ENTERPRISE SURVEYS

WORLD BANK GROUP

The Democratic Republic of the Congo 2024 Micro, World Bank Enterprise Survey Implementation Report

I. Introduction

This document provides information on the Enterprise Surveys of Micro Firms (ESM) implemented in the Democratic Republic of the Congo (DRC) between July 2024 and November 2024. The ESM collect both objective data based on firms' day-to-day experiences, and perceptions of enterprises regarding the business environment in which they operate. The primary objectives of the ESM are to: i) understand the demographics of the micro-enterprises in the covered cities, ii) describe the environment within which these enterprises operate, and iii) enable data analysis based on the samples that are representative at each city level.

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 ESM 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.[1] 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 ESM typically use three levels of stratification: industry classification, establishment size, and subnational region (used in combination). Starting in 2022, the ESM bases the industry classification on ISIC Rev. 4 (with earlier surveys using ISIC Rev. 3.1).[2] For regional coverage within a country, the ESM has national coverage.

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[1] 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.
[2] The ESM 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 ESM universe of inference can be found in the *Enterprise Surveys Manual and Guide* (p. 4).

II.1 Stratification Categories

The Democratic Republic of Congo 2024 ESM uses the following stratification categories:

- **Industry: 3 categories**:
    - All manufacturing sectors were grouped as Manufacturing
    - All retail trade activities were grouped as Retail
    - Other services including wholesale trade, construction, hotel and other service activities were grouped as Other Services
- **Size: 1 category**: Micro (1 to 4 employees)
- **Region: 9 cities**: Kinshasa; Goma; Bunia; Bukavu; Matadi; Mbuji-Mayi; Kananga; Kisangani; Lubumbashi

Sectoral stratification was determined such that both the manufacturing and the services sector meet the minimum criteria of representativeness at the 7.5% margin of error and 90% confidence interval.

The regional strata for the Democratic Republic of the Congo 2024 Micro Enterprise Survey were determined based on the country's administrative divisions. The selection of cities for this survey is primarily determined to coincide with those covered by the existing World Bank project, TRANSFORME. This alignment ensures that the data collected can be effectively utilized for evaluation and other relevant analytical work.

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 the Democratic Republic of the Congo, registration is defined as businesses officially registered with the Guichet Unique de Création d'Entreprise. 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 Democratic Republic of the Congo 2024 ESM, the universe table, shown in Table 1 below, was obtained from the 2019 General Census of Enterprises (Recensement Général des Entreprises, RGE) conducted by the National Institute of Statistics (Institut National de la Statistique, INS). This census provides a comprehensive count of all registered establishments within the country's geographical boundaries. To account for newly established firms, RGE was supplemented with data from General Directorate of Taxes (Direction Générale des Impôts, DGI).

II.3 Sampling Frame

The ESM 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.

The Sampling Frame for the Democratic Republic of the Congo 2024 ESM was based on the 2019 General Census of Enterprises (Recensement Général des Entreprises, RGE) conducted by the National Institute of Statistics (Institut National de la Statistique, INS). This census provides a comprehensive count of all registered establishments within the country's geographical boundaries. To account for newly established firms, RGE was supplemented with data from General Directorate of Taxes (Direction Générale des Impôts, DGI).

For every ESM, 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 ESM 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.[3] 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*.[4] The original survey design for the Democratic Republic of the Congo 2024 ESM is given in Table 3.

III. Data Collection

The detailed information on the ESM methodology and data collection is provided in the Enterprise Surveys Manual and Guide. The interviews for the Democratic Republic of the Congo (DRC) 2024 Micro Enterprise Survey were conducted between July 2024 and October 2024. The interviews were conducted in the following languages: French, Kiswahili, Kikongo, Lingala, and Tshiluba. For monetary variables, the currency used was the Congolese franc (CDF).

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[3] 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.

[4] 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 ESM questionnaire covers several topics regarding the business environment and business performance. These topics include general firm characteristics, 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*.

III.2 Contractor

The fieldwork for the Democratic Republic of the Congo (DRC) 2024 ESM was implemented by Ipsos Kenya Ltd, with ETS New Generation serving as the sub-contractor. The selection of the implementing agency followed the standard World Bank procurement practices, which are detailed 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 ESM, 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 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 Democratic Republic of the Congo (DRC) 2024 ESM 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.

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 Democratic Republic of the Congo (DRC) 2024 ESM 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
Weak	1,2,3,4,10,11,13,91,92,93,94,12

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.[5] 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).

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[5] 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.

- 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 ESM 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 ESM 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.[6]

Additionally, the ESM 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 combination of *a4a, a2*, and *a6a* 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 ESM 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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[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/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	2019 General Census of Enterprises (Recensement Général des Entreprises, RGE) conducted by the National Institute of Statistics (Institut National de la Statistique, INS), supplemented with data from General Directorate of Taxes (Direction Générale des Impôts, DGI).
Source of Sampling Frame	2019 General Census of Enterprises (Recensement Général des Entreprises, RGE) conducted by the National Institute of Statistics (Institut National de la Statistique, INS), supplemented with data from General Directorate of Taxes (Direction Générale des Impôts, DGI).
Stratification sectors	Manufacturing, Retail, Other Services
Stratification sizes	Micro (1 to 4 employees)
Stratification regions	Kinshasa, Goma, Bunia, Bukavu, Matadi, Mbuji-Mayi, Kananga, Kisangani, Lubumbashi
Contractor	Ipsos Kenya Ltd with sub-contractor ETS New Generation
Fieldwork dates	July 2024 – November 2024
Interview languages	French, Kiswahili, Kikongo, Lingala, Tshiluba
Survey software	Survey Solutions
Currency for nominal variables	Congolese franc (CDF)
Reference fiscal year	2023 (1,096 obs.)
Sample Size	Total: 1,096
Survey response rates	Yield: 82.72% Response rate: 94.40% Frame quality: 87.62%
Item response rates	d2: 100% n2a: 97.61% l1: 99.64 %
Additional topics covered in the questionnaire	Micro-related questions
Additional surveys available (if any)	WBES Enterprise Survey covering the 26 provinces, WBES follow-up surveys covering 9 provinces, Informal Sector Enterprise Surveys covering the 9 cities

Tables

Table 1: Democratic Republic of the Congo 2024 ESM Universe

		Manufacturing	Retail	Other services
Kinshasa	Micro (1-4)	814	21356	5374
Goma	Micro (1-4)	267	6376	798
Bunia	Micro (1-4)	23	2777	143
Bukavu	Micro (1-4)	43	4439	409
Matadi	Micro (1-4)	21	675	492
Mbuji-Mayi	Micro (1-4)	26	865	114
Kananga	Micro (1-4)	23	868	162
Kisangani	Micro (1-4)	74	2851	358
Lubumbashi	Micro (1-4)	122	10443	903
		1,413	**50,650**	**8,753**

Source: 2019 General Census of Enterprises (Recensement Général des Entreprises, RGE) conducted by the National Institute of Statistics (Institut National de la Statistique, INS), supplemented with data from General Directorate of Taxes (Direction Générale des Impôts, DGI).

Table 2: Democratic Republic of the Congo 2024 ESM Sample Frame (Fresh and Panel Combined)

		Manufacturing	Retail	Other services
Kinshasa	Micro (1-4)	814	21,356	5,374
Goma	Micro (1-4)	267	6,376	798
Bunia	Micro (1-4)	23	2,777	143
Bukavu	Micro (1-4)	43	4,439	409
Matadi	Micro (1-4)	21	675	492
Mbuji-Mayi	Micro (1-4)	26	865	114
Kananga	Micro (1-4)	23	868	162
Kisangani	Micro (1-4)	74	2,851	358
Lubumbashi	Micro (1-4)	122	10,443	903
		1,413	**50,650**	**8,753**

Source: 2019 General Census of Enterprises (Recensement Général des Entreprises, RGE) conducted by the National Institute of Statistics (Institut National de la Statistique, INS), supplemented with data from General Directorate of Taxes (Direction Générale des Impôts, DGI).

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

		Manufacturing	Retail	Other services
Kinshasa	Micro (1-4)	58	80	25
Goma	Micro (1-4)	80	29	10
Bunia	Micro (1-4)	12	75	29
Bukavu	Micro (1-4)	22	80	16
Matadi	Micro (1-4)	11	51	48
Mbuji-Mayi	Micro (1-4)	13	54	41
Kananga	Micro (1-4)	12	55	42
Kisangani	Micro (1-4)	37	62	18
Lubumbashi	Micro (1-4)	55	55	10
		300	**541**	**239**

Table 4: Response Outcomes

		Totals	Rates relative to total contacted
Overall	Contacts available in frame	60,816	
	Issued	3,077	
	Contacted	1,325	
Screening phase	Eligibles	1,156	87.2%
	Screener refusals	5	0.4%
	Assumed eligibles	1,161	87.6%
	Ineligible + out of target	35	2.6%
	Unobtainables	129	9.7%
Interview phase	Interview refusals	60	4.5%
(only if eligible)	Complete interviews	1,096	82.7%

Table 5: Survey Yield Rates

	Stratification	Yield	Survey response rate	Frame quality
Panel	Fresh	82.72%	94.40%	87.62%
	Panel	#N/A	#N/A	#N/A
Size	Micro (1-4)	82.72%	94.40%	87.62%
Region	Kinshasa	81.95%	89.36%	91.71%
	Goma	88.15%	95.20%	92.59%
	Bunia	80.95%	98.35%	82.31%
	Bukavu	83.10%	94.40%	88.03%
	Matadi	97.35%	98.21%	99.12%
	Mbuji-Mayi	78.99%	87.90%	89.86%
	Kananga	79.86%	96.52%	82.73%
	Kisangani	90.84%	97.54%	93.13%
	Lubumbashi	70.29%	95.35%	73.71%
Sector	Manufacturing	80.00%	94.41%	84.74%
	Retail	83.41%	94.60%	88.17%
	Other services	84.69%	93.96%	90.14%
Overall	Drc 2024	82.72%	94.40%	87.62%

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

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

		Manufacturing	Retail	Other services
Kinshasa	Micro (1-4)	58	80	30
Goma	Micro (1-4)	80	29	10
Bunia	Micro (1-4)	14	76	29
Bukavu	Micro (1-4)	22	80	16
Matadi	Micro (1-4)	11	51	48
Mbuji-Mayi	Micro (1-4)	14	54	41
Kananga	Micro (1-4)	12	55	44
Kisangani	Micro (1-4)	39	62	18
Lubumbashi	Micro (1-4)	54	56	13
		304	**543**	**249**

Table 7: Weak Universe Estimates

		Manufacturing	Retail	Other services
Kinshasa	Micro (1-4)	786	21,527	5,399
Goma	Micro (1-4)	249	6,219	776
Bunia	Micro (1-4)	22	2,775	142
Bukavu	Micro (1-4)	41	4,465	410
Matadi	Micro (1-4)	20	684	497
Mbuji-Mayi	Micro (1-4)	25	870	114
Kananga	Micro (1-4)	21	841	157
Kisangani	Micro (1-4)	71	2,866	359
Lubumbashi	Micro (1-4)	106	9,490	818
		1,343	**49,736**	**8,672**

Table 8: Median Universe Estimates

		Manufacturing	Retail	Other services
Kinshasa	Micro (1-4)	722	19,708	5,070
Goma	Micro (1-4)	239	5,941	760
Bunia	Micro (1-4)	18	2,300	121
Bukavu	Micro (1-4)	37	3,932	370
Matadi	Micro (1-4)	20	673	502
Mbuji-Mayi	Micro (1-4)	23	782	105
Kananga	Micro (1-4)	18	723	138
Kisangani	Micro (1-4)	67	2,672	343
Lubumbashi	Micro (1-4)	87	7,746	685
		1,231	**44,477**	**8,094**

Table 9: Strict Universe Estimates

		Manufacturing	Retail	Other services
Kinshasa	Micro (1-4)	725	19,690	5,053
Goma	Micro (1-4)	240	5,935	758
Bunia	Micro (1-4)	18	2,298	121
Bukavu	Micro (1-4)	36	3,834	360
Matadi	Micro (1-4)	20	667	496
Mbuji-Mayi	Micro (1-4)	23	775	104
Kananga	Micro (1-4)	18	722	137
Kisangani	Micro (1-4)	67	2,669	342
Lubumbashi	Micro (1-4)	87	7,739	683
		1,235	**44,329**	**8,053**

Table 10: Item Response Rates

	Screener/Interview	d2	l1	n2a	all TFP variables
Panel	Fresh	100.00%	99.64%	97.61%	94.49%
	Panel	#N/A	#N/A	#N/A	#N/A
Size	Micro (1-4)	100.00%	99.63%	97.70%	95.81%
Region	Kinshasa	100.00%	100.00%	100.00%	94.35%
	Goma	100.00%	100.00%	100.00%	96.86%
	Bunia	100.00%	97.48%	90.53%	94.57%
	Bukavu	100.00%	100.00%	98.82%	91.14%
	Matadi	100.00%	100.00%	100.00%	100.00%
	Mbuji-Mayi	100.00%	100.00%	97.65%	100.00%
	Kananga	100.00%	100.00%	100.00%	100.00%
	Kisangani	100.00%	99.16%	91.51%	100.00%
	Lubumbashi	100.00%	100.00%	100.00%	97.80%
Sector	Manufacturing	100.00%	100.00%	99.34%	97.44%
	Retail	100.00%	99.53%	97.25%	98.76%
	Other services	100.00%	99.62%	97.26%	81.73%
Overall	Drc 2024	100.00%	99.64%	97.61%	98.83%

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).