

# Peru - Enterprise Survey 2017

**World Bank**

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# Sampling

## Sampling Procedure

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The sample for 2017 Peru ES was selected using stratified random sampling.

Three levels of stratification were used in this country: industry, establishment size, and region.

Industry stratification was designed as follows: the universe was stratified into three manufacturing industries and two services industries- Food and Beverages (ISIC Rev. 3.1 code 15), Textiles and Garments (ISIC codes 17,18), Other Manufacturing (ISIC codes 16, 19-37), Retail (ISIC code 52) and Other Services (ISIC codes 45, 50, 51, 55, 60-64, and 72).

For the Peru 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 was done across five regions: Lima, Arequipa, Chiclayo, Trujillo and Piura.

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.

The sample frame consisted of listings of firms from several sources. For panel firms the list of 1000 firms from the Peru 2010 ES was used, and for fresh firms (i.e., firms not covered in 2010) the lists obtained from Top 10mil 2011, Registro Mype Callao 2010, Registro Mype 2012 and SUNAT (Hacienda) 2011 were used.

## Response Rate

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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.

## Weighting

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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.)

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, 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.

# Questionnaires

## Overview

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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.

The end date of the last complete fiscal year is identified by variables a20y, a20m, and a20d, collecting information on respectively, year, month, and day. For questions pertaining to monetary amounts, the unit is the Peruvian Sol, PEN.

## Data Collection

### Data Collection Dates

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<b>Start</b>	<b>End</b>	<b>Cycle</b>
2017-03	2018-03	N/A

### Data Collection Mode

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Face-to-face [f2f]

#### **DATA COLLECTION NOTES**

Private contractors conduct the Enterprise Surveys on behalf of the World Bank. Due to sensitive survey questions addressing business-government relations and corruption-related topics, private contractors are preferred over any government agency or an organization/institution associated with government, and are hired by the World Bank to collect the data.

The surveys are usually implemented following a two-stage procedure. In the first stage, a screener questionnaire is applied over the phone to determine eligibility and to make appointments; in the second stage, a face-to-face interview takes place with the Manager/Owner/Director of each establishment. Sometimes the survey respondent calls company accountants and human resource managers into the interview to answer questions in the sales and labor sections of the survey.

All Enterprise Surveys are conducted in the local languages.

# Data Processing

## Data Editing

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Data entry and quality controls are implemented by the contractor and data is delivered to the World Bank in batches (typically 10%, 50% and 100%). These data deliveries are checked for logical consistency, out of range values, skip patterns, and duplicate entries. Problems are flagged by the World Bank and corrected by the implementing contractor through data checks, callbacks, and revisiting establishments.

# Data Appraisal

No content available



## Related Materials

### Questionnaires

#### Manufacturing Module Questionnaire

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Title Manufacturing Module Questionnaire  
Language English  
Filename Peru 2017 ES Questionnaire Manufacturing.pdf

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#### Services Module Questionnaire

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Title Services Module Questionnaire  
Language English  
Filename Peru 2017 ES Questionnaire Services.pdf

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### Reports

#### Peru Country Profile 2017

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Title Peru Country Profile 2017  
Language English  
Filename <https://www.enterprisesurveys.org/~media/GIAWB/EnterpriseSurveys/Documents/Profiles/English/Peru-2017.pdf>

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### Technical documents

#### Description of Peru ES 2017 Implementation

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Title Description of Peru ES 2017 Implementation  
Language English  
Filename Peru 2017 ES Implementation Report.pdf

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