

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

### **I. Introduction**

This document provides information on the World Bank Enterprise Surveys (WBES) implemented in Cambodia between April 2023 and October 2023. 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 200,000 firms in 155 countries with a total of 340 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 Cambodia 2023 WBES uses the following stratification categories:

- **Industry: 4 categories:**
  - Within manufacturing: Garments and Other Manufacturing
  - Within services: Retail and Other Services
- **Size: 3 categories:** Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more employees)
- **Region: 4 categories:** Phnom Penh; Plains; Mountains; Tonle Sap;

Industry strata for the manufacturing sector were selected by their contribution to a total number of establishments, using the Cambodia Economic Census 2022 obtained from the Cambodian General Department of National Institute of Statistics. Similarly, strata for the services sector were selected by contribution to the total number of establishments based on the same data.

Region strata of the 2023 Cambodia WBES were selected based on administrative divisions, with some territories grouped to achieve the minimum required precision of estimates at the level of each stratification region. In particular, while Phnom Penh is singled out as a separate stratification region, the rest of the country is grouped into three broader groups for this survey.

## 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 Cambodia, registration was with the Ministry of Commerce's Business Registration Department, and General Department of Taxation. 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 Cambodia 2023 WBES, the universe table, shown in Table 1 below, is based on the Cambodia Economic Census 2022 obtained from the Cambodian General Department of National Institute of Statistics (NIS).

## 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 Cambodia 2023 WBES was constructed from the following sources (see counts of establishments in the frame in Table 2). The Panel Sampling Frame was constructed using information on all the establishments that participated in the Cambodia 2016 WBES. The Fresh Sampling Frame, i.e., list of establishments that are in the WBES universe and that have not participated in the Cambodia 2016 WBES, was obtained from Cambodia Economic Census 2022 obtained from the Cambodian General Department of National Institute of Statistics.

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 4 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 Cambodia 2023 WBES is given in Table 3.

### **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 Cambodia 2023 WBES were conducted between April 2023 and October 2023. The interviews were conducted in Khmer. For monetary variables, the currency was Cambodian Riel.

Apart from the challenges with participation and call-backs that are standard for all surveys, the Cambodia 2023 WBES faced challenges in interviewing some of the larger businesses as most of these businesses were not willing to respond to the survey before the national election concluded, which was in July 2023, delaying the fieldwork.

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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>

### **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 Cambodia 2023 WBES included additional questions tailored for the Business Ready Report covering infrastructure, trade, government regulations, finance, labor, and other topics. Furthermore, the survey also includes Cambodia-specific questions covering issues related to gender, with a focus on areas of sexual harassment and provision for maternity leave by the private sector. The Cambodia specific questions were selected in collaboration with colleagues from other part of World Bank.

### **III.2 Contractor**

The fieldwork for the Cambodia 2023 WBES was implemented by Mekong Economics Ltd as the main contractor with Education Development Institute (EDI) as the local survey implementer. 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 4. 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 5 provides these measures for the Cambodia 2023 WBES and across its stratification levels.

### III.5 Achieved Sample

Tables 6 and 7 provide count of the WBES interviews collected for each stratification cell, i.e., broken down by industry, establishment size, and region. Table 6 reports full sample, while Table 7 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*.

For the Cambodia 2023 WBES, the following strata were combined due to too much variation in weight in the corresponding subset of strata: small, panel firms in Phnom Penh for Other Services were collapsed onto themselves; small, panel firms in Plains for Retail were collapsed onto themselves.

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 Cambodia 2023 WBES is given in Table 4. All indicators and analysis conducted by the Enterprise Surveys team use the sampling weights based on the median assumption. Tables 8-10 report estimated universe based on the respective assumption.

<b>Assumption</b>	<b>Eligibility codes for inclusion in the WBES universe</b>
Strict	1,2,3,4,16
Median	1,2,3,4,16,10,11,13
Weak	1,2,3,4,16,10,11,13,91,92,93,94,12

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For descriptions of each eligibility code, see Table 4.

### 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 11 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. For the Cambodia 2023 WBES, these variables use prefixes CMB. 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 Cambodia 2016 WBES. The combination of *a4a*, *a2*, *a6a*, and *panel* forms stratum of each establishment, which is contained in variable *strata*.

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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.

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 inapplicable, due to skip patterns or other reasons. In cases when the question was posed, some entry is provided, including don't 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	Ministry of Commerce's Business Registration Department, and General Department of Taxation		
Source of Sampling Frame	Anonymized list of eligible establishments based on the Cambodia Economic Census 2022 was shared with DECEA, from which a sample was drawn by DECEA and contact information obtained from the NIS.		
Stratification sectors	Manufacturing of: Garments, Other manufacturing; Retail and Other Services		
Stratification sizes	Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 and more)		
Stratification regions	<ul style="list-style-type: none"> <li>• <b>Phnom Penh</b>, covers the autonomous municipality of Phnom Penh.</li> <li>• <b>Plains</b>, covers the following provinces: <i>Plains, Kampong Cham, Kampong Speu, Kampot, Kandal, Province, Kep, Koh Kong, Preah Sihanouk, Prey Veng, Svay Rieng, Takeo, and Tboung Khmum.</i></li> <li>• <b>Mountains</b>, covers the following provinces: <i>Mountains, Kracheh, Mondul Kiri, Otdar Meanchey, Preah Vihear, Ratanak Kiri, and Stung Treng.</i></li> <li>• <b>Tonle Sap</b>, covers the following provinces: <i>Tonle Sap, Banteay Meanchey, Battambang, Kampong Chhnang, Kampong Thom, Pailin Pursat, and Siem Reap</i></li> </ul>		
Contractor	Mekong Economics LTD, with Education Development Institute as the local sub-contractor.		
Fieldwork dates	April 2023 – October 2023		
Interview languages	Khmer		
Survey software	<a href="#">Survey Solutions</a>		
Currency for nominal variables	Cambodian Riel		
Reference fiscal year	2022 (519 obs.)		
Sample Size	Total: 519	Fresh:399	Panel: 120
Survey response rates	Yield: 30.9% Response rate: 57.3% Frame quality: 53.9%		
Item response rates	d2: 100% n2a: 100% 11: 100% all TFP vars.: 80.5%		
Additional topics covered in the questionnaire	Gender		
Additional surveys available (if any)	Informal Sector Enterprise Survey		

## Tables

**Table 1: Cambodia 2023 WBES Universe**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	11	212	559	1003	<b>1,840</b>
<b>Mountains</b>	Medium (20-99)	0	7	10	36	
<b>Mountains</b>	Large (100 or more)	0	1	0	1	
<b>Plains</b>	Small (5-19)	157	1343	2118	5188	<b>10,287</b>
<b>Plains</b>	Medium (20-99)	133	300	68	347	
<b>Plains</b>	Large (100 or more)	231	366	9	27	
<b>Tonle Sap</b>	Small (5-19)	60	1073	1747	4013	<b>7,330</b>
<b>Tonle Sap</b>	Medium (20-99)	9	84	43	237	
<b>Tonle Sap</b>	Large (100 or more)	19	27	5	13	
<b>Phnom Penh</b>	Small (5-19)	224	1302	3106	7306	<b>13,982</b>
<b>Phnom Penh</b>	Medium (20-99)	120	230	262	856	
<b>Phnom Penh</b>	Large (100 or more)	291	150	18	117	
		<b>1,255</b>	<b>5,095</b>	<b>7,945</b>	<b>19,144</b>	<b>33,439</b>

Source: Based on Cambodia Economic Census 2022, obtained from the Cambodian General Department of National Institute of Statistics (NIS).

**Table 2: Cambodia 2023 WBES Sample Frame (Fresh and Panel Combined)**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	11	212	563	1005	<b>1852</b>
<b>Mountains</b>	Medium (20-99)	0	12	10	37	
<b>Mountains</b>	Large (100 or more)	0	1	0	1	
<b>Plains</b>	Small (5-19)	160	1358	2158	5206	<b>10434</b>
<b>Plains</b>	Medium (20-99)	137	316	77	364	
<b>Plains</b>	Large (100 or more)	240	374	9	35	
<b>Tonle Sap</b>	Small (5-19)	60	1086	1760	4033	<b>7413</b>
<b>Tonle Sap</b>	Medium (20-99)	9	92	52	248	
<b>Tonle Sap</b>	Large (100 or more)	19	29	5	20	
<b>Phnom Penh</b>	Small (5-19)	228	1315	3128	7332	<b>14113</b>
<b>Phnom Penh</b>	Medium (20-99)	122	240	272	870	
<b>Phnom Penh</b>	Large (100 or more)	308	154	22	122	
		<b>1,294</b>	<b>5,189</b>	<b>8,056</b>	<b>19,273</b>	<b>33,812</b>

Source: Based on Cambodia Economic Census 2022, obtained from the Cambodian General Department of National Institute of Statistics (NIS).

**Table 3: Original Survey Design (Fresh and Panel Combined)**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	5	38	13	21	<b>110</b>
<b>Mountains</b>	Medium (20-99)	0	8	5	18	
<b>Mountains</b>	Large (100 or more)	0	1	0	1	
<b>Plains</b>	Small (5-19)	6	15	21	22	<b>177</b>
<b>Plains</b>	Medium (20-99)	15	16	11	17	
<b>Plains</b>	Large (100 or more)	30	11	3	10	
<b>Tonle Sap</b>	Small (5-19)	6	14	14	22	<b>130</b>
<b>Tonle Sap</b>	Medium (20-99)	5	10	11	12	
<b>Tonle Sap</b>	Large (100 or more)	9	15	3	9	
<b>Phnom Penh</b>	Small (5-19)	7	14	22	35	<b>183</b>
<b>Phnom Penh</b>	Medium (20-99)	15	11	11	15	
<b>Phnom Penh</b>	Large (100 or more)	32	7	7	7	
		<b>130</b>	<b>160</b>	<b>121</b>	<b>189</b>	<b>600</b>

**Table 4: Response Outcomes**

		<b>Totals</b>	<b>Rates relative to total contacted</b>
Overall	Contacts available in frame	33,812	
	Issued	1,681	
	Contacted	1,680	
Screening phase	Eligibles	849	50.5%
	Screener refusals	57	3.4%
	Assumed eligibles	906	53.9%
	Ineligible + out of target	455	27.1%
	Unobtainables	319	19.0%
Interview phase (only if eligible)	Interview refusals	385	22.9%
	Complete interviews	519	30.9%

**Table 5: Survey Yield Rates**

	<b>Stratification</b>	<b>Yield</b>	<b>Survey response rate</b>	<b>Frame quality</b>
Panel	Fresh	31.6%	53.7%	58.8%
	Panel	28.4%	77.4%	36.7%
Size	Small (5-19)	28.9%	85.1%	34.0%
	Medium (20-99)	32.6%	52.4%	62.2%
	Large (100+)	32.4%	40.1%	81.0%
Region	Mountains	25.9%	82.5%	31.3%
	Plains	25.4%	43.7%	58.1%
	Tonle Sap	37.1%	61.1%	60.8%
	Phnom Penh	35.8%	56.0%	64.0%
Sector	Garments	31.4%	44.4%	70.5%
	Other Manufacturing	28.1%	56.6%	49.6%
	Retail	32.4%	69.5%	46.5%
	Other Services	33.0%	68.7%	48.0%
Overall	Cambodia 2023	30.9%	57.3%	53.9%

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

**Table 6: Achieved Total Sample (Fresh and Panel Combined)**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	3	39	12	29	<b>104</b>
<b>Mountains</b>	Medium (20-99)	0	8	4	7	
<b>Mountains</b>	Large (100 or more)	0	1	0	1	
<b>Plains</b>	Small (5-19)	3	7	5	12	<b>115</b>
<b>Plains</b>	Medium (20-99)	16	8	6	11	
<b>Plains</b>	Large (100 or more)	22	15	5	5	
<b>Tonle Sap</b>	Small (5-19)	13	10	6	12	<b>127</b>
<b>Tonle Sap</b>	Medium (20-99)	5	16	9	11	
<b>Tonle Sap</b>	Large (100 or more)	14	17	3	11	
<b>Phnom Penh</b>	Small (5-19)	13	11	21	26	<b>173</b>
<b>Phnom Penh</b>	Medium (20-99)	22	13	13	15	
<b>Phnom Penh</b>	Large (100 or more)	21	6	5	7	
		<b>132</b>	<b>151</b>	<b>89</b>	<b>147</b>	<b>519</b>

**Table 7: Achieved Panel Sample**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	0	0	0	0	<b>16</b>
<b>Mountains</b>	Medium (20-99)	0	5	0	0	
<b>Mountains</b>	Medium (20-99)	0	4	2	5	
<b>Plains</b>	Small (5-19)	4	2	3	8	<b>34</b>
<b>Plains</b>	Medium (20-99)	0	1	0	1	
<b>Plains</b>	Large (100 or more)	0	6	3	6	
<b>Tonle Sap</b>	Small (5-19)	0	3	2	5	<b>36</b>
<b>Tonle Sap</b>	Medium (20-99)	0	0	0	3	
<b>Tonle Sap</b>	Large (100 or more)	1	6	8	8	
<b>Phnom Penh</b>	Small (5-19)	0	6	6	2	<b>34</b>
<b>Phnom Penh</b>	Medium (20-99)	2	0	2	2	
<b>Phnom Penh</b>	Large (100 or more)	0	6	6	2	
		<b>7</b>	<b>39</b>	<b>32</b>	<b>42</b>	<b>120</b>

**Table 8: Weak Universe Estimates**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	3	40	130	197	<b>404</b>
<b>Mountains</b>	Medium (20-99)	0	9	6	17	
<b>Mountains</b>	Large (100 or more)	0	1	0	1	
<b>Plains</b>	Small (5-19)	99	554	1067	2214	<b>5643</b>
<b>Plains</b>	Medium (20-99)	204	300	83	359	
<b>Plains</b>	Large (100 or more)	355	368	11	28	
<b>Tonle Sap</b>	Small (5-19)	38	442	879	1710	<b>3540</b>
<b>Tonle Sap</b>	Medium (20-99)	14	84	52	245	
<b>Tonle Sap</b>	Large (100 or more)	29	27	6	14	
<b>Phnom Penh</b>	Small (5-19)	138	526	1531	3051	<b>7558</b>
<b>Phnom Penh</b>	Medium (20-99)	180	225	313	866	
<b>Phnom Penh</b>	Large (100 or more)	438	148	22	119	
		<b>1498</b>	<b>2724</b>	<b>4101</b>	<b>8822</b>	<b>17145</b>

**Table 9: Median Universe Estimates**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	3	39	101	156	<b>324</b>
<b>Mountains</b>	Medium (20-99)	0	8	4	11	
<b>Mountains</b>	Large (100 or more)	0	1	0	1	
<b>Plains</b>	Small (5-19)	84	470	884	1871	<b>4668</b>
<b>Plains</b>	Medium (20-99)	140	207	56	246	
<b>Plains</b>	Large (100 or more)	332	343	10	26	
<b>Tonle Sap</b>	Small (5-19)	29	334	650	1290	<b>2608</b>
<b>Tonle Sap</b>	Medium (20-99)	8	52	32	150	
<b>Tonle Sap</b>	Large (100 or more)	24	23	5	12	
<b>Phnom Penh</b>	Small (5-19)	124	471	1342	2727	<b>6529</b>
<b>Phnom Penh</b>	Medium (20-99)	131	164	223	629	
<b>Phnom Penh</b>	Large (100 or more)	432	145	22	117	
		<b>1308</b>	<b>2256</b>	<b>3327</b>	<b>7237</b>	<b>14129</b>

**Table 10: Strict Universe Estimates**

		Garments	Other Manufacturing	Retail trade	Other Services	Grand Total
<b>Mountains</b>	Small (5-19)	3	39	106	157	<b>330</b>
<b>Mountains</b>	Medium (20-99)	0	8	4	10	
<b>Mountains</b>	Large (100 or more)	0	1	0	1	
<b>Plains</b>	Small (5-19)	86	466	889	1799	<b>4515</b>
<b>Plains</b>	Medium (20-99)	136	193	53	223	
<b>Plains</b>	Large (100 or more)	319	319	9	24	
<b>Tonle Sap</b>	Small (5-19)	27	306	602	1143	<b>2339</b>
<b>Tonle Sap</b>	Medium (20-99)	8	44	27	125	
<b>Tonle Sap</b>	Large (100 or more)	22	19	4	11	
<b>Phnom Penh</b>	Small (5-19)	127	466	1343	2612	<b>6276</b>
<b>Phnom Penh</b>	Medium (20-99)	126	152	210	567	
<b>Phnom Penh</b>	Large (100 or more)	414	135	20	105	
		<b>1267</b>	<b>2148</b>	<b>3268</b>	<b>6777</b>	<b>13460</b>

**Table 11: Item Response Rates**

Screener/Interview		d2	l1	n2a	all TFP variables
Panel	Fresh	100.0%	100.0%	100.0%	84.1%
	Panel	100.0%	100.0%	100.0%	57.1%
Size	Small (5-19)	100.0%	100.0%	100.0%	80.7%
	Medium (20-99)	100.0%	100.0%	100.0%	69.7%
	Large (100+)	100.0%	100.0%	100.0%	88.8%
Region	Mountains	100.0%	100.0%	100.0%	79.5%
	Plains	100.0%	100.0%	100.0%	71.6%
	Tonle Sap	100.0%	100.0%	100.0%	92.1%
	Phnom Penh	100.0%	100.0%	100.0%	78.1%
Sector	Garments	100.0%	100.0%	100.0%	86.5%
	Other Manufacturing	100.0%	100.0%	100.0%	75.0%
	Retail	100.0%	100.0%	100.0%	0.0%
	Other Services	100.0%	100.0%	100.0%	0.0%
Overall	Cambodia 2023	100.0%	100.0%	100.0%	80.5%

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).