonal workers employed during last complete fiscal year) and *l8* (average length of employment of full-time temporary employees during last complete fiscal year) were designed to obtain a more accurate measure of employment accounting for permanent and temporary employment. Special efforts were made to make sure that this information was not missing for most establishments.

Most firms had January 2014 to December 2014 as their last complete fiscal year. Variables *eea3a3w* (starting month of last complete fiscal year) and *eea3a3y* (last complete fiscal year) can be used to obtain the last complete fiscal year for each firm.

For questions pertaining to monetary amounts, the unit is the Philippine peso or the US dollar. Respondents were given the choice to answer in either currency and the variable *a3a2* contains the currency of their choice. Variables *c9b*, *d2*, *n3*, *h8*, *i2b*, *i4b*, *n5a*, *n5b*, *k5a1*, *k5i1*, *k5bc1*, *k5e1*, *k5f1*, *k5hdj1*, *k11*, *k15a*, *k15c*, *j7b*, *n2a*, *n2e*, *n2f*, *n2b*, *n2i*, *n2p*, *n6a*, *n6b*, *n7a*, and *n7b* were originally given in the currency of choice, but they are transformed into Philippine peso using the exchange rates as contained in variables *Official\_ER\_LCU\_per\_USD\_2014* and *Official\_ER\_LCU\_per\_USD\_2012*. The original series as provided by respondents are contained in variables prefixed with *ea*, e.g. *eaac9b*.

## V. Universe Estimates

Universe estimates for the number of establishments in each cell in Philippines were produced for the strict, weak and median eligibility definitions described below. The estimates were the multiple of the relative eligible proportions.

For some establishments where contact was not successfully completed during the screening process (because the firm has moved and it is not possible to locate the new location, for example), it is not possible to directly determine eligibility. Thus, different assumptions about the eligibility of establishments result in different adjustments to the universe cells and thus different sampling weights.

Three sets of assumptions on establishment eligibility are used to construct sample adjustments using the status code information.

Strict assumption: eligible establishments are only those for which it was possible to directly determine eligibility. The resulting weights are included in the variable *wstrict*.

$$\text{Strict eligibility} = (\text{Sum of the firms with codes } 1, 2, 3, 4, \& 16) / \text{Total}$$

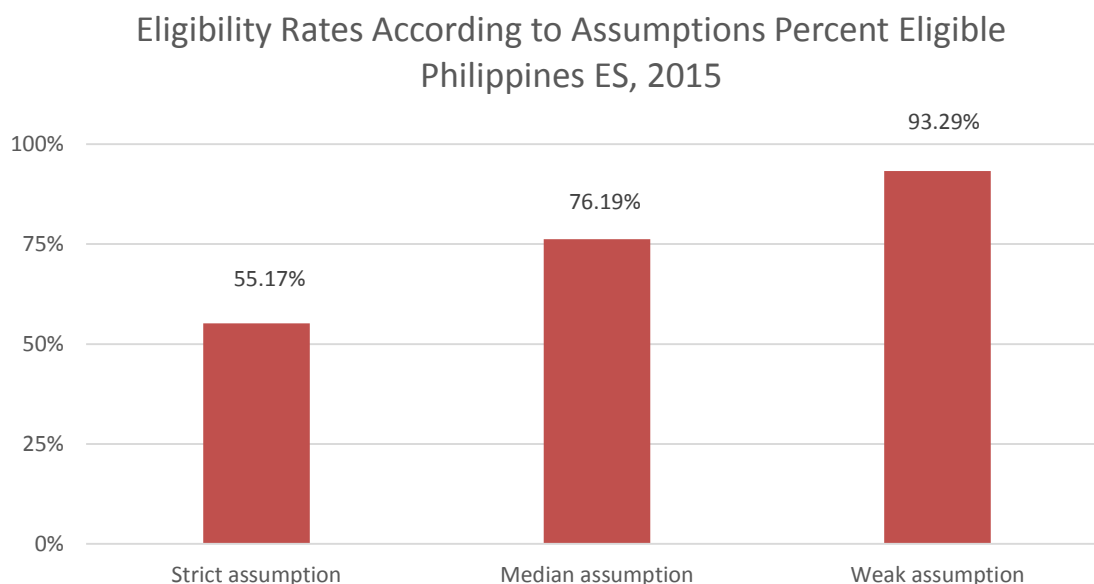
Median assumption: eligible establishments are those for which it was possible to directly determine eligibility and those that rejected the screener questionnaire or an answering machine or fax was the only response. The resulting weights are included in the variable *wmedian*.

$$\text{Median eligibility} = (\text{Sum of the firms with codes } 1, 2, 3, 4, 16, 10, 11, \text{ \& } 13) / \text{Total}$$

Weak assumption: in addition to the establishments included in points a and b, all establishments for which it was not possible to contact or that refused the screening questionnaire are assumed eligible. This definition includes as eligible establishments with dead or out of service phone lines, establishments that never answered the phone, and establishments with incorrect addresses for which it was impossible to find a new address. Under the weak assumption only observed non-eligible units are excluded from universe projections. The resulting weights are included in the variable *wweak*.

$$\text{Weak eligibility} = (\text{Sum of the firms with codes, } 1, 2, 3, 4, 16, 10, 11, 13, 91, 92, 93, 94, 12) / \text{Total}$$

The indicators computed for the ES website use the median weights. The following graph shows the different eligibility rates calculated for firms in the sample frame under each set of assumptions.



Universe estimates for the number of establishments in each industry-region-size cell in Philippines were produced for the strict, weak and median eligibility definitions. Appendix B shows the universe estimates of the numbers of registered establishments that fit the criteria of the ES.

Once an accurate estimate of the universe cell projection was made, weights for the probability of selection were computed using the number of completed interviews for each cell.

## VI. Weights

Since the sampling design was stratified and employed differential sampling, individual observations should be properly weighted when making inferences about the population. Under stratified random sampling, unweighted estimates are biased unless sample sizes are proportional to the size of each stratum. With stratification the probability of selection of each unit is, in general, not the same. Consequently, individual observations must be weighted by the inverse of their probability of selection (probability weights or *pw* in Stata.)<sup>5</sup>

Special care was given to the correct computation of the weights. It was imperative to accurately adjust the totals within each region/industry/size stratum to account for the presence of ineligible units (the firm discontinued businesses or was unattainable, education or government establishments, no reply after having called in different days of the week and in different business hours, no tone in the phone line, answering machine, fax line<sup>6</sup>, wrong address or moved away and could not get the new references). The information required for the adjustment was collected in the first stage of the implementation: the screening process. Using this information, each stratum cell of the universe was scaled down by the observed proportion of ineligible units within the cell. Once an accurate estimate of the universe cell (projections) was available, weights were computed using the number of completed interviews.

## VII. Appropriate use of the weights

Under stratified random sampling, weights should be used when making inferences about the population. Any estimate or indicator that aims at describing some feature of the population should take into account that individual observations may not represent equal shares of the population.

However, there is some discussion as to the use of weights in regressions (see Deaton, 1997, pp.67; Lohr, 1999, chapter 11, Cochran, 1953, pp.150). There is not strong large-sample econometric argument in favor of using weighted estimation for a common population coefficient if the underlying model varies per stratum (stratum-specific coefficient): both simple OLS and weighted OLS are inconsistent under regular conditions. However, weighted OLS have the advantage of providing an estimate that is independent of the sample design. This latter point may be quite relevant for the ES as in most cases the objective is not only to obtain model-unbiased estimates but also design-unbiased estimates (see also Cochran, 1977, pp 200 who favors the used of weighted OLS for a common population coefficient.)<sup>7</sup>

From a more general approach, if the regressions are descriptive of the population then weights should be used. The estimated model can be thought of as the relationship

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<sup>5</sup> This is equivalent to the weighted average of the estimates for each stratum, with weights equal to the population shares of each stratum.

<sup>6</sup> For the surveys that implemented a screener over the phone.

<sup>7</sup> Note that weighted OLS in Stata using the command `regress` with the option of weights will estimate wrong standard errors. Using the Stata survey specific commands `svy` will provide appropriate standard errors.

that would be expected if the whole population were observed.<sup>8</sup> If the models are developed as structural relationships or behavioral models that may vary for different parts of the population, then, there is no reason to use weights.

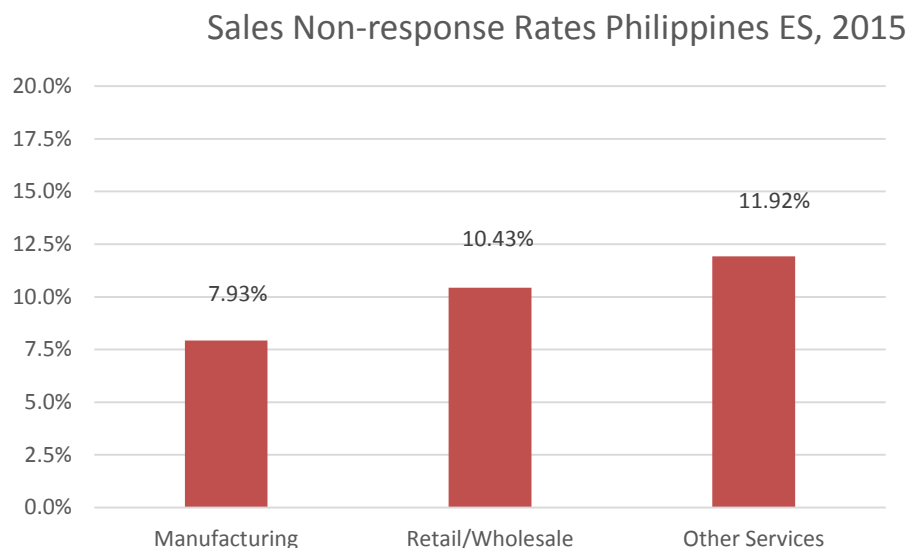
### VIII. Non-response

Survey non-response must be differentiated from item non-response. The former refers to refusals to participate in the survey altogether whereas the latter refers to the refusals to answer some specific questions. Enterprise Surveys suffer from both problems and different strategies were used to address these issues.

Item non-response was addressed by two strategies:

a- For sensitive questions that may generate negative reactions from the respondent, such as corruption or tax evasion, enumerators were instructed to collect the refusal to respond (-8) as a different option from don't know (-9).

b- Establishments with incomplete information were re-contacted in order to complete this information, whenever necessary. However, there were clear cases of low response. The following graph shows non-response rates for the sales variable, *d2*, by sector. Please, note that for this specific question, refusals were not separately identified from "Don't know" responses.

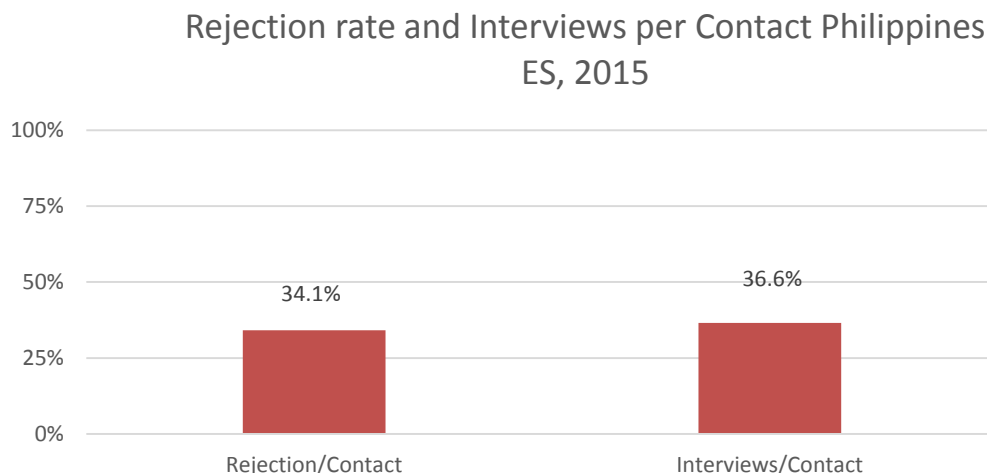


Survey non-response was addressed by maximizing efforts to contact establishments that were initially selected for interview. Attempts were made to contact the establishment for interview at different times/days of the week before a replacement establishment (with similar strata characteristics) was suggested for interview. Survey non-response did occur but substitutions were made in order to potentially achieve strata-specific goals; whenever this was done, strict rules were followed to ensure replacements were randomly selected within the same stratum. Further research is needed on survey non-response in the Enterprise Surveys regarding potential introduction of bias.

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<sup>8</sup> The use weights in most model-assisted estimations using survey data is strongly recommended by the statisticians specialized on survey methodology of the JPSM of the University of Michigan and the University of Maryland.

As the following graph shows, the number of interviews per contacted establishments was 0.36.<sup>9</sup> This number is the result of two factors: explicit refusals to participate in the survey, as reflected by the rate of rejection (which includes rejections of the screener and the main survey) and the quality of the sample frame, as represented by the presence of ineligible units. The share of rejections per contact was 0.34.



Details on the rejection rate, eligibility rate, and item non-response are available at the level strata. This report summarizes these numbers to alert researchers of these issues when using the data and when making inferences. Item non-response, selection bias, and faulty sampling frames are not unique to Philippines. All enterprise surveys suffer from these shortcomings, but in very few cases they have been made explicit.

### **References:**

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- Levy, Paul S. and Stanley Lemeshow, *Sampling of Populations: Methods and Applications*, New York, New York: John Wiley & Sons, 1999.
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<sup>9</sup> The estimate is based on the total no. of firms contacted including ineligible establishments.

## Appendix A

### Status Codes Enterprise Survey (ES):

<b>110</b>	<b>Screening in process</b>	14. In process (the establishment is being called/ is being contacted - previous to ask the screener)	<b>110</b>
<b>2013</b>	<b>Eligible</b>	1. Eligible establishment (Correct name and address)	1942
		2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	2
		3. Eligible establishment (Different name but same address - the firm/establishment changed its name)	35
		4. Eligible establishment (Moved and traced)	15
		16. Eligible establishment (Panel Firm - now less than five employees; this code applies only to panel firms.)	19
<b>762</b>	<b>Screener refusal</b>	13. Refuses to answer the screener	<b>762</b>
<b>130</b>	<b>Ineligible</b>	5. The establishment has less than 5 permanent full time employees	9
		616. The firm discontinued businesses - (Establishment went bankrupt)	43
		617.	0
		618. The firm discontinued businesses - (Original establishment disappeared and is now a different firm)	22
		619. The firm discontinued businesses - (Establishment was bought out by another firm)	2
		620. The firm discontinued businesses - (It was impossible to determine for what reason)	36
		621. The firm discontinued businesses - (Other)	4
		7. Not a business: Private household	2
		8. Ineligible activity: Education, Agriculture, Finances, Government, etc.	12
<b>5</b>	<b>Out of target</b>	151. Out of target - outside the covered regions	4
		152. Out of target - moved abroad	1

		153. Out of target - Not registered with Statistical Authority	0
		154. Out of target - establishment is HQ without production or sales of goods or services	0
		155. Out of target - establishment was not in operation for the entirety of last fiscal year	0
		156. Duplicated firm within the sample	0
<b>629</b>	<b>Unobtainable</b>	91. No reply after having called in different days of the week and in different business hours	256
		92. Line out of order	72
		93. No tone	24
		94. Phone number does not exist	161
		10. Answering machine	0
		11. Fax line- data line	5
		12. Wrong address/ moved away and could not get the new references	111

<b>3649</b>	<b>Total contacted</b>
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#### Response Outcomes : Philippines ES 2015:

<b>Target and totals</b>	Sample target	1320
	Sample target completion rate	101.1%
	Total contacts available in frame	4623
	Total contacts issued	3858
	Total contacts contacted	3649

<b>Screening phase</b>	Screening in process	110
	Eligibles	2013
	Screeners refusal	762
	Ineligible + out of target	135
	Unobtainable	629
<b>Interview phase (only if eligible)</b>	Complete interviews without extra module	1335
	Complete interviews with extra module	0
	Eligible in process + incomplete interviews	6
	Interview refusal	484

<b>Percent breakdown (relative to total contacted)</b>	Screening in process rate	3.0%
	Screeners refusal rate	20.9%
	Ineligible + out of target rate	3.7%
	Unobtainable rate	17.2%
	Interview conversion rate	36.6%
	Eligible in process + incomplete interviews rate	0.2%
	Interview refusal rate	13.3%



## Appendix B: Universe Estimate Based on Sampling Weights

### Strict Universe Estimates – Fresh:

		FOOD PRODUCTS	WEARING APPAREL	CHEMICAL PRODUCTS	RUBBER AND PLASTICS PRODUCTS	FABRICATED METAL	ELECTRONIC PRODUCTS	OTHER MFG	RETAIL TRADE	OTHER SVCS	Grand Total
<b>METRO MANILA</b>	Small	76	20	4	6	7	8	55	700	1,060	<b>2,558</b>
	Medium	10	12	3	3	4	6	28	112	375	
	Large	3	1	2	0	0	0	1	12	51	
<b>NCR Excluding Manila</b>	Small	353	145	72	79	121	103	538	3,041	4,527	<b>13,466</b>
	Medium	140	104	78	98	100	61	444	591	2,157	
	Large	48	23	22	27	16	16	86	85	392	
<b>METRO CEBU</b>	Small	344	12	19	15	24	27	140	989	1,163	<b>3,898</b>
	Medium	70	8	15	17	18	22	160	184	436	
	Large	26	11	6	4	7	25	54	35	67	
<b>CENTRAL LUZON</b>	Small	289	65	13	11	36	18	179	1,446	1,194	<b>4,468</b>
	Medium	100	39	21	20	27	17	133	207	465	
	Large	33	14	6	6	3	17	44	17	48	
<b>CALABARZON</b>	Small	435	103	33	17	74	60	293	2,268	1,938	<b>7,566</b>
	Medium	130	70	49	50	82	69	269	350	719	
	Large	53	39	21	32	38	126	139	36	72	
		<b>2,111</b>	<b>666</b>	<b>363</b>	<b>385</b>	<b>557</b>	<b>575</b>	<b>2,563</b>	<b>10,071</b>	<b>14,663</b>	<b>31,955</b>

### Median Universe Estimates – Fresh:

		FOOD PRODUCTS	WEARING APPAREL	CHEMICAL PRODUCTS	RUBBER AND PLASTICS PRODUCTS	FABRICATED METAL	ELECTRONIC PRODUCTS	OTHER MFG	RETAIL TRADE	OTHER SVCS	Grand Total
<b>METRO MANILA</b>	Small	105	30	6	9	9	11	77	1,029	1,519	<b>3,687</b>
	Medium	14	17	5	4	6	8	40	163	533	
	Large	5	2	3	0	0	0	2	18	74	
<b>NCR Excluding Manila</b>	Small	518	230	114	128	178	149	800	4,724	6,856	<b>20,479</b>
	Medium	204	164	121	158	147	87	655	910	3,240	
	Large	71	37	35	44	23	24	129	134	601	
<b>METRO CEBU</b>	Small	420	16	24	20	29	32	174	1,276	1,463	<b>4,912</b>
	Medium	84	11	19	23	22	26	196	235	544	
	Large	32	14	9	5	9	30	68	46	85	
<b>CENTRAL LUZON</b>	Small	370	90	18	15	46	23	232	1,958	1,576	<b>5,928</b>
	Medium	127	54	29	28	34	21	171	277	609	
	Large	43	20	9	8	4	21	58	23	64	
<b>CALABARZON</b>	Small	568	145	46	24	97	76	388	3,133	2,610	<b>10,232</b>
	Medium	168	98	68	72	107	88	352	479	960	
	Large	70	56	30	46	51	163	186	50	99	
		<b>2,800</b>	<b>984</b>	<b>534</b>	<b>586</b>	<b>763</b>	<b>758</b>	<b>3,526</b>	<b>14,455</b>	<b>20,833</b>	<b>45,239</b>

**Weak Universe Estimates – Fresh:**

		<b>FOOD PRODUCTS</b>	<b>WEARING APPAREL</b>	<b>CHEMICAL PRODUCTS</b>	<b>RUBBER AND PLASTICS PRODUCTS</b>	<b>FABRICATED METAL</b>	<b>ELECTRONIC PRODUCTS</b>	<b>OTHER MFG</b>	<b>RETAIL TRADE</b>	<b>OTHER SVCS</b>	<b>Grand Total</b>
<b>METRO MANILA</b>	Small	127	37	7	11	10	12	89	1,194	1,816	<b>4,331</b>
	Medium	16	21	5	5	7	9	44	185	623	
	Large	5	2	3	0	0	0	2	19	82	
<b>NCR Excluding Manila</b>	Small	645	288	132	155	206	178	942	5,638	8,430	<b>24,612</b>
	Medium	248	202	138	187	166	102	755	1,063	3,896	
	Large	83	43	38	50	25	26	142	148	686	
<b>METRO CEBU</b>	Small	534	20	29	25	35	39	209	1,554	1,835	<b>6,023</b>
	Medium	105	13	22	28	25	31	230	280	668	
	Large	38	17	9	6	10	34	76	52	100	
<b>CENTRAL LUZON</b>	Small	516	127	23	21	59	30	306	2,616	2,169	<b>7,978</b>
	Medium	174	74	36	38	43	28	221	363	820	
	Large	56	26	10	10	5	27	71	28	82	
<b>CALABARZON</b>	Small	681	175	52	28	107	88	440	3,597	3,086	<b>11,784</b>
	Medium	197	116	74	82	116	99	390	538	1,111	
	Large	78	63	32	50	53	174	196	54	109	
		<b>3,504</b>	<b>1,223</b>	<b>610</b>	<b>695</b>	<b>867</b>	<b>876</b>	<b>4,112</b>	<b>17,327</b>	<b>25,514</b>	<b>54,728</b>

**Appendix C: Original Sample Design**  
**Original Sample Design (Fresh)**

		FOOD PRODUCTS	WEARING APPAREL	CHEMICAL PRODUCTS	RUBBER AND PLASTICS PRODUCTS	FABRICATED METAL	ELECTRONIC PRODUCTS	OTHER MFG	RETAIL TRADE	OTHER SVCS	Grand Total
<b>METRO MANILA</b>	Large	5	2	2	0	2	0	1	3	2	<b>126</b>
	Medium	5	9	3	5	7	9	2	2	4	
	Small	4	5	8	9	11	10	5	6	5	
<b>NCR Excluding Manila</b>	Large	5	5	6	6	8	6	2	6	5	<b>211</b>
	Medium	6	7	6	7	10	5	10	7	12	
	Small	8	6	6	7	13	6	12	15	19	
<b>METRO CEBU</b>	Large	4	5	5	4	8	6	2	3	2	<b>160</b>
	Medium	4	10	8	5	9	10	3	3	4	
	Small	7	7	9	9	10	9	3	6	5	
<b>CENTRAL LUZON</b>	Large	9	9	9	10	5	6	4	3	2	<b>185</b>
	Medium	7	6	7	8	10	6	3	2	4	
	Small	7	6	11	10	12	10	4	9	6	
<b>CALABARZON</b>	Large	5	6	7	6	9	6	2	4	2	<b>174</b>
	Medium	5	6	6	7	11	6	4	4	5	
	Small	8	5	9	8	13	7	5	10	8	
		<b>89</b>	<b>94</b>	<b>102</b>	<b>101</b>	<b>138</b>	<b>102</b>	<b>62</b>	<b>83</b>	<b>85</b>	<b>856</b>

**Original Sample Design (Panel)**

		<b>FOOD PRODUCTS</b>	<b>WEARING APPAREL</b>	<b>CHEMICAL PRODUCTS</b>	<b>RUBBER AND PLASTICS PRODUCTS</b>	<b>FABRICATED METAL</b>	<b>ELECTRONIC PRODUCTS</b>	<b>OTHER MFG</b>	<b>RETAIL TRADE</b>	<b>OTHER SVCS</b>	<b>Grand Total</b>
<b>METRO MANILA</b>	Large	1	0	1	1	0	0	1	3	3	<b>40</b>
	Medium	1	1	3	1	0	1	3	3	3	
	Small	1	5	0	2	0	0	0	3	3	
<b>NCR Excluding Manila</b>	Large	5	5	6	6	3	5	3	3	3	<b>149</b>
	Medium	6	7	7	8	3	6	9	3	3	
	Small	9	8	7	7	2	7	12	3	3	
<b>METRO CEBU</b>	Large	5	5	5	3	2	5	3	2	3	<b>83</b>
	Medium	4	0	3	6	2	1	3	1	3	
	Small	7	3	3	2	1	2	3	3	3	
<b>CENTRAL LUZON</b>	Large	1	1	2	1	0	5	1	2	3	<b>74</b>
	Medium	3	5	5	4	2	5	3	3	3	
	Small	7	6	0	1	0	1	4	3	3	
<b>CALABARZON</b>	Large	5	5	5	6	3	7	3	3	1	<b>118</b>
	Medium	5	6	6	6	2	6	5	3	3	
	Small	9	7	3	3	0	5	5	3	3	
		<b>69</b>	<b>64</b>	<b>56</b>	<b>57</b>	<b>20</b>	<b>56</b>	<b>58</b>	<b>41</b>	<b>43</b>	<b>464</b>