

The Antigua and Barbuda 2025 World Bank Enterprise Survey Implementation Report

I. Introduction

This document provides information on the World Bank Enterprise Surveys (WBES) implemented in Antigua and Barbuda between September 2024 and March 2026. 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 has global coverage. 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 than simple random sampling 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.

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 Universe

The universe of inference includes all formal (i.e., registered) private sector establishments⁴ (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 Antigua and Barbuda Intellectual Property and Commerce Office (ABIPCO). 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 Antigua and Barbuda 2025 WBES, the universe table, shown in Table 1 below, was obtained from the Antigua & Barbuda Statistics Division, and the Antigua & Barbuda Intellectual Property & Commerce (ABIPCO).

II.2 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 Antigua and Barbuda 2025 WBES was constructed from the following sources (see counts of establishments in the frame in Table 2). The Fresh Sampling Frame, for both the manufacturing sector (ISIC 4.0 codes 10-32) and the services sector (ISIC 4.0 codes 41-43, 45-47, 49-56, 58, 61, 62, 69-75, 79, 95), was obtained from the Antigua & Barbuda Statistics Division, and the Antigua & Barbuda Intellectual Property & Commerce (ABIPCO). Mercaplan carried out a screening exercise prior to fieldwork to a random sample of firms in the unknown size category. This allowed to update the data as much as possible within the timeframe and allow for the estimation of the number of eligible firms within the unknown size category. Both the universe and sample frame were adjusted using this information.

Due to an agreement with the Inter-American Development Bank, and since both organizations were to carry out surveys in Antigua and Barbuda in similar timeframes, sampling frame information was divided randomly between the two organizations to reduce survey fatigue.

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

⁴ The unit of analysis of every WBES is the establishment defined as a business entity associated with a physical location with its own set of financial statements, including Balance Sheet and Income Statement. However, in many economies official statistics are provided at the firm level, where a firm may be composed of several establishments, the so-called multi-establishment firms.

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 universe equals the sampling frame (that is the weights project to universe totals by cell, coming from the sampling frame). Table 4 reports response outcomes.

II.3 Stratification Categories

The Antigua and Barbuda 2025 WBES uses the following stratification categories:

- **Industry: 2 categories:**
 - Manufacturing
 - Services
- **Size: 4 categories:** Small (5 to 19 employees), Medium (20 to 99 employees), Large (100 or more employees), Unknown
- **Region: 1 category:** Antigua and Barbuda

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. 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 Antigua and Barbuda 2025 WBES is given in Table 3.

III. Data Collection

The detailed formation on the WBES methodology and data collection is provided in the Enterprise Surveys Manual and Guide. The interviews for the Antigua and Barbuda 2025 WBES were conducted between September 2024 and March 2026. The interviews were conducted in English. For monetary variables, the currency was East Caribbean Dollars (XCD).

Apart from the challenges with participation and call-backs that are standard for all surveys, the Antigua and Barbuda 2025 WBES faced challenges with engaging firms to participate, and multiple efforts were made to promote firm participation.

III.1 Questionnaire

The standard WBES questionnaire covers several topics regarding the business environment and business performance. These topics include general establishment

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>

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 Antigua And Barbuda 2025 WBES was implemented by Mercaplan, with Hope Research, VagusMRI, and DMR Insights. 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 are eligible for the WBES to 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 Antigua and Barbuda 2025 WBES and across its stratification levels.

III.5 Achieved Sample

Table 6 provides 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.

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 establishment 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 Antigua and Barbuda 2025 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
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 of the sampling note.

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. 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 data files 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 data files 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.⁶

Additionally, the WBES data files 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 when they are available. 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.

⁶ 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/project-schedule>
- The list of all WBES databases and detailed information about each is available here:
<https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/DataDetails.xls>
- The description of the WBES indicators is available at:
<https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/methodology/Indicator-Description.pdf>

Fact Sheet

Source of Universe Table	Antigua & Barbuda Statistics Division, and Antigua & Barbuda Intellectual Property & Commerce (ABIPCO)
Source of Sampling Frame	Antigua & Barbuda Statistics Division, and Antigua & Barbuda Intellectual Property & Commerce (ABIPCO)
Levels of Universe Table and Sampling Frame	Universe Table: Establishment-level Sampling Frame: Establishment-level
Registration agency	Antigua and Barbuda Intellectual Property and Commerce Office (ABIPCO)
Stratification sectors	Manufacturing and Services
Stratification sizes	Small (5 to 19 employees), Medium (20 to 99 employees), Large (100-199), and Unknown
Stratification regions	Antigua & Barbuda
Contractor	Mercaplan
Fieldwork dates	September 2024 – March 2026
Interview languages	English
Survey software	Survey Solutions
Currency for nominal variables	East Caribbean Dollars (XCD)
Reference fiscal year	2023 (12 obs.), 2024 (64 obs.) and 2025 (25 obs.)
VAT Applicable	Yes
Additional definitions	“Consumption Tax” was referred to as ABST. “Occupancy Permit” was referred to as “Certificate of Occupancy”. For the capital city (a3b), Saint John's was entered; for the main business city (a3c), Saint John's was entered.
Sample Size	Total: 150 Fresh: 150
Survey response rates	Yield: 9.5% Response rate: 66% Frame quality: 14.4%
Item response rates	d2: 83.2%; n2a: 72.3%; 11: 100%; all TFP vars ⁷ : 33.3%
Additional topics covered in the questionnaire	NA
Additional surveys available (if any)	NA

⁷ TFP stands for total factor productivity. TFP variables are d2 (annual sales), n2a (annual cost of labor), n2e (annual cost of intermediate goods) and n7e (replacement cost of capital). Response rate for TFP variables is calculated only for manufacturing establishments.

Tables

Table 1: Antigua & Barbuda 2025 WBES Universe

		Manufacturing	Services	Grand Total
Antigua and Barbuda	Small (5-19)	41	463	1,296
Antigua and Barbuda	Medium (20-99)	8	184	
Antigua and Barbuda	Large (100-199)	0	41	
Antigua and Barbuda	Unkown	59	500	
		108	1,188	1,296

Sources: Antigua & Barbuda Statistics Division, and the Antigua & Barbuda Intellectual Property & Commerce (ABIPCO) (Establishment-level)

Table 2: Antigua & Barbuda 2025 WBES Sample Frame

		Manufacturing	Services	Grand Total
Antigua and Barbuda	Small (5-19)	36	312	1066
Antigua and Barbuda	Medium (20-99)	7	123	
Antigua and Barbuda	Large (100 or more)	0	29	
Antigua and Barbuda	Unknown	59	500	
		102	964	1,066

Sources: Antigua & Barbuda Statistics Division, and the Antigua & Barbuda Intellectual Property & Commerce (ABIPCO) (Establishment-level)

Table 3: Original Survey Design

		Manufacturing	Services	Grand Total
Antigua and Barbuda	Small (5-19)	8	27	150
Antigua and Barbuda	Medium (20-99)	3	67	
Antigua and Barbuda	Large (100-199)	0	16	
Antigua and Barbuda	Unknown	15	14	
		26	124	150

Table 4: Response Outcomes

		Totals	Rates relative to total contacted
Overall	Contacts available in frame	1,066	
	Issued	1,066	
	Contacted	1,066	
Screening phase	Eligibles	128	12.0%
	Screenener refusals	25	2.3%
	Assumed eligibles	153	14.4%
	Ineligible + out of target	91	8.5%
	Unobtainables	822	77.1%
Interview phase (only if eligible)	Interview refusals	25	2.3%
	Complete interviews	101	9.5%

Table 5: Survey Yield Rates

Stratification		Yield	Survey response rate	Frame quality
Panel	Fresh	9.5%	66.0%	14.4%
Size	Small (5-19)	15.2%	59.6%	25.6%
	Medium (20-99)	21.5%	84.8%	25.4%
	Large (100+)	17.2%	83.3%	20.7%
	Unknown	2.7%	60.0%	4.5%
Region	Antigua and Barbuda	9.5%	66.0%	14.4%
Sector	Manufacturing	9.8%	62.5%	15.7%
	Services	9.4%	66.4%	14.2%
Overall	Antigua and Barbuda 2025	9.5%	66.0%	14.4%

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

Table 6: Achieved Total Sample

		Manufacturing	Services	Grand Total
Antigua and Barbuda	Small (5-19)	3	58	101
Antigua and Barbuda	Medium (20-99)	6	30	
Antigua and Barbuda	Large (100 or more)	0	4	
		9	92	101

Table 7: Weak Universe Estimates

		Manufacturing	Services	Grand Total
Antigua and Barbuda	Small (5-19)	29	810	1184
Antigua and Barbuda	Medium (20-99)	52	265	
Antigua and Barbuda	Large (100 or more)	0	29	
		81	1103	1184

Table 8: Median Universe Estimates

		Manufacturing	Services	Grand Total
Antigua and Barbuda	Small (5-19)	5	114	190
Antigua and Barbuda	Medium (20-99)	10	55	
Antigua and Barbuda	Large (100 or more)	0	7	
		15	176	190

Table 9: Strict Universe Estimates

		Manufacturing	Services	Grand Total
Antigua and Barbuda	Small (5-19)	4	92	160
Antigua and Barbuda	Medium (20-99)	9	50	
Antigua and Barbuda	Large (100 or more)	0	6	
		13	148	160

Table 10: Item Response Rates

	 Screener/Interview	d2	I1	n2a	all TFP variables
Panel	Fresh	83.2%	100.0%	72.3%	33.3%
Size	Small (5-19)	83.6%	100.0%	72.1%	0.0%
	Medium (20-99)	80.6%	100.0%	72.2%	50.0%
	Large (100+)	100.0%	100.0%	75.0%	#N/A
Region	Antigua and Barbuda	83.2%	100.0%	72.3%	33.3%
Sector	Manufacturing	88.9%	100.0%	77.8%	33.3%
	Services	82.6%	100.0%	71.7%	#N/A
Overall	Antigua and Barbuda 2025	83.2%	100.0%	72.3%	33.3%

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).