

The Viet Nam 2023 World Bank Enterprise Survey Implementation Report

I. Introduction

This document provides information on the World Bank Enterprise Surveys (WBES) implemented in Viet Nam between April 2023 and November 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 180,000 firms in 154 countries with a total of 306 surveys since 2006. The WBES are also used to build a panel of enterprise data that will make it possible to track changes in the business environment over time.¹

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.² 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).³ For regional coverage within a country, the WBES has national coverage.

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

² The Sampling Note is available at:

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.

³ 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 Viet Nam 2023 WBES uses the following stratification categories:

- **Industry: 7 categories:**
 - Within manufacturing: Food, Garments, Fabricated Metal Products, Other manufacturing
 - Within services: Construction, Retail, and Other Services
- **Size: 3 categories:** Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more employees)
- **Region: 5 categories:** Northern Central region, the Central Coast, Central Highlands; Red River Delta; Northern Midlands and Mountains; Southeast; Mekong River Delta

Industry strata for the manufacturing sector were selected by their contribution to the total number of establishments according to information from the 2021 Economic Census obtained from the General Statistics Office of Viet Nam, available as of summer 2021. Similarly, the strata for the services sector were also selected by contribution to total number of establishments.

Region strata of the Viet Nam 2023 WBES were selected based on administrative divisions, with some territories grouped together to achieve minimum required precision of estimates at the level of each stratification region. Northern Central region, the Central Coast, Central Highlands, covers North Central Coast region, the South Central Coast, and Central Highlands. Red River Delta covers just the Red River Delta region. Northern Midlands and Mountains covers North East and North West Regions. South East covers just the South East region. Mekong River Delta covers just the Mekong River Delta 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. In the case of Viet Nam, the listing from the General Statistics Office of Vietnam, the 2021 Economic Census, was used. The registration agency is the Department of Planning and investment. 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 Viet Nam 2023 WBES, the universe table, shown in Table 1 below, based on the 2021 Economic Census, was obtained from the General Statistics Office of Vietnam.

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 Viet Nam 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 Viet Nam 2015 WBES. The Fresh Sampling Frame, i.e., list of establishments that are in the WBES universe and that have not participated in the Viet Nam 2015 WBES, for the manufacturing sector (ISIC 4.0 codes 10-32), was from the 2021 Economic Census, obtained mainly from the General Statistics Office of Vietnam.

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.⁴ 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*.⁵ The original survey design for the Viet Nam 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 Viet Nam 2023 WBES were conducted between April 2023 and November 2023. The interviews were conducted in the following languages: Vietnamese and English.

⁴ 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.

⁵ 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 Viet Nam 2023 WBES included additional questions tailored for the Business Ready Report covering infrastructure, trade, government regulations, finance, labor, and other topics.

III.2 Contractor

The fieldwork for the Viet Nam 2023 WBES was implemented by Mekong Economics 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 Viet Nam 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*.

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 Viet Nam 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.

Assumption	Eligibility codes for inclusion in the WBES universe
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

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.⁶ 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:

⁶ 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 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.⁷

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 Viet Nam 2023 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.

⁷ 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
- 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	General Statistics Office of Vietnam
Source of Sampling Frame	General Statistics Office of Vietnam
Stratification sectors	Manufacturing of: Food, Garments, Fabricated Metal Products, Other manufacturing; Construction, Retail, Hotels, and Other Services
Stratification sizes	Small (5 to 19 employees), Medium (20 to 99 employees), and Large (100 and more employees)
Stratification regions	Northern Central region, the Central Coast, Central Highlands; Red River Delta; Northern Midlands and Mountains; Southeast; Mekong River Delta
Contractor	Mekong Economics LTD
Fieldwork dates	April 2023 – October 2023
Interview languages	Vietnamese and English
Survey software	Survey Solutions software
Currency for nominal variables	Vietnamese dong
Reference fiscal year	2021 (2 obs.) 2022 (978 obs.) and 2023 (48 obs.)
Sample Size	Total: 1,028 Fresh: 772 Panel: 256
Survey response rates	Yield: 23.6% Response rate: 31.7% Frame quality: 74.3%
Item response rates	d2: 99.7% n2a: 100% 11: 98.6% all TFP vars.: 70%
Additional topics covered in the questionnaire	None
Additional surveys available (if any)	None

Tables

Table 1: Viet Nam 2023 WBES Universe

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	455	205	1012	2446	2879	7435	15028	40,190
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	252	217	209	1300	365	3285	2967	
Northern Central region, the Central Coast, Central Highlands	Large (100 or more)	153	249	39	602	51	647	394	
Red River Delta	Small (5-19)	652	726	2988	7956	3153	10559	41468	90,764
Red River Delta	Medium (20-99)	269	536	1011	4012	398	3837	7983	
Red River Delta	Large (100 or more)	123	549	208	2107	80	997	1152	
Northern Midlands and Mountains	Small (5-19)	268	68	448	1107	1029	2167	4406	14,053
Northern Midlands and Mountains	Medium (20-99)	93	86	138	821	155	1234	951	
Northern Midlands and Mountains	Large (100 or more)	34	142	34	450	19	315	88	
Southeast	Small (5-19)	792	824	2347	7621	2171	6937	32264	74,608
Southeast	Medium (20-99)	560	448	854	4210	402	2024	7327	
Southeast	Large (100 or more)	264	516	279	2899	148	412	1309	
Mekong River Delta	Small (5-19)	812	104	384	1440	2257	3442	6458	20,013
Mekong River Delta	Medium (20-99)	481	115	120	969	202	773	1142	
Mekong River Delta	Large (100 or more)	309	159	25	555	29	95	142	
		5,517	4,944	10,096	38,495	13,338	44,159	123,079	239,628

Source: General Statistics Office of Vietnam

Table 2: Viet Nam 2023 WBES Sample Frame (Fresh and Panel Combined)

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	429	195	989	2348	2787	7056	14386	38,921
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	258	219	210	1308	362	3254	2936	
Northern Central region, the Central Coast, Central Highlands	Large (100 or more)	160	260	43	620	54	651	396	
Red River Delta	Small (5-19)	596	680	2892	7469	2877	9489	37697	84,779
Red River Delta	Medium (20-99)	282	540	1009	3985	390	3745	7853	
Red River Delta	Large (100 or more)	130	563	215	2136	81	1004	1146	
Northern Midlands and Mountains	Small (5-19)	250	62	430	1047	997	2062	4257	13,630
Northern Midlands and Mountains	Medium (20-99)	89	82	136	812	154	1222	942	
Northern Midlands and Mountains	Large (100 or more)	34	139	39	454	19	314	89	
Southeast	Small (5-19)	704	752	2177	7029	2010	6235	29741	69,899
Southeast	Medium (20-99)	541	445	828	4151	384	1957	7077	
Southeast	Large (100 or more)	278	523	291	2932	147	412	1285	
Mekong River Delta	Small (5-19)	764	94	363	1350	2162	3163	6030	19,009
Mekong River Delta	Medium (20-99)	479	119	124	953	200	753	1116	
Mekong River Delta	Large (100 or more)	314	164	31	557	31	95	147	
		5,308	4,837	9,777	37,151	12,655	41,412	115,098	226,238

Source: General Statistics Office of Vietnam

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

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	3	4	4	4	8	13	10	150
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	12	8	6	4	7	12	4	
Northern Central region, the Central Coast, Central Highlands	Large (100-199)	11	12	6	4	9	5	4	
Red River Delta	Small (5-19)	4	4	11	26	14	28	50	300
Red River Delta	Medium (20-99)	15	12	20	17	9	16	6	
Red River Delta	Large (100-199)	11	16	11	9	10	7	4	
Northern Midlands and Mountains	Small (5-19)	2	2	3	2	8	2	3	120
Northern Midlands and Mountains	Medium (20-99)	10	9	13	3	16	9	2	
Northern Midlands and Mountains	Large (100-199)	4	13	4	4	2	7	2	
Southeast	Small (5-19)	4	4	10	26	14	14	41	300
Southeast	Medium (20-99)	12	14	16	22	11	9	6	
Southeast	Large (100-199)	21	20	16	17	12	7	4	
Mekong River Delta	Small (5-19)	4	3	4	4	7	4	6	130
Mekong River Delta	Medium (20-99)	14	8	8	4	8	4	4	
Mekong River Delta	Large (100-199)	13	11	8	4	5	3	4	
		140	140	140	150	140	140	150	1,000

Table 4: Response Outcomes

	Totals	Rates relative to total contacted
Contacts available in frame	226,238	
Issued	4,973	
Contacted	4,365	
Eligibles	1,117	25.6%
Screener refusals	1,890	43.3%
Assumed eligibles	3,244	74.3%
Ineligible + out of target	491	11.2%
Unobtainables	853	19.5%
Interview refusals	31	0.7%
Complete interviews	1,028	23.6%

Table 5: Survey Yield Rates

	Stratification	Yield	Survey response rate	Frame quality
Panel	Fresh	22.9%	28.2%	81.2%
	Panel	25.7%	50.2%	51.2%
Size	Small (5-19)	19.7%	28.0%	70.5%
	Medium (20-99)	25.3%	33.3%	76.0%
	Large (100+)	27.2%	34.8%	78.1%
Region	Northern Central region, the Central Coast, Central Highlands	17.3%	24.8%	69.8%
	Red River Delta	19.1%	24.9%	76.6%
	Northern Midlands and Mountains	21.6%	27.9%	77.3%
	Southeast	35.4%	48.7%	72.6%
	Mekong River Delta	40.7%	55.6%	73.3%
Sector	Food	27.2%	36.0%	75.6%
	Garments	22.7%	31.9%	71.1%
	Fabricated Metal Products	28.0%	33.4%	83.9%
	Other Manufacturing	22.6%	36.8%	61.5%
	Retail	21.9%	27.8%	78.8%
	Construction	24.0%	30.6%	78.5%
	Other Services	20.2%	27.8%	72.6%
Overall	Viet Nam 2023	23.6%	31.7%	74.3%

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

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

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	3	2	4	3	12	20	24	158
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	8	8	6	4	6	9	2	
Northern Central region, the Central Coast, Central Highlands	Large (100 or more)	13	14	5	3	7	3	2	
Red River Delta	Small (5-19)	10	10	19	15	22	25	29	335
Red River Delta	Medium (20-99)	15	16	20	15	14	17	12	
Red River Delta	Large (100 or more)	19	24	23	7	6	13	4	
Northern Midlands and Mountains	Small (5-19)	2	2	3	2	12	2	3	129
Northern Midlands and Mountains	Medium (20-99)	10	9	14	3	15	8	3	
Northern Midlands and Mountains	Large (100 or more)	4	13	4	4	2	9	5	
Southeast	Small (5-19)	4	3	9	21	8	15	38	272
Southeast	Medium (20-99)	10	9	16	23	8	5	12	
Southeast	Large (100 or more)	20	17	12	22	12	5	3	
Mekong River Delta	Small (5-19)	4	2	4	4	5	4	6	134
Mekong River Delta	Medium (20-99)	10	8	8	7	7	10	6	
Mekong River Delta	Large (100 or more)	11	9	7	9	6	4	3	
		143	146	154	142	142	149	152	1,028

Table 7: Achieved Panel Sample

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	0	0	0	2	0	0	0	16
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	5	1	0	2	0	1	0	
Northern Central region, the Central Coast, Central Highlands	Large (100 or more)	1	2	0	1	1	0	0	
Red River Delta	Small (5-19)	1	0	0	3	3	1	3	51
Red River Delta	Medium (20-99)	3	3	2	10	0	2	1	
Red River Delta	Large (100 or more)	2	9	1	5	0	1	1	
Southeast	Small (5-19)	0	1	2	8	2	2	11	118
Southeast	Medium (20-99)	2	5	9	15	2	2	8	
Southeast	Large (100 or more)	13	10	5	17	0	3	1	
Mekong River Delta	Small (5-19)	2	1	2	2	3	2	2	71
Mekong River Delta	Medium (20-99)	6	4	6	3	1	8	4	
Mekong River Delta	Large (100 or more)	7	7	5	2	2	1	1	
		42	43	32	70	14	23	32	256

Table 8: Weak Universe Estimates

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	407	179	944	2223	2574	6789	13273	36,353
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	231	195	200	1210	334	3072	2684	
Northern Central region, the Central Coast, Central Highlands	Large (100 or more)	145	231	39	580	48	627	369	
Red River Delta	Small (5-19)	588	641	2809	7289	2843	9721	36929	82,582
Red River Delta	Medium (20-99)	248	485	974	3765	368	3618	7282	
Red River Delta	Large (100 or more)	118	514	207	2048	77	974	1088	
Northern Midlands and Mountains	Small (5-19)	233	58	406	978	894	1924	3783	12,410
Northern Midlands and Mountains	Medium (20-99)	83	75	128	743	138	1122	836	
Northern Midlands and Mountains	Large (100 or more)	31	128	33	422	18	297	80	
Southeast	Small (5-19)	673	685	2079	6580	1845	6019	27078	64,062
Southeast	Medium (20-99)	487	382	775	3723	350	1799	6298	
Southeast	Large (100 or more)	238	455	262	2655	133	379	1165	
Mekong River Delta	Small (5-19)	746	94	368	1345	2074	3230	5862	18,603
Mekong River Delta	Medium (20-99)	453	106	118	927	190	743	1062	
Mekong River Delta	Large (100 or more)	301	152	26	550	28	95	137	
		4983	4379	9367	35035	11913	40405	107927	214011

Table 9: Median Universe Estimates

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	346	150	851	1866	2224	5719	11197	31,335
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	212	176	195	1097	312	2796	2446	
Northern Central region, the Central Coast, Central Highlands	Large (100 or more)	125	197	35	495	42	536	316	
Red River Delta	Small (5-19)	506	544	2564	6192	2485	8285	31519	71,937
Red River Delta	Medium (20-99)	231	444	960	3455	347	3331	6714	
Red River Delta	Large (100 or more)	103	443	192	1767	68	843	944	
Northern Midlands and Mountains	Small (5-19)	195	48	360	806	759	1591	3135	10,546
Northern Midlands and Mountains	Medium (20-99)	75	67	123	662	127	1003	749	
Northern Midlands and Mountains	Large (100 or more)	27	107	29	353	15	249	67	
Southeast	Small (5-19)	613	615	2009	5916	1707	5429	24459	59,130
Southeast	Medium (20-99)	479	370	809	3616	350	1753	6146	
Southeast	Large (100 or more)	220	415	257	2425	125	348	1070	
Mekong River Delta	Small (5-19)	618	76	323	1099	1745	2650	4816	15,606
Mekong River Delta	Medium (20-99)	405	93	112	819	173	658	942	
Mekong River Delta	Large (100 or more)	254	126	23	457	24	79	114	
		4409	3873	8842	31025	10503	35270	94633	188554

Table 10: Strict Universe Estimates

		Food	Garments	Fabricated Metal Products	Other Manufacturing	Retail	Construction	Other Services	Grand Total
Northern Central region, the Central Coast, Central Highlands	Small (5-19)	90	33	226	505	510	1481	2666	7,958
Northern Central region, the Central Coast, Central Highlands	Medium (20-99)	60	42	56	323	78	788	634	
Northern Central region, the Central Coast, Central Highlands	Large (100 or more)	34	45	10	141	10	146	79	
Red River Delta	Small (5-19)	137	124	709	1742	593	2232	7805	18,954
Red River Delta	Medium (20-99)	68	110	289	1057	90	976	1809	
Red River Delta	Large (100 or more)	29	106	56	522	17	239	245	
Northern Midlands and Mountains	Small (5-19)	60	13	114	261	208	493	893	3,243
Northern Midlands and Mountains	Medium (20-99)	25	19	42	233	38	338	232	
Northern Midlands and Mountains	Large (100 or more)	9	30	10	120	4	81	20	
Southeast	Small (5-19)	278	236	933	2796	684	2457	10177	26,308
Southeast	Medium (20-99)	237	155	409	1860	152	863	2783	
Southeast	Large (100 or more)	105	167	126	1204	53	165	467	
Mekong River Delta	Small (5-19)	281	29	150	520	700	1201	2006	6,942
Mekong River Delta	Medium (20-99)	200	39	57	422	75	325	427	
Mekong River Delta	Large (100 or more)	121	51	13	227	10	38	50	
		1734	1200	3200	11931	3224	11822	30294	63405

Table 11: Item Response Rates

	Screeners/Interview	d2	I1	n2a	all TFP variables
Panel	Fresh	99.9%	100.0%	98.7%	67.2%
	Panel	99.2%	100.0%	98.4%	75.8%
Size	Small (5-19)	99.7%	100.0%	97.8%	68.6%
	Medium (20-99)	99.7%	100.0%	98.7%	72.0%
	Large (100+)	99.7%	100.0%	99.7%	69.0%
Region	Northern Central region, the Central Coast, Central Highlands	99.4%	100.0%	97.5%	76.2%
	Red River Delta	99.7%	100.0%	99.1%	58.3%
	Northern Midlands and Mountains	99.2%	100.0%	96.0%	65.7%
	Southeast	100.0%	100.0%	99.3%	79.6%
	Mekong River Delta	100.0%	100.0%	100.0%	76.2%
Sector	Food	98.4%	100.0%	99.2%	69.0%
	Garments	100.0%	100.0%	100.0%	69.7%
	Fabricated Metal Products	100.0%	100.0%	98.1%	68.3%
	Other Manufacturing	99.5%	100.0%	99.5%	71.6%
	Retail	100.0%	100.0%	94.8%	0.0%
	Construction	100.0%	100.0%	98.1%	0.0%
	Other Services	100.0%	100.0%	99.0%	N/A
Overall	Viet Nam 2023	99.7%	100.0%	98.6%	70.0%

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).