

## **The Jordan 2024 World Bank Enterprise Survey Implementation Report**

### **I. Introduction**

This document provides information on the World Bank Enterprise Surveys (WBES) implemented in Jordan between March 2014 and December 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 220,000 firms in 160 countries with a total of 362 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 Jordan 2024 WBES uses the following stratification categories:

- **Industry: 5 categories:**
  - Within manufacturing: Food, Other manufacturing
  - Within services: Retail, Professional Activities, and Other Services
- **Size: 3 categories:** Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more employees)
- **Region: 5 categories:** Amman; Zarqa; Irbid; North and Central; South

Industry strata for the manufacturing sector were selected by their contribution to total number of establishments, using the sampling frame constructed from the listings of the Ministry of Planning, the Chambers of Industry and the Chambers of Commerce supplemented by the Ministry of Industry, Trade and Supply online tool. The manufacturing sectors stratified separately represent 29% of total number of establishments in the manufacturing sector, with the rest of sectors grouped into a residual, "Other Manufacturing", stratum. By number of establishments, the manufacturing sectors stratified separately represent 5% of the whole ES universe.

The strata for the services sector were selected by contribution to total number of establishments. The sectors stratified separately represent 49% of the total number of establishments in the services sector, and 40% of the whole ES universe.

Region strata of the Jordan 2024 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 Aqaba, Karaq, Maan and Tafilah are grouped as South region; Ajloun, Balqa, Jerash, Madaba and Mafraq are grouped as North and Central region. Amman, Zarqa and Idlib are treated as separate strata.

## 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 Ministry of Industry, Trade and Supply. 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 Jordan 2024 WBES, the universe table, shown in Table 1 below, was obtained by compiling the listing from the Ministry of Planning, the Chambers of Industry and the Chambers of Commerce. This listing lacks the size and the contact information for some establishments. In order to obtain the contact information, the online tool of the Ministry of Industry, Trade and

Supply is utilized.<sup>4</sup> There were extensive efforts to find the establishment size information as the listing from these sources for the establishments without the number of employees. Hence, the establishments with missing size information was called to recover the number of employees. The sector activity is also confirmed during phone calls. For establishments whose phone number is not available from neither of above sources, the local vendor search these establishments online or contact local sources who can help in attaining this information the neighboring. If none of these efforts are conclusive, the local vendor visited the premises to recover the size information and confirm the sector of main activity.

### **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 Jordan 2024 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 Jordan 2019 WBES. The Fresh Sampling Frame, i.e., list of establishments that are in the WBES universe and that have not participated in the Jordan 2019 WBES, is constructed from listings of the Ministry of Planning, the Chambers of Industry and the Chambers of Commerce as mentioned above.

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>5</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*

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<sup>4</sup> Link to website: <https://portal.ccd.gov.jo/search/bylink11.aspx>

<sup>5</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.

*Surveys Manual and Guide*.<sup>6</sup> The original survey design for the Jordan 2024 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 Jordan 2024 WBES were conducted between March 2024 and December 2024. The interviews were conducted in Arabic. For monetary variables, the currency was Jordanian Dinar.

#### **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, trade, 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*.

#### **III.2 Contractor**

The fieldwork for the Jordan 2024 WBES was implemented by Gallup International and IMR Infographic Market Research. 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,

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<sup>6</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>

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 Jordan 2024 WBES and across its stratification levels.

### III.5 Achieved Sample

Tables 6 and 7 provide counts 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*.

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 Jordan 2024 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>
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Strict	1,2,3,4
Median	1,2,3,4,10,11,13,133
Weak	1,2,3,4,10,11,13,133,91,92,93,94,12

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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>7</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. 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>8</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

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<sup>7</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>8</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.

establishments, i.e., those that participated in the Jordan 2019 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 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	The Ministry of Planning, the Chambers of Industry and the Chambers of Commerce (complemented by the Ministry of Industry, Trade and Supply), February 2024.
Source of Sampling Frame	The Ministry of Planning, the Chambers of Industry and the Chambers of Commerce (complemented by the Ministry of Industry, Trade and Supply), February 2024.
Levels of Universe Table and Sampling Frame	Universe Table: Establishment-level Sampling Frame: Establishment-level
Registration agency	The Ministry of Industry, Trade and Supply
Stratification sectors	Manufacturing of: Food, Other manufacturing; Retail, Professional Activities, and Other Services
Stratification sizes	Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more employees)
Stratification regions	Amman; Zarqa; Irbid; South; North and Central
Contractor	Gallup International and IMR Infographic Market Research
Fieldwork dates	March 2024 – December 2024
Interview languages	Arabic
Survey software	Survey Solutions
Currency for nominal variables	Jordanian Dinar
Reference fiscal year	2023 (592 obs.)
VAT Applicable	YES
Additional definitions	“Consumption Tax” was referred to as ضريبة المبيعات. “Occupancy Permit” was referred to as “إذن الأشغال”. For the capital city (a3b), Amman was entered; for the main business city (a3c), Amman was entered.
Sample Size	Total: 592      Fresh: 522      Panel: 70
Survey response rates	Yield: 11.1% Response rate: 34.6% Frame quality: 32%
Item response rates	d2: 98.1%; n2a: 98.8%; 11: 100%; all TFP vars.: 92.4%
Additional topics covered in the questionnaire	N/A
Additional surveys available (if any)	N/A

## Tables

**Table 1: Jordan 2024 WBES Universe**

		Food	Other Manufact uring	Retail	Professional activities	Other Services	Grand Total
<b>Amman</b>	Small (5-19)	386	1046	1120	2452	3134	<b>11,585</b>
<b>Amman</b>	Medium (20-99)	192	433	286	347	678	
<b>Amman</b>	Large (100-199)	73	147	64	117	226	
<b>Amman</b>	Unknown	6	23	261	178	416	
<b>Zarqa</b>	Small (5-19)	63	119	56	113	248	<b>1,151</b>
<b>Zarqa</b>	Medium (20-99)	28	59	13	14	74	
<b>Zarqa</b>	Large (100-199)	20	24	11	15	42	
<b>Zarqa</b>	Unknown	17	54	18	38	125	
<b>Irbid</b>	Small (5-19)	48	63	60	251	289	<b>1,068</b>
<b>Irbid</b>	Medium (20-99)	16	27	21	43	84	
<b>Irbid</b>	Large (100-199)	1	14	6	29	50	
<b>Irbid</b>	Unknown	0	1	11	26	28	
<b>South</b>	Small (5-19)	1	24	51	286	520	<b>1,634</b>
<b>South</b>	Medium (20-99)	3	12	20	86	125	
<b>South</b>	Large (100-199)	0	4	11	81	107	
<b>South</b>	Unknown	0	0	27	189	87	
<b>North and Central</b>	Small (5-19)	5	43	51	221	439	<b>1,341</b>
<b>North and Central</b>	Medium (20-99)	3	24	14	46	113	
<b>North and Central</b>	Large (100-199)	0	2	8	29	62	
<b>North and Central</b>	Unknown	0	0	33	108	140	
		<b>862</b>	<b>2,119</b>	<b>2,142</b>	<b>4,669</b>	<b>6,987</b>	<b>16,779</b>

Source: The Ministry of Planning, the Chambers of Industry, the Chambers of Industry and the Chambers of Commerce (complemented by the Ministry of Industry, Trade and Supply), February 2024 (Establishment-level)

**Table 2: Jordan 2024 WBES Sample Frame (Fresh and Panel Combined)**

		Food	Other Manufactu ring	Retail	Professional activities	Other Services	Grand Total
<b>Amman</b>	Small (5-19)	396	1084	1150	2452	3173	<b>11815</b>
	Medium (20-99)	206	464	296	347	693	
<b>Amman</b>	Large (100 or more)	79	167	70	117	237	
<b>Amman</b>	Unknown	6	23	261	178	416	
<b>Zarqa</b>	Small (5-19)	69	132	64	113	281	<b>1253</b>
	Medium (20-99)	34	79	14	14	80	
<b>Zarqa</b>	Large (100 or more)	20	32	12	15	42	
<b>Zarqa</b>	Unknown	17	54	18	38	125	
<b>Irbid</b>	Small (5-19)	64	85	71	251	295	<b>1176</b>
	Medium (20-99)	27	52	22	43	91	
<b>Irbid</b>	Large (100 or more)	1	22	6	29	51	
<b>Irbid</b>	Unknown	0	1	11	26	28	
<b>South</b>	Small (5-19)	8	36	66	286	563	<b>1749</b>
	Medium (20-99)	3	14	20	86	157	
<b>South</b>	Large (100 or more)	0	6	12	81	108	
<b>South</b>	Unknown	0	0	27	189	87	
<b>North and Central</b>	Small (5-19)	6	47	52	221	465	<b>1386</b>
	Medium (20-99)	5	25	15	46	116	
<b>North and Central</b>	Large (100 or more)	1	5	9	29	63	
<b>North and Central</b>	Unknown	0	0	33	108	140	
		<b>942</b>	<b>2,328</b>	<b>2,229</b>	<b>4,669</b>	<b>7,211</b>	<b>17,379</b>

Source: The Ministry of Planning, the Chambers of Industry, the Chambers of Industry and the Chambers of Commerce (complemented by the Ministry of Industry, Trade and Supply), February 2024 (Establishment-level)

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

		Food	Other Manufactu ring	Retail	Professio nal activities	Other Services	Grand Total
<b>Amman</b>	Small (5-19)	12	4	19	4	20	<b>120</b>
	Medium (20-99)	11	4	4	2	4	
<b>Amman</b>	Large (100 or more)	8	4	8	2	4	

<b>Amman</b>	Unknown	2	2	2	2	2	
<b>Zarqa</b>	Small (5-19)	18	13	10	3	4	<b>120</b>
<b>Zarqa</b>	Medium (20-99)	12	15	3	3	4	
<b>Zarqa</b>	Large (100 or more)	4	10	4	3	2	
<b>Zarqa</b>	Unknown	4	2	2	2	2	
<b>Irbid</b>	Small (5-19)	18	10	13	7	4	<b>120</b>
<b>Irbid</b>	Medium (20-99)	15	13	3	4	4	
<b>Irbid</b>	Large (100 or more)	1	10	2	6	3	
<b>Irbid</b>	Unknown	0	1	2	2	2	
<b>South</b>	Small (5-19)	8	12	17	10	16	<b>120</b>
<b>South</b>	Medium (20-99)	1	4	4	8	7	
<b>South</b>	Large (100 or more)	0	3	4	17	3	
<b>South</b>	Unknown	0	0	2	2	2	
<b>North and Central</b>	Small (5-19)	2	6	10	18	22	<b>120</b>
<b>North and Central</b>	Medium (20-99)	3	3	4	10	5	
<b>North and Central</b>	Large (100 or more)	1	4	3	6	8	
<b>North and Central</b>	Unknown	0	0	4	9	2	
		<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>600</b>

**Table 4: Response Outcomes**

		<b>Totals</b>	<b>Rates relative to total contacted</b>
Overall	Contacts available in frame	17,379	
	Issued	5,842	
	Contacted	5,480	
Screening phase	Eligibles	1,617	29.5%
	Screener refusals	134	2.4%
	Assumed eligibles	1,751	32.0%
	Ineligible + out of target	962	17.6%
	Unobtainables	2,767	50.5%

Interview phase (only if eligible)	Interview refusals	1,011	18.4%
	Complete interviews	606	11.1%

**Table 5: Survey Yield Rates**

	Stratification	Yield	Survey response rate	Frame quality
Panel	Fresh	10.9%	34.2%	32.0%
	Panel	12.1%	38.0%	31.7%
Size	Small (5-19)	11.1%	33.1%	33.5%
	Medium (20-99)	16.0%	41.6%	38.4%
	Large (100+)	10.0%	32.3%	31.1%
	Unknown	5.7%	27.7%	20.4%
	Region	Amman	10.8%	30.4%
	Zarqa	11.5%	37.2%	31.0%
	Irbid	11.1%	40.5%	27.5%
	South	10.0%	33.9%	29.6%
	North and Central	12.6%	39.6%	31.7%
Sector	Food	17.8%	47.3%	37.7%
	Other Manufacturing	13.6%	41.3%	32.9%
	Retail	8.3%	25.2%	32.9%
	Professional activities	8.9%	30.6%	29.2%
	Other Services	11.2%	36.3%	30.8%
Overall	Jordan 2024	11.1%	34.6%	32.0%

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

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

		Food	Other Manufacturing	Retail	Professional activities	Other Services	Grand Total
<b>Amman</b>	Small (5-19)	21	10	38	8	16	<b>207</b>
<b>Amman</b>	Medium (20-99)	40	7	18	3	3	
<b>Amman</b>	Large (100 or more)	13	7	4	3	3	
<b>Amman</b>	Unknown	0	0	7	3	3	
<b>Zarqa</b>	Small (5-19)	10	23	2	3	8	<b>116</b>
<b>Zarqa</b>	Medium (20-99)	5	15	2	3	13	
<b>Zarqa</b>	Large (100 or more)	3	3	0	1	11	
<b>Zarqa</b>	Unknown	0	5	1	5	3	

<b>Irbid</b>	Small (5-19)	10	8	9	8	3	<b>70</b>
<b>Irbid</b>	Medium (20-99)	4	5	3	2	3	
<b>Irbid</b>	Large (100 or more)	0	4	0	2	7	
<b>Irbid</b>	Unknown	0	0	0	1	1	
<b>South</b>	Small (5-19)	2	6	5	23	12	<b>114</b>
<b>South</b>	Medium (20-99)	1	1	1	13	14	
<b>South</b>	Large (100 or more)	0	1	1	9	11	
<b>South</b>	Unknown	0	0	0	10	4	
<b>North and Central</b>	Small (5-19)	0	8	5	17	18	<b>99</b>
<b>North and Central</b>	Medium (20-99)	3	5	4	10	11	
<b>North and Central</b>	Large (100 or more)	0	1	0	1	6	
<b>North and Central</b>	Unknown	0	0	2	5	3	
		<b>112</b>	<b>109</b>	<b>102</b>	<b>130</b>	<b>153</b>	<b>606</b>

**Table 7: Achieved Panel Sample**

		<b>Food</b>	<b>Other Manufacturing</b>	<b>Retail</b>	<b>Professional activities</b>	<b>Other Services</b>	<b>Grand Total</b>
<b>Amman</b>	Small (5-19)	6	5	5	0	5	<b>33</b>
<b>Amman</b>	Medium (20-99)	6	3	1	0	1	
<b>Amman</b>	Large (100 or more)	0	0	0	0	1	
<b>Zarqa</b>	Small (5-19)	0	2	0	0	1	<b>8</b>
<b>Zarqa</b>	Medium (20-99)	1	4	0	0	0	
<b>Irbid</b>	Small (5-19)	3	3	0	0	0	<b>15</b>
<b>Irbid</b>	Medium (20-99)	2	3	0	0	2	
<b>Irbid</b>	Large (100 or more)	0	2	0	0	0	
<b>South</b>	Small (5-19)	1	1	1	0	0	<b>9</b>
<b>South</b>	Medium (20-99)	0	0	0	0	5	
<b>South</b>	Large (100 or more)	0	0	1	0	0	

<b>North and Central</b>	Small (5-19)	0	1	0	0	2	<b>6</b>
<b>North and Central</b>	Medium (20-99)	2	0	0	0	0	
<b>North and Central</b>	Large (100 or more)	0	1	0	0	0	
		<b>21</b>	<b>25</b>	<b>8</b>	<b>-</b>	<b>17</b>	<b>71</b>

**Table 8: Weak Universe Estimates**

		<b>Food</b>	<b>Other Manufacturing</b>	<b>Retail</b>	<b>Professional activities</b>	<b>Other Services</b>	<b>Grand Total</b>
							<b>1002</b>
<b>Amman</b>	Small (5-19)	0	0	1003	1956	2792	<b>6</b>
<b>Amman</b>	Medium (20-99)	185	404	270	292	636	
<b>Amman</b>	Large (100 or more)	61	119	52	85	184	
<b>Amman</b>	Small and Unknown	0	0	236	144	375	
<b>Amman</b>	Small (5-19)	337	895	0	0	0	
<b>Zarqa</b>	Medium (20-99)	0	105	50	90	220	<b>1003</b>
<b>Zarqa</b>	Large (100 or more)	27	55	0	12	69	
<b>Zarqa</b>	Small and Unknown	17	19	0	11	34	
<b>Zarqa</b>	Medium and Large (20+)	0	48	16	31	112	
<b>Zarqa</b>	Small (5-19)	69	0	0	0	0	
<b>Zarqa</b>	Medium (20-99)	0	0	20	0	0	
<b>Irbid</b>	Large (100 or more)	41	0	0	189	243	<b>860</b>
<b>Irbid</b>	Small and Unknown	0	24	0	34	74	
<b>Irbid</b>	Medium and Large (20+)	0	11	0	20	38	
<b>Irbid</b>	Small (5-19)	0	0	0	20	24	
<b>Irbid</b>	Medium (20-99)	0	51	57	0	0	
<b>Irbid</b>	Large (100 or more)	13	0	21	0	0	
<b>South</b>	Small and Unknown	6	20	0	215	436	<b>1313</b>
<b>South</b>	Small (5-19)	3	11	0	68	110	
<b>South</b>	Medium (20-99)	0	3	0	56	82	
<b>South</b>	Large (100 or more)	0	0	0	144	74	
<b>South</b>	Small and Unknown	0	0	62	0	0	
<b>South</b>	Medium and Large (20+)	0	0	24	0	0	
<b>North and Central</b>	Small (5-19)	0	31	38	145	322	<b>956</b>
<b>North and Central</b>	Medium (20-99)	0	0	0	32	87	
<b>North and Central</b>	Large (100 or more)	0	0	0	17	42	
<b>North and Central</b>	Unknown	0	0	25	72	104	
<b>North and Central</b>	Medium and Large (20+)	0	18	15	0	0	

North and Central	Small, Medium and Large (5+)	8	0	0	0	0
		<b>758</b>	<b>1795</b>	<b>1848</b>	<b>3510</b>	<b>5826 14157</b>

**Table 9: Median Universe Estimates**

		Food	Other Manufacturing	Retail	Professional activities	Other Services	Grand Total
Amman	Small (5-19)	0	0	415	810	1117	<b>4097</b>
Amman	Medium (20-99)	92	187	120	130	273	
Amman	Large (100 or more)	27	50	21	35	72	
Amman	Small and Unknown	0	0	59	36	91	
Amman	Small (5-19)	162	402	0	0	0	
Zarqa	Medium (20-99)	0	43	19	35	83	<b>370</b>
Zarqa	Large (100 or more)	12	24	0	5	28	
Zarqa	Small and Unknown	7	8	0	4	13	
Zarqa	Medium and Large (20+)	0	12	4	7	26	
Zarqa	Small (5-19)	31	0	0	0	0	
Zarqa	Medium (20-99)	0	0	9	0	0	
Irbid	Large (100 or more)	17	0	0	71	88	<b>321</b>
Irbid	Small and Unknown	0	10	0	14	29	
Irbid	Medium and Large (20+)	0	5	0	7	14	
Irbid	Small (5-19)	0	0	0	4	5	
Irbid	Medium (20-99)	0	20	22	0	0	
Irbid	Large (100 or more)	7	0	9	0	0	
South	Small and Unknown	3	8	0	84	165	<b>479</b>
South	Small (5-19)	1	5	0	29	45	
South	Medium (20-99)	0	1	0	21	30	
South	Large (100 or more)	0	0	0	34	17	
South	Small and Unknown	0	0	25	0	0	
South	Medium and Large (20+)	0	0	11	0	0	
North and Central	Small (5-19)	0	15	18	69	147	<b>412</b>
North and Central	Medium (20-99)	0	0	0	16	43	
North and Central	Large (100 or more)	0	0	0	8	19	
North and Central	Unknown	0	0	7	20	29	
North and Central	Medium and Large (20+)	0	10	8	0	0	
North and Central	Small, Medium and Large (5+)	3	0	0	0	0	
		<b>358</b>	<b>791</b>	<b>732</b>	<b>1394</b>	<b>2240</b>	<b>5679</b>

**Table 10: Strict Universe Estimates**

		Food	Other Manufacturing	Retail	Professional activities	Other Services	Grand Total
<b>Amman</b>	Small (5-19)	0	0	361	722	1017	<b>3716</b>
<b>Amman</b>	Medium (20-99)	87	178	106	118	254	
<b>Amman</b>	Large (100 or more)	26	48	19	31	67	
<b>Amman</b>	Small and Unknown	0	0	48	30	77	
<b>Amman</b>	Small (5-19)	151	377	0	0	0	
<b>Zarqa</b>	Medium (20-99)	0	42	18	33	79	<b>353</b>
<b>Zarqa</b>	Large (100 or more)	12	24	0	5	27	
<b>Zarqa</b>	Small and Unknown	7	8	0	4	12	
<b>Zarqa</b>	Medium and Large (20+)	0	11	3	6	23	
<b>Zarqa</b>	Small (5-19)	30	0	0	0	0	
<b>Zarqa</b>	Medium (20-99)	0	0	8	0	0	
<b>Irbid</b>	Large (100 or more)	17	0	0	66	84	<b>306</b>
<b>Irbid</b>	Small and Unknown	0	10	0	13	28	
<b>Irbid</b>	Medium and Large (20+)	0	4	0	7	13	
<b>Irbid</b>	Small (5-19)	0	0	0	4	5	
<b>Irbid</b>	Medium (20-99)	0	20	20	0	0	
<b>Irbid</b>	Large (100 or more)	6	0	8	0	0	
<b>South</b>	Small and Unknown	3	8	0	78	157	<b>450</b>
<b>South</b>	Small (5-19)	1	5	0	27	43	
<b>South</b>	Medium (20-99)	0	1	0	20	29	
<b>South</b>	Large (100 or more)	0	0	0	30	15	
<b>South</b>	Small and Unknown	0	0	23	0	0	
<b>South</b>	Medium and Large (20+)	0	0	10	0	0	
<b>North and Central</b>	Small (5-19)	0	15	16	63	138	<b>382</b>
<b>North and Central</b>	Medium (20-99)	0	0	0	15	41	
<b>North and Central</b>	Large (100 or more)	0	0	0	8	18	
<b>North and Central</b>	Unknown	0	0	6	18	25	
<b>North and Central</b>	Medium and Large (20+)	0	10	7	0	0	
<b>North and Central</b>	Small, Medium and Large (5+)	3	0	0	0	0	
		<b>339</b>	<b>750</b>	<b>640</b>	<b>1257</b>	<b>2070</b>	<b>5207</b>

**Table 11: Item Response Rates**

	Screener/Interview	d2	l1	n2a	all TFP variables
Panel	Fresh	98.9%	100.0%	98.9%	92.5%
	Panel	92.9%	100.0%	98.6%	91.8%
Size	Small (5-19)	98.2%	100.0%	99.3%	92.4%

	Medium (20-99)	98.0%	100.0%	98.8%	94.7%
	Large (100+)	98.6%	100.0%	97.3%	86.5%
Region	Amman	97.9%	100.0%	99.6%	95.6%
	Zarqa	98.9%	100.0%	100.0%	98.2%
	Irbid, North and Central	97.6%	100.0%	97.6%	87.7%
	South	99.1%	100.0%	98.1%	80.0%
Sector	Food	97.5%	100.0%	98.3%	91.7%
	Other Manufacturing	99.4%	100.0%	98.7%	92.9%
	Retail	97.9%	100.0%	100.0%	#N/A
	Professional activities	#N/A	#N/A	#N/A	#N/A
	Other Services	97.7%	100.0%	98.6%	#N/A
<b>Overall</b>	<b>Jordan 2024</b>	<b>98.1%</b>	<b>100.0%</b>	<b>98.8%</b>	<b>92.4%</b>

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).