

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

### **I. Introduction**

This document provides information on the World Bank Enterprise Surveys (WBES) implemented in Kazakhstan between January 2024 and October 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 232,000 firms in 162 economies with a total of 385 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 Kazakhstan 2024 WBES uses the following stratification categories:

- **Industry: 7 categories:**
  - Within manufacturing: Food, Garments, Non-Metallic Mineral Products, Other manufacturing
  - Within services: Construction, Retail, Other Services
- **Size: 3 categories:** Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more employees)
- **Region: 7 categories:** Almaty City; Astana City; Center comprising Karaganda and Ulytau; East comprising Abay and East-Kazakhstan; North comprising Akmolinsk, Kostanay, Pavlodar and North-Kazakhstan; South comprising Alma-Ata's, Jambyl, Zhetisu, Kyzylorda, Turkestan and Shymkent City; West comprising Aktobe, Atyrau, West-Kazakhstan and Mangistau.

Industry strata for the manufacturing sector were selected by their contribution to employment and to total number of establishments, using UNIDO INSTAT 4, available as of 2023. The manufacturing sectors stratified separately represent 33% and 34% of employment and number of establishments in the manufacturing sector, respectively, with the rest of sectors grouped into a residual, "Other Manufacturing", stratum.

The strata for the services sector were selected by contribution to total number of establishments. The sectors stratified separately represent 36% of the total number of establishments in the services sector, and 33% of the whole ES universe.

Region strata of the Kazakhstan 2024 WBES were selected based on administrative divisions, with some divisions grouped together to achieve minimum required precision of estimates at the level of each stratification region.

## 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, Kazakhstan state register of legal entities. 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 Kazakhstan 2024 WBES, the universe table, shown in Table 1 below, was obtained from Bureau of National Statistics.

## 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 Kazakhstan 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 Kazakhstan 2019 WBES. The Fresh Sampling Frame, i.e., list of establishments that are in the WBES universe and that have not participated in the Kazakhstan 2019 WBES, was obtained from Bureau of National 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 Kazakhstan 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 Kazakhstan 2024 WBES were conducted between January 2024 and October 2024. The interviews were conducted in the

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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>

following languages: Kazakh and Russian. For monetary variables, the currency was Kazakhstani tenge.

### **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 Kazakhstan 2024 WBES was implemented by ACT LTD. 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:

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

Table 5 provides these measures for the Kazakhstan 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 Kazakhstan 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>
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

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:

<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.

- 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 Kazakhstan-specific options used in variable *b1* are stored in variable named *b1\_KAZ*.

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 Kazakhstan 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.

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<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.

#### 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	Bureau of National Statistics, as of November, 2023
Source of Sampling Frame	Bureau of National Statistics, as of November, 2023, and 2019 World Bank Enterprise Survey
Levels of Universe Table and Sampling Frame	Universe Table: Establishment Level Sampling Frame: Establishment Level
Registration agency	Kazakhstan state register of legal entities
Stratification sectors	Manufacturing of: Food, Garments, Non-Metallic Mineral Products, Other manufacturing; Construction, Retail, and Other Services
Stratification sizes	Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more)
Stratification regions	Almaty City; Astana City; Center comprising Karaganda and Ulytau; East comprising Abay and East-Kazakhstan; North comprising Akmolinsk, Kostanay, Pavlodar and North-Kazakhstan; South comprising Alma-Ata's, Jambyl, Zhetisu, Kyzylorda, Turkestan and Shymkent City; West comprising Aktobe, Atyrau, West-Kazakhstan and Mangistau.
Contractor	ACT LTD
Fieldwork dates	January 2024 – October 2024
Interview languages	Kazakh and Russian
Survey software	Survey Solutions
Currency for nominal variables	Kazakhstani tenge
Reference fiscal year	2023 (1,013 obs.)
VAT Applicable	YES
Additional definitions	“Consumption Tax” was referred to as VAT. “Occupancy Permit” was referred to as “разрешение на ввод в эксплуатацию”. For the capital city (a3b), Astana was entered; for the main business city (a3c), Almaty was entered.
Sample Size	Total: 1,013      Fresh: 629      Panel: 384
Survey response rates	Yield: 34% Response rate: 65% Frame quality: 53%
Item response rates	d2: 100% n2a: 100% 11: 100% all TFP vars.: 92.8%



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Additional topics covered in the questionnaire	None
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Additional surveys available (if any)	None
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## Tables

**Table 1: Kazakhstan 2024 WBES Universe**

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	847	327	579	4376	13085	12879	64980	<b>103,068</b>
<b>Almaty</b>	Medium (20-99)	98	35	72	442	502	862	3118	
<b>Almaty</b>	Large (100 or more)	33	3	18	97	139	100	476	
<b>Astana</b>	Small (5-19)	406	166	543	2538	8384	18021	38102	<b>71,302</b>
<b>Astana</b>	Medium (20-99)	30	7	72	163	244	1019	1300	
<b>Astana</b>	Large (100 or more)	7	0	8	32	49	51	160	
<b>Center</b>	Small (5-19)	253	95	238	1390	1803	4395	12623	<b>21,948</b>
<b>Center</b>	Medium (20-99)	40	7	25	173	67	229	377	
<b>Center</b>	Large (100 or more)	13	2	8	57	26	48	79	
<b>East</b>	Small (5-19)	223	51	140	824	1629	2748	7262	<b>13,925</b>
<b>East</b>	Medium (20-99)	49	6	22	105	79	235	341	
<b>East</b>	Large (100 or more)	24	2	10	49	17	38	71	
<b>North</b>	Small (5-19)	697	87	360	1905	3532	6432	19634	<b>34,755</b>
<b>North</b>	Medium (20-99)	135	15	63	215	166	298	804	
<b>North</b>	Large (100 or more)	51	1	24	100	58	48	130	
<b>South</b>	Small (5-19)	940	209	910	2998	6188	13439	27026	<b>54,621</b>
<b>South</b>	Medium (20-99)	136	31	124	308	209	621	909	
<b>South</b>	Large (100 or more)	42	12	40	126	58	131	164	
<b>West</b>	Small (5-19)	299	73	402	1924	4180	10065	22362	<b>41,730</b>
<b>West</b>	Medium (20-99)	53	14	69	174	159	534	915	
<b>West</b>	Large (100 or more)	23	1	25	73	53	136	196	
		<b>4,399</b>	<b>1,144</b>	<b>3,752</b>	<b>18,069</b>	<b>40,627</b>	<b>72,329</b>	<b>201,029</b>	<b>341,349</b>

Source: Bureau of National Statistics

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

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	847	327	579	4376	13085	12879	64980	<b>103,068</b>
<b>Almaty</b>	Medium (20-99)	98	35	72	442	502	862	3118	
<b>Almaty</b>	Large (100 or more)	33	3	18	97	139	100	476	
<b>Astana</b>	Small (5-19)	406	166	543	2538	8384	18021	38102	<b>71,302</b>
<b>Astana</b>	Medium (20-99)	30	7	72	163	244	1019	1300	
<b>Astana</b>	Large (100 or more)	7	0	8	32	49	51	160	
<b>Center</b>	Small (5-19)	253	95	238	1390	1803	4395	12623	<b>21,948</b>
<b>Center</b>	Medium (20-99)	40	7	25	173	67	229	377	
<b>Center</b>	Large (100 or more)	13	2	8	57	26	48	79	
<b>East</b>	Small (5-19)	223	51	140	824	1629	2748	7262	<b>13,925</b>
<b>East</b>	Medium (20-99)	49	6	22	105	79	235	341	
<b>East</b>	Large (100 or more)	24	2	10	49	17	38	71	
<b>North</b>	Small (5-19)	697	87	360	1905	3532	6432	19634	<b>34,755</b>
<b>North</b>	Medium (20-99)	135	15	63	215	166	298	804	
<b>North</b>	Large (100 or more)	51	1	24	100	58	48	130	
<b>South</b>	Small (5-19)	940	209	910	2998	6188	13439	27026	<b>54,621</b>
<b>South</b>	Medium (20-99)	136	31	124	308	209	621	909	
<b>South</b>	Large (100 or more)	42	12	40	126	58	131	164	
<b>West</b>	Small (5-19)	299	73	402	1924	4180	10065	22362	<b>41,730</b>
<b>West</b>	Medium (20-99)	53	14	69	174	159	534	915	
<b>West</b>	Large (100 or more)	23	1	25	73	53	136	196	
		<b>4,399</b>	<b>1,144</b>	<b>3,752</b>	<b>18,069</b>	<b>40,627</b>	<b>72,329</b>	<b>201,029</b>	<b>341,349</b>

Source: Bureau of National Statistics

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

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	6	8	6	6	12	14	49	<b>175</b>
<b>Almaty</b>	Medium (20-99)	6	5	6	6	6	3	6	
<b>Almaty</b>	Large (100 or more)	6	1	5	6	7	6	5	
<b>Astana</b>	Small (5-19)	6	5	6	7	3	8	7	<b>125</b>
<b>Astana</b>	Medium (20-99)	8	5	15	16	3	4	5	
<b>Astana</b>	Large (100 or more)	3	0	4	5	4	5	6	
<b>Center</b>	Small (5-19)	6	22	6	6	6	4	6	<b>155</b>
<b>Center</b>	Medium (20-99)	6	3	5	6	7	5	5	
<b>Center</b>	Large (100 or more)	5	1	2	13	10	13	18	
<b>East</b>	Small (5-19)	6	10	6	6	6	4	6	<b>120</b>
<b>East</b>	Medium (20-99)	6	2	6	6	6	5	6	
<b>East</b>	Large (100 or more)	9	1	2	10	6	5	6	
<b>North</b>	Small (5-19)	6	8	6	6	6	6	10	<b>135</b>
<b>North</b>	Medium (20-99)	6	7	6	6	6	6	6	
<b>North</b>	Large (100 or more)	8	1	4	9	6	6	10	
<b>South</b>	Small (5-19)	6	13	6	6	6	6	17	<b>160</b>
<b>South</b>	Medium (20-99)	6	10	6	6	6	6	6	
<b>South</b>	Large (100 or more)	6	3	10	16	9	6	4	
<b>West</b>	Small (5-19)	6	7	6	6	6	6	11	<b>130</b>
<b>West</b>	Medium (20-99)	6	7	6	6	6	6	6	
<b>West</b>	Large (100 or more)	6	1	6	6	8	6	6	
		<b>129</b>	<b>120</b>	<b>125</b>	<b>160</b>	<b>135</b>	<b>130</b>	<b>201</b>	<b>1,000</b>

**Table 4: Response Outcomes**

		<b>Totals</b>	<b>Rates relative to total contacted</b>
Overall	Contacts available in frame	341349	
	Issued	3493	
	Contacted	2943	
Screening phase	Eligibles	1013	34.4%
	Screener refusals	500	17.0%
	Assumed eligibles	1554	52.8%
	Ineligible + out of target	170	5.8%
	Unobtainables	1255	42.6%
Interview phase (only if eligible)	Interview refusals	0	0.0%
	Complete interviews	1013	34.4%

**Table 5: Survey Yield Rates**

	<b>Stratification</b>	<b>Yield</b>	<b>Survey response rate</b>	<b>Frame quality</b>
Panel	Fresh	32.4%	63.6%	51.0%
	Panel	38.3%	68.0%	56.3%
Size	Small (5-19)	33.2%	67.1%	49.5%
	Medium (20-99)	37.0%	67.1%	55.1%
	Large (100+)	33.7%	60.3%	55.9%
Region	Almaty	29.1%	64.5%	45.1%
	Astana	37.8%	76.1%	49.7%
	Center	30.7%	62.5%	49.1%
	East	40.5%	67.4%	60.1%
	North	36.1%	64.1%	56.3%
	South	38.4%	63.4%	60.6%
	West	34.2%	61.3%	55.7%
Sector	Food	37.4%	69.9%	53.5%
	Garments	39.2%	72.4%	54.2%
	Non-Metallic Mineral Products	37.5%	68.7%	54.6%
	Other Manufacturing	34.6%	65.9%	52.5%
	Retail	32.6%	57.5%	56.8%
	Construction	35.1%	64.2%	54.6%
	Other Services	30.2%	62.5%	48.3%
Overall	Kazakhstan 2024	34.4%	65.2%	52.8%

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

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

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	6	12	12	7	8	15	37	<b>189</b>
<b>Almaty</b>	Medium (20-99)	10	8	9	19	5	3	7	
<b>Almaty</b>	Large (100 or more)	5	0	3	9	3	6	5	
<b>Astana</b>	Small (5-19)	6	7	6	7	6	13	25	<b>137</b>
<b>Astana</b>	Medium (20-99)	6	2	6	10	4	4	5	
<b>Astana</b>	Large (100 or more)	2	0	5	5	7	6	5	
<b>Center</b>	Small (5-19)	7	20	7	6	7	3	8	<b>135</b>
<b>Center</b>	Medium (20-99)	6	3	4	8	5	4	4	
<b>Center</b>	Large (100 or more)	5	1	2	10	4	8	13	
<b>East</b>	Small (5-19)	6	8	5	6	6	6	7	<b>122</b>
<b>East</b>	Medium (20-99)	8	4	5	9	7	4	5	
<b>East</b>	Large (100 or more)	4	1	3	8	6	6	8	
<b>North</b>	Small (5-19)	5	6	6	6	7	7	16	<b>132</b>
<b>North</b>	Medium (20-99)	7	5	5	6	6	7	6	
<b>North</b>	Large (100 or more)	7	1	4	8	4	5	8	
<b>South</b>	Small (5-19)	5	9	4	6	8	10	17	<b>149</b>
<b>South</b>	Medium (20-99)	6	9	7	7	6	5	6	
<b>South</b>	Large (100 or more)	5	5	8	10	6	5	5	
<b>West</b>	Small (5-19)	5	6	6	6	6	10	19	<b>149</b>
<b>West</b>	Medium (20-99)	8	5	9	6	6	6	6	
<b>West</b>	Large (100 or more)	9	1	7	7	6	7	8	
		<b>128</b>	<b>113</b>	<b>123</b>	<b>166</b>	<b>123</b>	<b>140</b>	<b>220</b>	<b>1,013</b>



**Table 7: Achieved Panel Sample**

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	3	8	8	4	1	1	4	<b>65</b>
<b>Almaty</b>	Medium (20-99)	7	1	3	14	1	0	1	
<b>Almaty</b>	Large (100 or more)	1	0	0	6	0	2	0	
<b>Astana</b>	Small (5-19)	3	1	3	4	1	3	5	<b>46</b>
<b>Astana</b>	Medium (20-99)	3	1	3	7	1	1	2	
<b>Astana</b>	Large (100 or more)	1	0	2	2	1	1	1	
<b>Center</b>	Small (5-19)	3	1	4	3	3	0	1	<b>34</b>
<b>Center</b>	Medium (20-99)	3	1	1	5	2	1	1	
<b>Center</b>	Large (100 or more)	2	0	0	0	1	1	1	
<b>East</b>	Small (5-19)	3	3	2	3	3	1	3	<b>47</b>
<b>East</b>	Medium (20-99)	5	0	2	6	4	0	2	
<b>East</b>	Large (100 or more)	1	0	0	5	2	0	2	
<b>North</b>	Small (5-19)	2	3	3	3	4	3	6	<b>61</b>
<b>North</b>	Medium (20-99)	3	2	2	3	3	4	3	
<b>North</b>	Large (100 or more)	4	0	0	5	1	2	5	
<b>South</b>	Small (5-19)	2	6	1	3	3	3	3	<b>61</b>
<b>South</b>	Medium (20-99)	3	3	4	4	3	2	3	
<b>South</b>	Large (100 or more)	2	0	4	7	3	2	0	
<b>West</b>	Small (5-19)	2	3	3	3	3	3	7	<b>70</b>
<b>West</b>	Medium (20-99)	3	2	4	3	3	3	3	
<b>West</b>	Large (100 or more)	5	0	4	4	3	4	5	
		<b>61</b>	<b>35</b>	<b>53</b>	<b>94</b>	<b>46</b>	<b>37</b>	<b>58</b>	<b>384</b>

**Table 8: Weak Universe Estimates**

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	761	302	543	4075	12347	11365	58039	<b>93,014</b>
<b>Almaty</b>	Medium (20-99)	91	0	70	426	490	787	2881	
<b>Almaty</b>	Large (100 or more)	30	0	17	92	134	90	435	
<b>Almaty</b>	Medium and Large (20+)	0	38	0	0	0	0	0	
<b>Astana</b>	Small (5-19)	368	155	514	2385	7984	16048	34343	<b>64,739</b>
<b>Astana</b>	Medium (20-99)	28	7	70	159	240	939	1212	
<b>Astana</b>	Large (100 or more)	6	0	8	31	48	46	147	
<b>Center</b>	Small (5-19)	240	93	236	1368	1798	4098	11914	<b>20,882</b>
<b>Center</b>	Medium (20-99)	39	7	26	176	69	221	368	
<b>Center</b>	Large (100 or more)	13	2	8	57	26	46	76	
<b>East</b>	Small (5-19)	206	49	135	790	1583	2497	6680	<b>12,946</b>
<b>East</b>	Medium (20-99)	47	6	22	104	79	221	325	
<b>East</b>	Large (100 or more)	23	2	10	48	17	35	67	
<b>North</b>	Small (5-19)	662	85	357	1877	3525	6003	18549	<b>33,141</b>
<b>North</b>	Medium (20-99)	133	15	65	219	171	288	786	
<b>North</b>	Large (100 or more)	50	1	24	101	59	46	126	
<b>South</b>	Small (5-19)	874	200	883	2890	6045	12276	24989	<b>50,969</b>
<b>South</b>	Medium (20-99)	131	31	124	307	211	587	870	
<b>South</b>	Large (100 or more)	40	12	40	124	58	122	155	
<b>West</b>	Small (5-19)	252	63	354	1683	3704	8341	18758	<b>35,273</b>
<b>West</b>	Medium (20-99)	46	13	63	157	146	458	794	
<b>West</b>	Large (100 or more)	20	1	22	65	48	115	168	
		<b>4,060</b>	<b>1,081</b>	<b>3,589</b>	<b>17,136</b>	<b>38,785</b>	<b>64,630</b>	<b>181,682</b>	<b>310,964</b>

**Table 9: Median Universe Estimates**

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	380	139	277	1837	6289	5726	26681	<b>44,151</b>
<b>Almaty</b>	Medium (20-99)	49	0	38	205	267	424	1417	
<b>Almaty</b>	Large (100 or more)	16	0	9	45	74	49	215	
<b>Almaty</b>	Medium and Large (20+)	0	13	0	0	0	0	0	
<b>Astana</b>	Small (5-19)	193	75	275	1126	4260	8470	16540	<b>32,526</b>
<b>Astana</b>	Medium (20-99)	16	3	40	80	137	530	625	
<b>Astana</b>	Large (100 or more)	4	0	5	16	27	26	76	
<b>Center</b>	Small (5-19)	118	42	119	607	902	2033	5393	<b>9,783</b>
<b>Center</b>	Medium (20-99)	21	3	14	84	37	117	178	
<b>Center</b>	Large (100 or more)	7	1	4	27	14	24	37	
<b>East</b>	Small (5-19)	123	27	83	426	963	1503	3669	<b>7,411</b>
<b>East</b>	Medium (20-99)	30	4	14	60	52	142	191	
<b>East</b>	Large (100 or more)	15	1	6	28	11	23	39	
<b>North</b>	Small (5-19)	345	41	190	883	1874	3157	8900	<b>16,500</b>
<b>North</b>	Medium (20-99)	74	8	37	110	97	162	403	
<b>North</b>	Large (100 or more)	28	1	14	51	34	26	65	
<b>South</b>	Small (5-19)	527	111	545	1574	3719	7471	13876	<b>29,569</b>
<b>South</b>	Medium (20-99)	84	18	82	179	139	382	516	
<b>South</b>	Large (100 or more)	26	7	26	73	38	80	93	
<b>West</b>	Small (5-19)	158	37	228	954	2374	5287	10849	<b>21,252</b>
<b>West</b>	Medium (20-99)	31	8	43	95	100	310	491	
<b>West</b>	Large (100 or more)	13	1	16	40	33	79	105	
		<b>2,258</b>	<b>541</b>	<b>2,067</b>	<b>8,500</b>	<b>21,443</b>	<b>36,022</b>	<b>90,360</b>	<b>161,191</b>

**Table 10: Strict Universe Estimates**

		Food	Garments	Non Metallic Mineral Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
<b>Almaty</b>	Small (5-19)	268	97	182	1260	3537	3576	16137	<b>26,803</b>
<b>Almaty</b>	Medium (20-99)	35	0	26	145	155	273	882	
<b>Almaty</b>	Large (100 or more)	10	0	5	27	36	27	113	
<b>Almaty</b>	Medium and Large (20+)	0	12	0	0	0	0	0	
<b>Astana</b>	Small (5-19)	173	66	229	983	3047	6728	12721	<b>25,205</b>
<b>Astana</b>	Medium (20-99)	15	3	35	72	101	433	494	
<b>Astana</b>	Large (100 or more)	3	0	5	12	17	18	51	
<b>Center</b>	Small (5-19)	83	29	77	413	504	1260	3236	<b>5,958</b>
<b>Center</b>	Medium (20-99)	15	3	9	59	21	75	110	
<b>Center</b>	Large (100 or more)	5	1	2	16	7	13	19	
<b>East</b>	Small (5-19)	90	19	56	301	558	967	2287	<b>4,677</b>
<b>East</b>	Medium (20-99)	22	4	10	44	31	94	122	
<b>East</b>	Large (100 or more)	9	1	4	18	6	13	21	
<b>North</b>	Small (5-19)	246	29	126	611	1064	1991	5434	<b>10,202</b>
<b>North</b>	Medium (20-99)	54	6	25	79	57	105	253	
<b>North</b>	Large (100 or more)	17	1	8	31	17	14	34	
<b>South</b>	Small (5-19)	361	75	346	1048	2029	4528	8144	<b>17,594</b>
<b>South</b>	Medium (20-99)	59	13	54	123	78	238	312	
<b>South</b>	Large (100 or more)	15	5	15	42	18	42	47	
<b>West</b>	Small (5-19)	112	26	149	655	1335	3304	6564	<b>12,991</b>
<b>West</b>	Medium (20-99)	23	6	29	67	58	200	306	
<b>West</b>	Large (100 or more)	9	1	10	24	16	43	55	
		<b>1,624</b>	<b>397</b>	<b>1,401</b>	<b>6,028</b>	<b>12,692</b>	<b>23,941</b>	<b>57,345</b>	<b>103,429</b>

**Table 11: Item Response Rates**

	<b>Screeners/Interview</b>	<b>d2</b>	<b>l1</b>	<b>n2a</b>	<b>all TFP variables</b>
Panel	Fresh	100.0%	100.0%	100.0%	92.0%
	Panel	100.0%	100.0%	100.0%	93.8%
Size	Small (5-19)	100.0%	100.0%	100.0%	92.3%
	Medium (20-99)	100.0%	100.0%	100.0%	94.9%
	Large (100+)	100.0%	100.0%	100.0%	90.2%
Region	Almaty	100.0%	100.0%	100.0%	97.5%
	Astana	100.0%	100.0%	100.0%	93.4%
	Center	100.0%	100.0%	100.0%	92.6%
	East	100.0%	100.0%	100.0%	94.2%
	North	100.0%	100.0%	100.0%	92.2%
	South	100.0%	100.0%	100.0%	88.2%
	West	100.0%	100.0%	100.0%	91.4%
Sector	Food	100.0%	100.0%	100.0%	99.2%
	Garments	100.0%	100.0%	100.0%	97.6%
	Non-Metallic Mineral Products	100.0%	100.0%	100.0%	97.5%
	Other Manufacturing	100.0%	100.0%	100.0%	83.9%
	Retail	100.0%	100.0%	100.0%	N/A
	Construction	100.0%	100.0%	100.0%	N/A
	Other Services	100.0%	100.0%	100.0%	N/A
Overall	Kazakhstan 2024	100.0%	100.0%	100.0%	92.8%

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).