

## **The Colombia 2023 World Bank Enterprise Survey Implementation Report**

### **I. Introduction**

This document provides information on the World Bank Enterprise Surveys (WBES) implemented in Colombia between April 2023 and February 2024. The WBES collect both objective data based on firms' day-to-day experiences, and perceptions of enterprises regarding the business environment in which they operate. The WBES currently cover over 180,000 firms in 154 countries with a total of 306 surveys since 2006. The WBES are also used to build a panel of enterprise data that will make it possible to track changes in the business environment over time.<sup>1</sup>

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

### **II. Sampling Structure**

The WBES use stratified random sampling, where the population of establishments is first separated into non-overlapping groups, called strata, and then respondents are selected through simple random sampling from each stratum. The detailed methodology is provided in the Sampling Note.<sup>2</sup> Stratified random sampling has several advantages over simple random sampling. In particular, it:

- produces unbiased estimates of the whole population or universe of inference, as well as at the levels of stratification
- ensures representativeness by including observations in all of those categories
- produces more precise estimates for a given sample size or budget allocation, and
- may reduce implementation costs by splitting the population into convenient subdivisions.

The WBES typically use three levels of stratification: industry classification, establishment size, and subnational region (used in combination). Starting in 2022, the WBES bases the industry classification on ISIC Rev. 4 (with earlier surveys using ISIC Rev. 3.1).<sup>3</sup> For regional coverage within a country, the WBES has national coverage.

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<sup>1</sup> A "panel interview" refers to an interview with a business that was also interviewed in the previous WBES.

<sup>2</sup> The Sampling Note is available at:

[https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Sampling\\_Note-Consolidated-2-16-22.pdf](https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Sampling_Note-Consolidated-2-16-22.pdf). For further methodological background see, Richard L. Scheaffer; Mendenhall, W.; Lyman, R., "Elementary Survey Sampling", Fifth Edition, 1996.

<sup>3</sup> The WBES universe includes: all manufacturing (ISIC 4.0 codes 10-33), services (ISIC 4.0 codes 41-43, 45-47, 49-56, 58, 61, 62, 69-75, 79, 95). Details on sectoral coverage and the WBES universe of inference can be found in the *Enterprise Surveys Manual and Guide* (p. 4).

## II.1 Stratification Categories

The Colombia 2023 WBES uses the following stratification categories:

- **Industry: 7 categories:**
  - Within manufacturing: Food, Garments, and Other Manufacturing
  - Within services: Construction, Retail, Hotels, and Other Services
- **Size: 3 categories:** Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more employees)
- **Region: 5 categories:** Bogota; Amazonia, Orinoquia; Andina; Caribe; and Pacifica

Industry strata for the manufacturing sector were selected by their contribution to total employment and to total number of establishments, using Departamento Administrativo Nacional de Estadística (DANE), the Registro Unico Empresarial (RUES) and Confecámaras as of February 2023. According to information from DANE, by total employment and number of establishments, the manufacturing sectors stratified separately represent 19% and 16% respectively of the whole ES universe.

The strata for the services sector were selected by contribution to total employment and number of establishments, using DANE, RUES and Confecámaras. By total employment and number of establishments, the manufacturing sectors stratified separately represent 81% and 84% respectively of the whole ES universe.

Region strata of the Colombia 2023 WBES were selected based on administrative divisions, with some territories grouped together to achieve minimum required precision of estimates at the level of each stratification region. In particular, the division in natural regions is adopted to take into consideration economic, geographical and cultural differences.

## II.2 Universe

The universe of inference includes all formal (i.e., registered) private sector businesses (with at least 1% private ownership) and with at least five employees. In terms of sectoral criteria, all manufacturing businesses (ISIC Rev 4. codes 10-33) are eligible; for services businesses, those corresponding to the ISIC Rev 4 codes 41-43, 45-47, 49-53, 55-56, 58, 61-62, 69-75, 79, and 95 are included in the Enterprise Surveys. Cooperatives and collectives are excluded from the Enterprise Surveys. All eligible establishments must be registered with the registration agency. In the case of Colombia, the definition of registration with the Dirección de Impuestos y Aduanas Nacionales (DIAN) was used. The universe table is the total number of eligible establishments, and the table is partitioned by the stratification groups (industry classification, establishment size, and subnational region) in a country.

For the Colombia 2023 WBES, the universe table, shown in Table 1 below, was obtained from RUES and Confecámaras.

## II.3 Sampling Frame

The WBES requires the most complete and up-to-date Sampling Frame, the list of eligible establishments with information on industry classification, size, address and other contact information that will be used to randomly select the sample. In countries where a previous round of the WBES exists, the Sampling Frame also includes the Panel Sampling Frame, which provides information about all the establishments that participated in the previous round of the WBES in the country.

The Sampling Frame for the Colombia 2023WBES was constructed from the following sources (see counts of establishments in the frame in Table 1). The Panel Sampling Frame was constructed using information on all the establishments that participated in the Colombia 2017 WBES. The Fresh Sampling Frame, i.e., list of establishments that are in the WBES universe and that have not participated in the Colombia 2017 WBES, for the manufacturing sector (ISIC 4.0 codes 10-33) and services sector (ISIC 4.0 codes 41-43, 45-47, 49-56, 58, 61, 62, 69-75, 79, 95), was obtained mainly from RUES and Confecámaras.

For every WBES, necessary measures are taken to ensure the quality of the frame; however, the sample frames are not immune to 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, eligibility adjustments may be needed when computing the appropriate sampling weights for individual observations (if and only if the weights are computed the sampling frame that is also the universe). Table 3 reports response outcomes.

## II.4 Sample Design

The WBES sample design, i.e., target number of interviews in each combination of stratification categories (cells), is generated using the two primary criteria: 1) minimize the difference from the purely proportional sample within each cell; and 2) achieve a sufficient sample size by stratification category to allow for estimates of a given level of precision.<sup>4</sup> Additional information on the criteria for determining the sample size by stratification category is given in the *Sampling Note*, and additional information on the sample design is given in the *Enterprise Surveys Manual and Guide*.<sup>5</sup> The original survey design for the Colombia 2023 WBES is given in Table 2.

## III. Data Collection

The detailed information on the WBES methodology and data collection is provided in the Enterprise Surveys Manual and Guide. The interviews for the Colombia 2023 WBES were

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<sup>4</sup> Additional constraints are also considered in the design stage. These are generally practical and include, for example, having a sufficient number of available contacts in the sample.

<sup>5</sup> The *Enterprise Surveys Manual and Guide* is available at:

<https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Enterprise-Surveys-Manual-and-Guide.pdf>

conducted between April 2023 and February 2024. The interviews were conducted in Spanish. For monetary variables, the currency was Colombian Pesos (COP).

The Colombia 2023 WBES faced the challenges with participation and call-backs that are standard for all surveys.

### **III.1 Questionnaire**

The standard WBES questionnaire covers several topics regarding the business environment and business performance. These topics include general firm characteristics, infrastructure, sales and supplies, management practices, competition, innovation, capacity, land and permits, finance, business-government relations, exposure to bribery, labor, and performance. Information about the general structure of the questionnaire is available in the *Enterprise Surveys Manual and Guide*.

The questionnaire implemented in the Colombia 2023 WBES included additional questions tailored for the Business Ready Report covering infrastructure, trade, government regulations, finance, labor, and other topics.

### **III.2 Contractor**

The fieldwork for the Colombia 2023 WBES was implemented by Kapa Research and the local sub-contractor Cifras Y Conceptos. The selection for the implementing agency followed the standard World Bank procurement practices that are described in more detail in the *Enterprise Surveys Manual and Guide*.

### **III.3 Sampling and screening**

Samples are drawn by the Enterprise Surveys team in batches, following the stratification and sample design. The contractor conducted a thorough screening process before scheduling the ES interviews. Results of the screening are provided using the eligibility and status codes as listed in Table 3. In cases of unit non-response (either a refusal or an inability to obtain an interview after exhaustive attempts), the contractor proceeded with the contact that appeared next in the list drawn in the respective cell. The process of sampling and screening is described in more detail in the *Enterprise Surveys Manual and Guide*.

### **III.4 Survey response**

In all surveys, including the WBES, some respondents choose not to participate. The Enterprise Analysis team and the contractor take all necessary measures to boost participation, through various methods of recruitment. The proper management of the screening process and sample replacement ensures that the resulting sample remains random.

The main measure of survey participation is the yield, which is the ratio of the total number of achieved interviews to the total number of contacted establishments. There are two main elements that boost yields. First is the survey participation rate, measured as the share of establishments that participated among those that can be assumed to have been eligible. The second element is the quality of frame. If only a small fraction of the contacted establishments is actually eligible to participate in the survey, then the sampling frame is far from ideal. This quality is

measured by the ratio of the total number of establishments that can be assumed to be eligible for the WBES with the total number of contacted establishments in the frame. In other words:

$$Yield = Survey\ response\ rate * Rate\ of\ quality\ of\ the\ frame$$

which can be rewritten as follows:

$$\frac{Total\ interviewed}{Total\ contacted} = \frac{Total\ interviewed}{Assumed\ eligible} * \frac{Assumed\ eligible}{Total\ contacted}$$

Table 4 provides these measures for the Colombia 2023 WBES and across its stratification levels.

### III.5 Achieved Sample

Tables 5 and 6 provide count of the WBES interviews collected for each stratification cell, i.e., broken down by industry, establishment size, and region. Table 5 reports full sample, while Table 6 shows counts of only panel interviews.

### III.6 Sampling Weights

Since the WBES uses stratified random sampling, individual observations should be properly weighted when making inferences about the population, since unweighted estimates are biased unless sample sizes are proportional to the size of each stratum. For each WBES, special care is given to correctly compute sampling weights. Whenever the Universe is used to draw the sample (i.e., Sampling Frame is the same as the Universe) it is imperative to accurately adjust the universe within each stratum to account for the presence of ineligible establishments (e.g., the firm discontinued businesses, or is deemed ineligible due to its business activity or having fewer than five employees). Proper treatment of panel establishments is also crucial. Details about how the WBES sampling weights are calculated are given in the *Sampling Note*.

Three versions of sampling weights are calculated, depending on the assumptions that determine eligibility of establishments to be counted towards the WBES universe. These assumptions are called weak, medium, and strong; and are defined as given in the table below. Prevalence of each of these outcomes for the Colombia 2023 WBES is given in Table 3. All indicators and analysis conducted by the Enterprise Surveys team use the sampling weights based on the median assumption. Tables 7-9 report estimated universe based on the respective assumption.

Assumption	Eligibility codes for inclusion in the WBES universe
Strict	1,2,3,4
Median	1,2,3,4,10,11,13
Weak	1,2,3,4,10,11,13,91,92,93,94,12

For descriptions of each eligibility code, see Table 2.

### III.7 Item response rates

Item response rate must be differentiated from survey response rates. The latter refers to participation in the survey itself (see Section III.4) whereas the former refers to the absence of

responses to specific survey questions.<sup>6</sup> The WBES, as any survey, suffer from item non-response; and different strategies are used by the data collection team to address this. In particular:

- For sensitive questions, such as on corruption or tax evasion, enumerators were instructed to collect the refusal to respond (-8) as a separate response category from don't know (-9).
- Establishments with incomplete information were re-contacted to fill gaps.

Table 10 provides item response rates for several key variables, broken down across the stratification levels.

### III.8 Database Structure

The WBES datafiles are organized in ways that reflect the corresponding questionnaire. The variables that are standard across countries have the first letter in their name correspond to the questionnaire section where the variable belongs in the questionnaire, i.e., *a1* denotes section A. 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.

The WBES datafiles contain two establishment identifiers, *idstd* and *id*. The former is a global unique identifier of each establishment, while the latter is unique identifier within each survey. The variable *idstd* can be used to match the WBES establishment one-to-one across databases. The variables *wweak*, *wmedian*, and *wstrong* corresponding to sampling weights based on, respectively, weak, median, and strong assumptions about eligibility (see Section III.6). The variable *strata* corresponds to the stratum of each observation.<sup>7</sup>

Additionally, the WBES datafiles contain many standard variables. The variable *d1a2\_v4* denotes the main activity of the establishment, as obtained during the WBES interview, coded in the four-digit ISIC Rev. 4. Users should note that this activity may differ from the industry classification given in the Sampling Frame, *a4a*. Users are generally advised to use industry categories based on the realized information in *d1a2\_v4*. Additional sampling information is contained in variables *a2* (region) and *a6a* (size). The variable *panel* identifies panel establishments, i.e., those that participated in the Colombia 2017 WBES. The combination of *a4a*, *a2*, *a6a*, and *panel* forms stratum of each establishment, which is contained in variable *strata*.

The last complete fiscal year for each establishment is contained in variables *a20m* (last month of last complete fiscal year) and *a20y* (last complete fiscal year).

Note that when an entry in the WBES database is empty, this means that the question was not asked to the corresponding respondent. This happens when the question is deemed

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<sup>6</sup> The WBES questionnaire is organized so that there is always some entry in the database when the question was posed. An empty entry means that the question was not asked to the corresponding respondent, typically, due to skip patterns, or lack of applicability of that question in general.

<sup>7</sup> Note that the sampling weights may vary within *strata* for panel establishments due to the procedure used for projecting the universe from the previous round of the survey.

inapplicable, due to skip patterns or other reasons. In cases when the question was posed, some entry is provided, including do not know, which is an example of item non-response.

#### IV. Useful Links

The users of the WBES data may find the following links useful:

- *Sampling Note* is available at:  
[https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Sampling\\_Note-Consolidated-2-16-22.pdf](https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Sampling_Note-Consolidated-2-16-22.pdf)
- The *Enterprise Surveys Manual and Guide* is available at:  
<https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Enterprise-Surveys-Manual-and-Guide.pdf>
- The WBES global questionnaires are available at:  
<https://www.enterprisesurveys.org/en/methodology>
- The projects that are currently being implemented by the Enterprise Surveys team are available at: <https://www.enterprisesurveys.org/en/methodology/current-projects>
- The list of all WBES databases and detailed information about each is available here:  
<https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/DataDetails.xls>
- The description of the WBES indicators is available at:  
<https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/Indicator-Description.pdf>



## Fact Sheet

Source of Universe Table	RUES and Confecámaras
Source of Sampling Frame	RUES and Confecámaras
Stratification sectors	Manufacturing of: Food, Garments, Other manufacturing; Construction, Retail, Hotels, and Other Services
Stratification sizes	Small (5 to 19 employees), Medium (20 to 99 employees), and Large (100 or more employees)
Stratification regions	Bogota; Amazonia, Orinoquia; Andina; Caribe; and Pacifica
Contractor	Kapa Research
Fieldwork dates	April 2023 – February 2024
Interview languages	Spanish
Survey software	Survey Solutions
Currency for nominal variables	Colombian Pesos (COP)
Reference fiscal year	2023 (795 obs.) and 2024 (124 obs.)
Sample Size	Total: 919      Fresh: 626      Panel: 293
Survey response rates	Yield: 17.5% Response rate: 46.0% Frame quality: 38.1%
Item response rates	d2: 98.6% n2a: 98.3% 11: 100.0% all TFP vars.: 52.4%
Additional topics covered in the questionnaire	None
Additional surveys available (if any)	None

## Tables

**Table 1: Colombia 2023 WBES Universe and Sample Frame**

		Food	Garments	Other Manufacturing	Construction	Retail	Hotels	Other Services	Grand Total
<b>Bogota</b>	Small (5-19)	602	157	734	108	3,887	195	4,668	<b>12,995</b>
<b>Bogota</b>	Medium (20-99)	125	63	286	37	469	66	1,108	
<b>Bogota</b>	Large (100 or more)	41	13	112	15	94	16	199	
<b>Amazonia, Orinoquia</b>	Small (5-19)	87	8	66	87	1,074	95	1,207	<b>3,529</b>
<b>Amazonia, Orinoquia</b>	Medium (20-99)	30	0	11	26	204	17	406	
<b>Amazonia, Orinoquia</b>	Large (100 or more)	21	1	5	14	52	1	117	
<b>Andina</b>	Small (5-19)	1,405	1,004	2,645	1,609	9,966	872	11,923	<b>39,578</b>
<b>Andina</b>	Medium (20-99)	470	398	1,114	658	1,675	182	3,355	
<b>Andina</b>	Large (100 or more)	241	77	392	147	471	16	958	
<b>Caribe</b>	Small (5-19)	340	100	607	554	3,871	614	4,886	<b>14,713</b>
<b>Caribe</b>	Medium (20-99)	157	14	240	180	749	216	1,427	
<b>Caribe</b>	Large (100 or more)	52	9	112	61	146	58	320	
<b>Pacifica</b>	Small (5-19)	634	132	884	514	3,955	307	5,010	<b>15,231</b>
<b>Pacifica</b>	Medium (20-99)	210	56	375	199	724	53	1,447	
<b>Pacifica</b>	Large (100 or more)	96	32	151	50	125	6	271	
		<b>4,511</b>	<b>2,064</b>	<b>7,734</b>	<b>4,259</b>	<b>27,462</b>	<b>2,714</b>	<b>37,302</b>	<b>86,046</b>

Source: RUES and Confecámaras.

**Table 2: Original Survey Design (Fresh and Panel Combined)**

		Food	Garments	Other Manufacturing	Construction	Retail	Hotels	Other Services	Grand Total
<b>Bogota</b>	Small (5-19)	9	13	10	7	23	8	25	<b>205</b>
<b>Bogota</b>	Medium (20-99)	5	12	5	5	6	7	13	
<b>Bogota</b>	Large (100-199)	11	10	9	5	9	3	10	
<b>Amazonia, Orinoquia</b>	Small (5-19)	5	2	2	16	13	18	15	<b>120</b>
<b>Amazonia, Orinoquia</b>	Medium (20-99)	4	0	2	5	3	4	5	
<b>Amazonia, Orinoquia</b>	Large (100-199)	4	1	1	3	8	1	8	
<b>Andina</b>	Small (5-19)	17	17	18	20	34	16	45	<b>302</b>
<b>Andina</b>	Medium (20-99)	10	15	14	8	7	8	19	
<b>Andina</b>	Large (100-199)	7	7	13	9	4	5	9	
<b>Caribe</b>	Small (5-19)	8	5	9	7	23	13	25	<b>205</b>
<b>Caribe</b>	Medium (20-99)	6	5	4	9	10	8	17	
<b>Caribe</b>	Large (100-199)	7	4	10	8	4	12	11	
<b>Pacifica</b>	Small (5-19)	8	7	7	7	11	9	15	<b>168</b>
<b>Pacifica</b>	Medium (20-99)	7	9	6	3	5	6	11	
<b>Pacifica</b>	Large (100-199)	12	13	10	8	7	2	5	
		<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>167</b>	<b>120</b>	<b>233</b>	<b>1,000</b>

**Table 3: Response Outcomes**

		Totals	Rates relative to total contacted
Overall	Contacts available in frame	86,046	
	Issued	5,550	
	Contacted	5,242	
Screening phase	Eligibles	1,862	35.5%
	Screener refusals	135	2.6%
	Assumed eligibles	1,997	38.1%
	Ineligible + out of target	100	1.9%
	Unobtainables	3,145	60.0%
Interview phase (only if eligible)	Interview refusals	860	16.4%
	Complete interviews	919	17.5%

**Table 4: Survey Yield Rates**

	Stratification	Yield	Survey response rate	Frame quality
Panel	Fresh	14.7%	42.4%	34.7%
	Panel	29.5%	56.1%	52.6%
Size	Small (5-19)	16.8%	44.9%	37.4%
	Medium (20-99)	18.5%	47.3%	39.1%
	Large (100+)	18.0%	46.8%	38.5%
Region	Bogota	18.8%	48.6%	38.6%
	Amazonia, Orinoquia	18.7%	45.8%	40.8%
	Andina	17.3%	45.5%	38.1%
	Caribe	15.2%	49.4%	30.8%
	Pacifica	18.6%	41.9%	44.3%
Sector	Food	15.1%	44.0%	34.3%
	Garments	19.2%	47.3%	40.6%
	Other Manufacturing	20.8%	46.5%	44.8%
	Construction	19.5%	43.7%	44.7%
	Retail	14.1%	45.3%	31.2%
	Hotels	18.4%	42.9%	42.9%
	Other Services	17.8%	49.9%	35.7%
Overall	Colombia 2023	17.5%	46.0%	38.1%

Notes: the rates are calculated as defined in Section III.4.

**Table 5: Achieved Total Sample (Fresh and Panel Combined)**

		Food	Garments	Other Manufacturing	Construction	Retail	Hotels	Other Services	Grand Total
<b>Bogota</b>	Small (5-19)	4	5	18	5	23	4	23	<b>172</b>
<b>Bogota</b>	Medium (20-99)	3	11	13	4	7	9	11	
<b>Bogota</b>	Large (100 or more)	5	1	9	2	4	2	9	
<b>Amazonia, Orinoquia</b>	Small (5-19)	4	2	1	17	12	21	16	<b>124</b>
<b>Amazonia, Orinoquia</b>	Medium (20-99)	10	0	1	4	2	4	6	
<b>Amazonia, Orinoquia</b>	Large (100 or more)	5	0	0	4	8	0	7	
<b>Andina</b>	Small (5-19)	6	10	22	22	28	14	43	<b>320</b>
<b>Andina</b>	Medium (20-99)	10	22	12	11	5	12	24	
<b>Andina</b>	Large (100 or more)	26	20	8	12	2	3	8	
<b>Caribe</b>	Small (5-19)	4	6	6	3	14	11	23	<b>153</b>
<b>Caribe</b>	Medium (20-99)	3	6	5	6	9	7	12	
<b>Caribe</b>	Large (100 or more)	4	4	6	9	1	9	5	
<b>Pacifica</b>	Small (5-19)	4	5	4	7	16	9	22	<b>150</b>
<b>Pacifica</b>	Medium (20-99)	7	10	7	4	2	5	9	
<b>Pacifica</b>	Large (100 or more)	7	10	9	7	3	1	2	
		<b>102</b>	<b>112</b>	<b>121</b>	<b>117</b>	<b>136</b>	<b>111</b>	<b>220</b>	<b>919</b>

**Table 6: Achieved Panel Sample**

		Food	Garments	Other Manufacturing	Construction	Retail	Hotels	Other Services	Grand Total
<b>Bogota</b>	Small (5-19)	2	3	16	3	15	0	16	<b>113</b>
<b>Bogota</b>	Medium (20-99)	1	6	10	3	5	0	10	
<b>Bogota</b>	Large (100 or more)	4	1	7	1	3	0	7	
<b>Andina</b>	Small (5-19)	4	5	9	0	3	0	7	<b>69</b>
<b>Andina</b>	Medium (20-99)	2	6	6	0	2	0	8	
<b>Andina</b>	Large (100 or more)	2	3	7	1	0	2	2	
<b>Caribe</b>	Small (5-19)	2	0	4	2	8	0	8	<b>66</b>
<b>Caribe</b>	Medium (20-99)	2	4	3	4	7	0	10	
<b>Caribe</b>	Large (100 or more)	3	1	3	2	0	0	3	
<b>Pacifica</b>	Small (5-19)	2	3	2	0	1	0	2	<b>45</b>
<b>Pacifica</b>	Medium (20-99)	5	3	2	0	0	0	5	
<b>Pacifica</b>	Large (100 or more)	5	6	5	1	2	0	1	
		<b>34</b>	<b>41</b>	<b>74</b>	<b>17</b>	<b>46</b>	<b>2</b>	<b>79</b>	<b>293</b>

**Table 7: Weak Universe Estimates**

		Food	Garments	Other Manufacturing	Construction	Retail	Hotels	Other Services	Grand Total
<b>Bogota</b>	Small (5-19)	588	139	672	99	3814	191	4547	<b>12,482</b>
<b>Bogota</b>	Medium (20-99)	99	0	249	33	456	66	1065	
<b>Bogota</b>	Large (100 or more)	22	0	89	13	85	16	185	
<b>Bogota</b>	Medium and Large (20+)	0	54	0	0	0	0	0	
<b>Amazonia, Orinoquia</b>	Small (5-19)	86	0	0	85	1058	94	1185	<b>3,480</b>
<b>Amazonia, Orinoquia</b>	Medium (20-99)	30	0	0	26	203	0	402	
<b>Amazonia, Orinoquia</b>	Large (100 or more)	21	0	0	14	52	0	116	
<b>Amazonia, Orinoquia</b>	Medium and Large (20+)	0	0	0	0	0	18	0	
<b>Amazonia, Orinoquia</b>	All size (5+)	0	9	83	0	0	0	0	
<b>Andina</b>	Small (5-19)	1373	962	2619	1574	9842	866	11724	<b>38,953</b>
<b>Andina</b>	Medium (20-99)	459	368	1105	646	1667	183	3320	
<b>Andina</b>	Large (100 or more)	233	70	378	144	466	14	940	
<b>Caribe</b>	Small (5-19)	323	94	581	534	3765	605	4754	<b>14,218</b>
<b>Caribe</b>	Medium (20-99)	145	10	212	168	724	214	1383	
<b>Caribe</b>	Large (100 or more)	45	7	97	57	142	57	302	
<b>Pacifica</b>	Small (5-19)	615	122	865	497	3869	302	4884	<b>14,792</b>
<b>Pacifica</b>	Medium (20-99)	191	45	363	194	712	53	1414	
<b>Pacifica</b>	Large (100 or more)	80	17	137	47	116	6	262	
		<b>4,310</b>	<b>1,899</b>	<b>7,449</b>	<b>4,128</b>	<b>26,971</b>	<b>2,685</b>	<b>36,483</b>	<b>83,925</b>

**Table 8: Median Universe Estimates**

		Food	Garments	Other Manufacturing	Construction	Retail	Hotels	Other Services	Grand Total
<b>Bogota</b>	Small (5-19)	146	47	241	38	880	71	1256	<b>3,385</b>
<b>Bogota</b>	Medium (20-99)	25	0	91	13	107	25	300	
<b>Bogota</b>	Large (100 or more)	6	0	33	5	20	6	52	
<b>Bogota</b>	Medium and Large (20+)	0	22	0	0	0	0	0	
<b>Amazonia, Orinoquia</b>	Small (5-19)	29	0	0	44	328	47	440	<b>1,277</b>
<b>Amazonia, Orinoquia</b>	Medium (20-99)	10	0	0	13	64	0	152	
<b>Amazonia, Orinoquia</b>	Large (100 or more)	7	0	0	7	16	0	43	
<b>Amazonia, Orinoquia</b>	Medium and Large (20+)	0	0	0	0	0	10	0	
<b>Amazonia, Orinoquia</b>	All size (5+)	0	6	60	0	0	0	0	
<b>Andina</b>	Small (5-19)	397	377	1087	697	2637	373	3761	<b>12,743</b>
<b>Andina</b>	Medium (20-99)	135	147	468	291	455	80	1086	
<b>Andina</b>	Large (100 or more)	68	28	157	64	125	7	302	
<b>Caribe</b>	Small (5-19)	67	27	173	169	723	187	1093	<b>3,301</b>
<b>Caribe</b>	Medium (20-99)	31	6	64	54	142	67	324	
<b>Caribe</b>	Large (100 or more)	9	4	29	18	27	18	70	
<b>Pacifica</b>	Small (5-19)	209	56	423	259	1221	153	1845	<b>5,608</b>
<b>Pacifica</b>	Medium (20-99)	66	22	181	103	229	27	545	
<b>Pacifica</b>	Large (100 or more)	27	10	67	25	37	3	99	
		<b>1,233</b>	<b>752</b>	<b>3,073</b>	<b>1,800</b>	<b>7,012</b>	<b>1,073</b>	<b>11,369</b>	<b>26,312</b>

**Table 9: Strict Universe Estimates**

		Food	Garments	Other Manufacturing	Construction	Retail	Hotels	Other Services	Grand Total
<b>Bogota</b>	Small (5-19)	127	42	211	32	724	58	1,076	<b>2,917</b>
<b>Bogota</b>	Medium (20-99)	23	0	86	12	95	22	277	
<b>Bogota</b>	Large (100 or more)	5	0	30	4	17	5	48	
<b>Bogota</b>	Medium and Large (20+)	0	20	0	0	0	0	0	
<b>Amazonia, Orinoquia</b>	Small (5-19)	25	0	0	38	277	39	386	<b>1,126</b>
<b>Amazonia, Orinoquia</b>	Medium (20-99)	10	0	0	13	58	0	144	
<b>Amazonia, Orinoquia</b>	Large (100 or more)	7	0	0	7	14	0	40	
<b>Amazonia, Orinoquia</b>	Medium and Large (20+)	0	0	0	0	0	9	0	
<b>Amazonia, Orinoquia</b>	All size (5+)	0	5	53	0	0	0	0	
<b>Andina</b>	Small (5-19)	376	362	1,049	653	2,380	333	3,533	<b>12,130</b>
<b>Andina</b>	Medium (20-99)	138	153	487	294	443	77	1,100	
<b>Andina</b>	Large (100 or more)	68	28	162	64	120	7	302	
<b>Caribe</b>	Small (5-19)	58	23	153	146	600	153	944	<b>2,872</b>
<b>Caribe</b>	Medium (20-99)	29	6	61	51	127	60	302	
<b>Caribe</b>	Large (100 or more)	9	4	27	17	24	15	64	
<b>Pacifica</b>	Small (5-19)	193	53	398	236	1,073	133	1,687	<b>5,188</b>
<b>Pacifica</b>	Medium (20-99)	66	22	184	101	217	26	537	
<b>Pacifica</b>	Large (100 or more)	27	10	67	24	34	3	97	
		<b>1,162</b>	<b>729</b>	<b>2,968</b>	<b>1,691</b>	<b>6,205</b>	<b>939</b>	<b>10,539</b>	<b>24,233</b>

**Table 10: Item Response Rates**

	<b>Screener/Interview</b>	<b>d2</b>	<b>l1</b>	<b>n2a</b>	<b>all TFP variables</b>
Panel	Fresh	98.4%	100.0%	98.4%	46.9%
	Panel	99.0%	100.0%	98.0%	57.8%
Size	Small (5-19)	99.3%	100.0%	99.3%	56.7%
	Medium (20-99)	97.5%	100.0%	97.1%	55.6%
	Large (100+)	98.9%	100.0%	97.8%	43.7%
Region	Bogota	98.3%	100.0%	97.7%	58.1%
	Amazonia, Orinoquia	99.2%	100.0%	97.6%	53.3%
	Andina	98.4%	100.0%	98.4%	47.3%
	Caribe	98.7%	100.0%	98.7%	54.3%
	Pacifica	98.7%	100.0%	98.7%	54.2%
Sector	Food	97.4%	100.0%	97.4%	51.9%
	Garments	98.7%	100.0%	96.2%	51.3%
	Other Manufacturing	100.0%	100.0%	97.8%	53.2%
	Construction	98.3%	100.0%	98.3%	na
	Retail	98.2%	100.0%	98.2%	na
	Hotels	98.1%	100.0%	99.1%	na
	Other Services	98.7%	100.0%	99.1%	na
Overall	Colombia 2023	98.6%	100.0%	98.3%	52.4%

Notes: the rates are calculated as follows. The number of responses with informative content in the respective variable (or combination of variables in the case of TFP) is divided by the same number plus the number of responses that are "don't know" (code -9) or refusal (code -8).