



Street vendors in Madangiri, New Delhi. Photo credit: Ruhani Kaur

Surveys on Informal Enterprises: An Overview and Measurement Issues

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Key Points

- While international momentum to improve survey data on enterprises is growing, significant data gaps persist on the numbers, operations and productivity of informal, nano (single-person) enterprises in national cross-country survey programmes.
- Enterprise surveys typically do not fully identify informal, nano enterprises; nor do they have adequate information on earnings and costs, working environments and constraints to expanding operations for these enterprises.
- Case studies from India and Ghana compare area-based, city-level enterprise surveys with concurrent national survey programmes that include enterprise-level data. The case studies show that certain sampling approaches in area-based surveys lead to undercounts of informal, nano enterprises, including home-based and mobile enterprises – as compared to sampling approaches that incorporate a household listing of enterprises.

¹ This brief benefitted from significant contributions from Michael Frosch, Senior Statistician, Statistics, ILO; Govindan Raveendran, former Director General of the Central Statistical Organization, Government of India; Kieran Walsh, Head of Statistical Standards and Methods Unit, Statistics, ILO; Joann Vanek, Senior Advisor, WIEGO Statistics Programme; and Martha Chen, Former International Coordinator and current Board Member of WIEGO. Pauline Castaing, Economist, and Amparo Palacios-López, Programme Manager, both of the World Bank's Development Data Group, provided information on recent LSMS survey experiments on informal enterprise measurement.

Overview

Informal enterprises are central to jobs and livelihoods in low- and middle-income countries. However, many countries still do not have comprehensive survey data on the nature, composition and operation of informal enterprises to enable policy decisions for the development of the sector. Informal enterprises face numerous challenges that are not faced by larger firms in sustaining and expanding their operations.

Recognizing the importance of informal enterprises in economic development and the limitations in the currently available data on them, efforts are now underway to improve national survey data. The International Labour Organization (ILO) has initiated a multi-year project to develop survey methods to measure the production and characteristics of enterprises in the informal sector, following the statistical standards on work relationships and on the informal economy adopted by the 20th and 21st International Conference of Labour Statisticians (ICLS), respectively (ILO 2023a). With the integration of the 21st ICLS recommendations in the last version of the System of National Accounts (United Nations Intersecretariat Working Group on National Accounts 2025), the measurement of the informal sector has added importance for countries. Guidance is needed to facilitate implementation of the standards in countries as well as of an expanded indicator framework on the informal economy.

Another initiative is through the World Bank's Living Standards Measurement Study (LSMS) Survey Methods programme, which is working to improve the measurement of household businesses and informality in household surveys. Building on priorities identified during a 2025 Expert Convening on Measuring Jobs, Informality, and Unpaid Work (Castaing et al. 2025), the programme is developing and testing new survey methods to address persistent challenges in identifying informal work and businesses, and innovative approaches to measuring business performance and growth. In Nepal, methods are being tested to more accurately capture growth and

performance outcomes of small businesses. In Kenya, an experiment planned in late 2026 will explore whether sampling and questionnaire design choices can reduce measurement error in the identification and characteristics of informal household businesses.

At the national level in India, WIEGO and SEWA are leading an initiative with a team of experts on the informal economy¹ funded by Harvard's Mittal South Asia Institute to improve data on informal enterprises with a focus on micro enterprises and those headed by women. The initial goal of the initiative was to analyze existing data to highlight the relative share of formal and informal enterprises in total enterprises, workers and output across different sectors of the economy. However, current national data in India do not allow for this type of comparison as comprehensive data for formal enterprises are not available and the sampling frames for formal and informal enterprise surveys are not compatible. Using analyses of recent rounds of the Annual Survey of Enterprises in the Unorganized Sector of India, the team has prepared a set of recommendations to the Government of India for improving data on informal enterprises (Natarajan and Sen 2026, Raveendran and Singh forthcoming, Chen forthcoming).

This brief contributes to efforts to develop data on informal enterprises by providing an overview of the main sources of cross-country data with a focus on informal enterprises, especially micro or nano (single-person) enterprises. It examines the core measurement challenges in survey programmes collecting data on these enterprises. The main survey programmes reviewed are the World Bank's Informal Sector Enterprise Surveys (ISES) and the nonfarm enterprise modules conducted as part of nationally representative household socio-economic surveys, such as the World Bank Living Standards Measurement Study programme.

¹ The team of experts includes a retired senior statistician of India (G. Raveendran), three labour economists (Rajesh Raj Natarajan, Kunal Sen and Ravi Srivastava) and three specialists on the informal economy (Marty Chen, Nandini Dey and Renana Jhabvala).

Using India and Ghana as case studies, findings are presented that compare area-based, city-level ISES surveys with concurrent survey programmes that include enterprise-level data. In India, the analysis compares surveys with area-based samples, but with different sampling and listing approaches. In Ghana, the studies reviewed compare the ISES with nonfarm enterprise modules based on samples from household surveys. For both India and Ghana, ISES data provide much lower estimates of the numbers of informal enterprises, compared to other surveys with enterprise-level data, as well as less information on the characteristics and constraints on the productivity of these enterprises. However, each of the surveys has limitations, for example, in constructing reliable estimates on the costs of labour and capital, as well as obtaining sufficient data on special constraints faced by informal enterprises. Despite discrepancies in counts of informal enterprises, the studies from Ghana found that the ISES and household-based enterprise surveys yield similar results on determinants of enterprise performance. Recommendations are made to improve the ISES as well as other enterprise-level surveys.

Policies to sustain and expand successfully the operations and productivity of informal enterprises require better enterprise data. This review and assessment of existing national surveys is an initial step by WIEGO to highlight the particular and challenging measurement issues in developing the data needed to support informal enterprises, and the workers in them.

I. Surveys with data on enterprises

A. World Bank Enterprise Surveys

World Bank Enterprise Surveys are standardized, country specific firm level surveys to identify the main constraints that private sector firms face and how these affect performance and growth. Topics covered in the surveys include (a) infrastructure, trade, finance, regulations, taxes and licensing; (b) informality, competition and public procurement, innovation and technology; and (c) gender of owner and manager, labour, firm size, location, management practices and reported obstacles, including corruption.

There are three types of World Bank Enterprise Surveys:

1. Formal Sector Enterprise Surveys (WBES)

The WBES surveys formal enterprises, defined as a single business entity that keeps its own financial records (income statement, balance sheet). WBES sample private-sector firms from official registers. Multi-establishment firms are treated separately if each establishment has independent financial reporting. The sampling design is stratified random sampling by firm size, sector and geographic region. Over 160 economies have been surveyed since 2006. Newly released data include the United States and Ghana. The list of countries covered is available on the WBES webpage (**Annex 1**).

2. Micro-Enterprise Surveys

These surveys sample micro-enterprises, defined in the survey as registered firms with fewer than five employees, to capture the business dynamics and constraints of the “missing middle” between informal and larger formal enterprises. The surveys cover micro *formal* enterprises often excluded from the standard WBES sample frame. The sampling design is similar to WBES (stratified random sampling), but restricted to micro-firms. Recent surveys include Nepal (2025), Ghana (2024), Democratic Republic of Congo (2024), Central African Republic (2023), Madagascar (2022), Iraq (2022), India (2022), Somalia (2019), Zambia (2019), Armenia (2019) and Georgia (2019).

3. Informal Sector Enterprise Surveys (ISES)

The sampling unit of the ISES is the informal business (unregistered enterprise). The sampling approach is an area-based sample, based on lists of informal businesses that survey enumerators prepare by walking through selected neighbourhood block areas. Informal enterprises are identified using Adaptive Cluster Sampling (ACS), where (a) cities are divided into small blocks (e.g., 150 m × 150 m); (b) blocks are enumerated to find informal businesses; (c) clusters expand outward from identified blocks until no new eligible businesses are found; and (d) within eligible blocks, informal businesses are randomly selected to be interviewed directly (Aga et al. 2023).

Annex 1 shows how to access and download the ISES.

The ISES is *city based*, covering 41,000 non-registered enterprises between 2017-2025 across cities in 16 countries. Registration practices vary by country but, in general, the ISES asked the enterprise owner whether the enterprise was registered by any local or national authority (see Aberra et al. 2022). The framing of the criteria for registration without restricting registration to a national authority is a departure from the International Conference of Labour Statisticians (ICLS) definition of the informal sector (ILO 2023a: para 28). This affects the interpretation of the data and especially its comparability across surveys. Recent surveys cover cities in Bangladesh (2022), Cambodia (2024), Central African Republic (2022-2023), Ghana (2022), India (2021-2022), Indonesia (2023-2024), Iraq (2021-2022), Lao PDR (2019), Mozambique (2018), Nepal (2024-2025), Peru (2022), Somalia (2019-2020), Sudan (2022-2023), Tanzania (2023-2024), Zambia (2019-2020) and Zimbabwe (2017). A cross-country harmonized dataset is available. It includes the same set of core questions across all countries, and each individual country. ISES includes additional questions tailored to the local country context (constraints to operating, local governance, etc.).

B. Household surveys

1. Mixed surveys of the informal sector

Mixed surveys are an arrangement of interlocking surveys that are aimed at different populations: individuals, economic units, and households. The 1-2 or 1-2-3 surveys conducted across countries in Africa, Asia and Latin America, was the most widespread implementation of this survey approach (Roubaud 2024). In the 1-2 surveys, the first phase consists of the labour force survey, which identifies the size of employment in the informal sector, and through the question on status in employment identifies the number of employers and own-account workers. This information also provides the basis for selecting a representative sample of units for the second phase, the enterprise survey (ILO 2013). The second-phase survey focuses on enterprise characteristics and outcomes such as revenues, costs and profits. Some of these enterprises may be formal, and some (likely a greater percentage in low- and middle-income countries) are informal. This job-based approach to identifying enterprises facilitates the identification of own-account (a single

operator enterprise without employees) and small enterprises. Additionally, it is possible to add a third phase, an income and expenditure survey, to capture household consumption and living standards – however, only few countries have added this third phase.

2. Multi-topic household surveys: LSMS enterprise module

The World Bank's Living Standards Measurement Study (LSMS) measures enterprises through a nonfarm enterprise module that sits inside the household questionnaire. The LSMS has been active for decades and global coverage is broad but uneven, with the largest concentration of surveys in Sub-Saharan Africa, substantial surveys in parts of Asia, and a smaller set of surveys in Latin America and the Caribbean. **Annex 1** describes how to access and download LSMS surveys.

The LSMS follows a stratified, multi stage cluster sample. The sampling frame is divided into strata (often by region and urban/rural). Enumeration areas or primary sampling units (PSUs) are selected within each stratum, usually with probability proportional to size (PPS). A fixed number of households is listed in each chosen PSU and then selected (typically with systematic or equal probability sampling). This creates a cluster design with households nested within PSUs. Within the enterprise module, the sampling unit is the nonfarm household enterprise – consisting of any business activity run by household members. Similar to the mixed survey approach, these enterprises are identified in the labour module and then enterprise-level details are collected for each identified unit. Unlike the other individual-level modules within the multi-topic household survey, there is one household respondent for the enterprise module.

II. Methodological limitations in informal enterprise surveys

A. Identification of small and micro enterprises in country surveys

The broad consensus across recent studies (Hardy, Kagy and Jimy 2023; Amankwah et al. 2025), is that although many surveys focus on small and micro enterprises, certain types of these enterprises are underrepresented. This includes own-account enterprises, which the ISES identifies as economic enterprises with a main operator and no other employees.

Tabulations prepared from the publicly available ISES data show that own-account enterprises are about 50-60 per cent of enterprises in cities across most of the countries. About 20 per cent of own-account operators reported that they ran the enterprise from their home, and about a third also reported having some family members helping in the business. However, even these relatively high numbers of own-account and home-based enterprises may be an underestimate, since the ISES sampling approach (ACS) is more likely to capture businesses in “visible” marketplaces, and is therefore less conducive to identifying home-based, own-account enterprises and mobile businesses.

Other measurement issues across different enterprise surveys can lead to underreporting of small-scale enterprises and workers. This includes proxy reporting and respondent selection more broadly. Depending on the respondent for the enterprise module, there can be significant differences in knowledge of the enterprise and what is reported (Koolwal 2021). Seasonality of work is especially characteristic of informal enterprises and this also contributes to underreporting, as do norms that overlook work in family enterprises by household members, especially by women. These factors complicate an assessment of labour productivity of such enterprises (Kilic et al. 2023).

In many low- and medium-income countries, agricultural enterprises also comprise a large share of national enterprises and employment. However agricultural enterprises are typically not covered in many enterprise surveys or modules, including the ISES, LSMS and other country-specific enterprise surveys. The 21st ICLS resolution on statistics on the informal economy now explicitly recommends that agricultural enterprises be included within the framework of the informal economy.²

B. Enterprise performance

Apart from the identification issues discussed above, informal enterprise surveys often do not provide sufficient information on their working environment and factors affecting performance for the development of policies to improve the performance of small and micro enterprises.

1. Earnings, costs and profits

Across many labour force surveys, data on earnings are often not available for specific groups of workers, such as self-employed workers who do not have formal accounts. Earnings of the self-employed are especially difficult to measure in both household and enterprise surveys. These workers may be engaged in multiple and/or seasonal economic activities, receive payments intermittently and/or through different mechanisms (e.g., piece-rate, in-kind and/or labour-sharing arrangements) and there is no clear separation between household (i.e., household consumption expenditure) and enterprise finances.

Standard approaches to asking about revenues, specifically self-reporting and recall over the past month or even year, can lead to reporting errors and biases. Similar issues exist around costs and, as a result, profits as well as asset values and other related variables. Recall issues are compounded among informal micro-firms that may not have standardized accounting practices.

² One of the objectives of the ILO project is to establish how to cover agricultural enterprises in phase 2 of the 1-2-3 survey. In these surveys the labour force survey is the starting point.

2. Working environment, and constraints to expanding operations

Enterprise surveys typically lack data on working environments relevant to informal enterprises. This includes harassment in the workplace and the need to bribe authorities; price setting/lack of ability to bargain over prices; and underinvestment in local infrastructure (including in electricity, transport and markets) (Chen forthcoming). The lack of data on these constraints also has implications for understanding earnings and costs, which are very sensitive to working conditions.

Data are also needed on aspects of business networks and investment. These include participation in business associations (see Joubert and Beegle 2025), capital and labour investments, and engagement in supply chains.

Change is endemic to most informal enterprises. However, the largely cross-sectional nature of surveys makes it difficult to study enterprise informality as a dynamic process (entry, exit, formalization/reform) or to establish causal relationships between constraints and performance.

III. Relevant indicators from ISES and household surveys

Annex 2 provides indicators on the characteristics and operation of informal enterprises covered in the ISES and LSMS. There is significant overlap in indicators. Both the ISES and LSMS collect data on owner characteristics, including demographic data on owners and the nature of their businesses. Both surveys also cover firm size and composition, hours of operation and household participation in business activities. Depending on when the survey was undertaken, the ISES includes questions on workforce changes since the COVID-19 pandemic. Indicators on production, output and performance are covered in both surveys. These include revenue, profits and market access, and questions on financing and access to credit, technology adoption and the overall business environment, identifying constraints and barriers to growth. The ISES collects data on record keeping, compliance with legal requirements, perceived regulatory challenges and reasons for business locations.

Both the ISES and LSMS include variables to establish the formal/informal status of the enterprise. However, the standardized questionnaire in both the ISES and the LSMS does not include the updated criteria for operationalizing formality and informality as defined by recent resolutions of the 20th and 21st ICLS. The application of the new standards in these surveys, specifically the status in employment categories in the International Classification of Status in Employment (ICSE-18) (the 20th ICLS resolution) and the criteria to identify the informal sector (the 21st ICLS resolution), would contribute greatly to the value and quality of the data produced.

While the questionnaire structure is similar across different ISES countries, some country surveys have introduced a set of country-specific questions. Depending on the country, there may be missing data or variables from the full range of indicators in **Annex 2**. The data may also be affected by measurement errors discussed in Section II, including underreporting of micro enterprises and recall errors in reporting earnings, costs and profits, and a lack of granular data on constraints to expanding operations. These problems have important implications for understanding the performance and productivity of informal enterprises.

IV. Case studies: India and Ghana

India and Ghana are useful case studies for considering the measurement issues discussed above. Both have had ISES surveys alongside country-led, large-scale surveys with data on informal enterprises. In India, the 2022 ISES was conducted concurrently with the 2021-2022 Annual Survey of Enterprises in the Unincorporated Sector (ASUSE). The ASUSE coverage is national and limited to enterprises that are (i) non-agricultural, (ii) non-corporate, (iii) non-registered under the Factories Act, 1948, or Bidi and Cigar Workers (Conditions of Employment) Act, 1966, and (iv) non-governmental. In recent years, the ASUSE has been conducted yearly. The Annual Survey of Industries is another large-scale enterprise survey in India but covers only enterprises in the manufacturing sector registered under specific statutes.

In Ghana, along with the ISES, the nationally representative Annual Household Income and Expenditure Survey (AHIES) is similar in structure to the Ghana Living Standards Survey (GLSS) initiated as part of the World Bank LSMS. The AHIES also has LSMS-type household employment and nonfarm enterprise modules.

Measurement issues discussed here are relevant for country revisions to the International Standard Industrial Classification (ISIC), as well as the ILO's upcoming revisions to the International Standard Classification of Occupations (ISCO-08) (for India's recent revisions to ISIC, see MOSPI 2025; for ISCO, see Badre 2024). These revisions may also provide an opportunity for further collaboration with efforts to improve household enterprise survey data (Castaing et al. 2025).

Since comparative analyses were not conducted earlier based on the India ISES, the discussion on India below provides new comparisons between the ISES and the 2021-2022 ASUSE. For Ghana, the discussion focuses on findings from recent studies that have compared enterprise counts and outcomes in the Ghana ISES, also conducted in 2022, with concurrent household surveys that have an enterprise module. Many of the measurement issues highlighted in the India analysis apply to the Ghana ISES, and other country ISES as well. The general aim of Section IV is to provide greater understanding of available data and gaps within each country, to further a discussion of potential areas for improving enterprise statistics.

A. India: comparing the 2022 ISES and 2021-2022 ASUSE

An analysis of the questionnaires and findings of the 2022 ISES and the 2021-2022 ASUSE illustrate some of the key measurement issues raised in Section II. Data in the ISES and the ASUSE are self-reported through face-to-face interviews with owners or managers, as opposed to reliance on proxy reporting (Aberra et al. 2022; MOSPI 2024). The listing of enterprises by physically visiting each household and enquiring about activities of each person in the household is a crucial step in including home-based enterprises in the sample. However, the two surveys vary in concepts and methods, hampering a full understanding of what contributes to differences in estimates across surveys.

Both surveys have area-based samples but cover different sampling approaches. ISES is an adaptive cluster survey of several cities, while ASUSE is a nationally representative survey based on household and enterprise listings (see MOSPI 2024, for more detail). Another major difference is the criteria for identifying unregistered enterprises. The ISES, as noted earlier, samples enterprises that are not registered under any local or national authority but does not provide details on the specific acts or authorities. By contrast, the ASUSE sample excludes enterprises registered under a number of specific national acts.³ In addition, in the ASUSE, the operator is also asked whether the enterprise was registered under “any act or authority” with specific examples, ending with “any other act not covered above”.⁴ In the analysis below, ISES is compared with a sub-set sample of the ASUSE comprised of enterprises responding “no” to this second question.

The analysis focuses on the data available on the numbers and characteristics of informal enterprises across all enterprises in the ISES, and urban, nonregistered enterprises in the ASUSE, drawing attention to survey administration, data quality and additionally needed data. Since the ASUSE

³ The main ASUSE sample excludes units registered with the following: (i) Corporates registered under Companies Act; (ii) Establishments registered under Factories Act; (iii) Establishments registered under “Bidi and Cigar (Conditions of Employment) Act; (iv) Establishments Registered with the Central Electricity Authority (CEA); (v) Establishments registered under Limited Liability Partnerships (LLPs) Act; (vi) Government/Public sector establishments.

⁴ Response categories for this additional question include registration under the Shops and Establishment Act; Indian Trust Act, 1882 (including the State Public Trust Act); Societies Registration Act, 1860; Co-operative Societies Act, 1912; “club/association of persons/body of individuals”; or “any other act not covered above.”

has details on locations of enterprises down to the city (and within-city) level, future work may explore a more granular city-level comparison of enterprise counts and performance, following the approach in Ghana discussed below by Amankwah et al. (2025).

1. Identification of informal enterprises

The 2022 India ISES covered 31,783 unregistered enterprises across nine cities, based on a survey sample of around 10,600 (**Table 1**; see World Bank 2022a).⁵ The 2021-2022 ASUSE surveyed 416,226 establishments, of which roughly 176,000 were urban.

Data on the number of employees in the ISES can be used to identify own-account enterprises (see available indicators in **Annex 2**). The resulting data show that the share of own-account workers in each city varied from 31 per cent in Tezpur to 78 per cent in Ludhiana (**Table 1**). In general, the share of own-account enterprises for most cities in the ISES tended to be lower than what is reported among urban unincorporated enterprises in the 2021-2022 ASUSE. Based on the ASUSE data, 88 per cent of enterprises that do not keep accounts and are not registered are own-account, compared to 77 per cent of all urban enterprises. However, as the criteria for registration are different in the two surveys, the interpretation of these comparisons is not clear.

Since the sampling approach of the ISES is based on lists of informal businesses within neighbourhood block areas, the less-visible single person or family units operating within their own homes may be underreported. Within the ISES, 14 per cent of informal enterprises reported being home-based, compared to 44 per cent of enterprises in the ASUSE. The differences in findings related to own-account enterprises, home-based enterprises and economic activities point to the need for further review and assessment, particularly relating to the listing of establishments, sampling design and coverage. Consideration needs to be given to the resolutions of the 20th and 21st ICLS in identifying informal units in the design of enterprise surveys (ILO 2024a).

Table 1. Cities covered in 2022 India ISES

	Number of enterprises	Universe of blocks	Number of blocks enumerated	% of blocks enumerated	% of own-account workers
Hyderabad	6,414	29,308	2,045	7.0	52
Jaipur	4,312	17,569	1,620	9.2	67
Kochi	1,213	3,622	424	11.7	47
Ludhiana	2,091	9,296	658	7.1	78
Mumbai	8,400	16,177	3,400	21.0	59
Sehore	1,032	2,100	314	15.0	49
Surat	6,334	11,052	1,854	16.8	60
Tezpur	611	1,058	336	31.8	31
Varanasi	1,376	4,113	352	8.6	47

Another challenge is identifying the industry sector of the enterprises. In the ISES, enterprises are classified into one of three broad categories of (a) manufacturing, (b) retail, or (c) services (**Table 2**), with detailed activities following ISIC codes. A large share of enterprises, however, report “other” in each of the broad industry categories (13 per cent within “other” manufacturing, 10 per cent in “retail/selling other goods” and 26 per cent in “other service activities”). More detailed information on these activities would be important in understanding enterprise performance. The National Industrial Classification (NIC) codes used in ASUSE are based on ISIC, although concerns have been raised recently (see Raveendran and Singh forthcoming) about how the introduction of special industry codes in different years creates trend breaks that affect the reliability of estimates of informal enterprise. Another problem is that the ASUSE excludes activities in construction and mining.

⁵ The share of blocks enumerated varied widely across cities in each ISES survey; survey weights are used to adjust for this sampling approach.

Table 2. Activities reported by enterprises in 2022 India ISES (all cities)

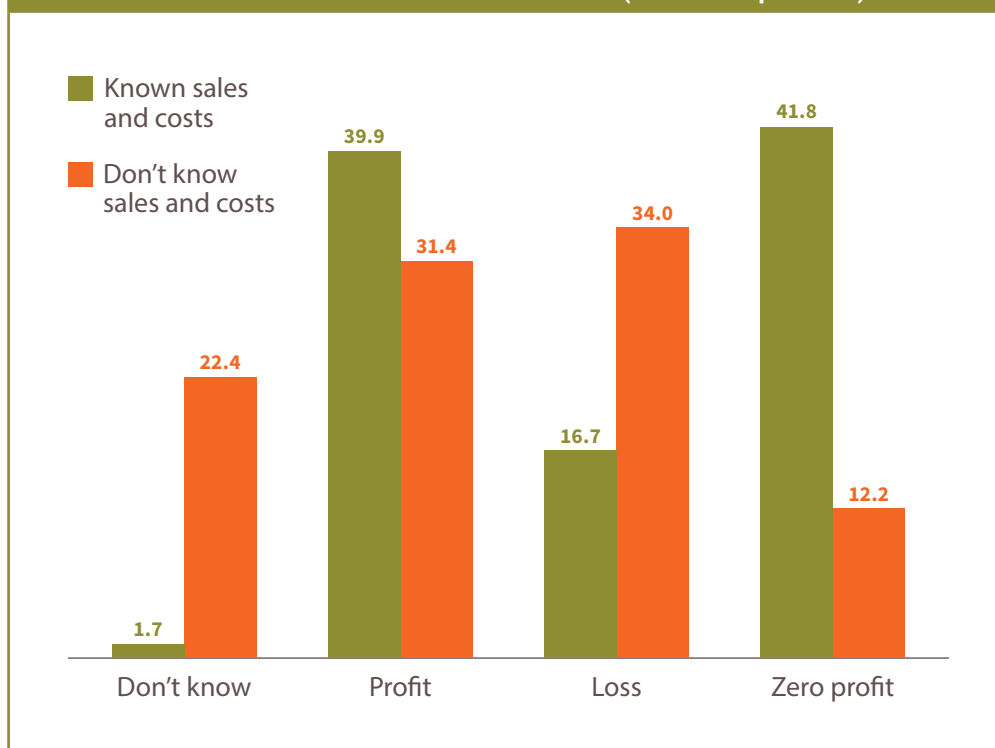
Main Business: Manufacturing	Per cent	Main Business: Retail	Per cent	Main Business: Services	Per cent
Manufacturing of clothes or shoes	17.2	Selling of clothes or household items	8.9	Transport services	2.3
Manufacturing of food (including bakers)	18.9	Selling of business/computer/phone serv	1.7	Cleaning and washing services	13.8
Manufacturing of coffee, sugar, oil, drinks	20.3	Selling of tobacco, cigarette, bidi, paan	9.3	Hairdressers and barber shops	14.0
Manufacturing of handcrafts	13.5	Selling of medicines, pharmacy	0.6	Professional services (including internships)	8.0
Manufacturing of furniture	10.0	Selling of agricultural products	0.5	Construction	2.5
Manufacturing of metal products	3.4	Selling of raw meat and animal products	3.0	Domestic worker/cook/sweeper/night security guard	5.9
Manufacturing of household items	1.8	Selling of food products for immediate consumption	24.5	Cobbler	2.1
Manufacturing of tools and instruments	1.8	Reselling of finished food products	25.6	Real estate brokers	0.7
Other manufacturing	13.1	Selling of fruits and vegetables	16.2	Sound and music services, decorators	2.0
		Selling of other goods	9.9	Agents (for various products and services)	1.2
				Event management services	1.6
				Ayurvedic centre (consulting, medicine)	1.4
				Repair of motor vehicles and motorcycle	11.9
				Repair of machinery and equipment	4.6
				Repair of computers, personal and house	2.4
				Other services	26.0

2. Sales, costs and profits

Within the ISES, enterprises were asked the value of sales and the costs of labour for the last month and for an average month. The responses supported concerns raised above on substantial measurement error in reporting sales and costs. Around 20 per cent of enterprises in the India ISES did not know what their sales had been in the last month, and 22 per cent did not know the cost of labour in the last month.

For the two questions on profits in the survey, those who reported not knowing their sales and costs were also more likely to report not knowing their profits, or whether a loss had been incurred (figure 1). For profits in the last month, the ISES asked a categorical question on whether the enterprise had (a) a positive profit, (b) loss, (c) breakeven/zero profit, or (d) didn't know. Figure 1 shows that 22 per cent of enterprises that did not know their sales and costs also did not know details about their profits in the last month, compared to around 2 per cent among enterprises that reported sales and costs. Enterprises that did not know their sales and costs were also much more likely to be worse off than other enterprises, with 34 per cent reporting a loss compared to 17 per cent of enterprises that did know their sales and costs.

Figure 1. Knowledge of profits in the last month by whether enterprises knew the last month's sales and labour costs: India ISES 2022 (share of respondents)



By contrast, only about 6 per cent of non-registered urban enterprises in the ASUSE had missing data on sales, and only 8 per cent had missing cost data. Details of costs and sales were reported in separate blocks in the ASUSE. Non-market establishments did not sell any products, so reported no sales or costs.

The findings highlight the large share of enterprises in the ISES – even among those with a profit – that are not able to report key accounting figures accurately. It would be important to know if this lack of information is due to a problem with the questionnaire, data collection method, or business practices or constraints faced by informal enterprises.

3. Record keeping

Maintaining records/keeping accounts is key to keeping track of sales and costs, as well as contracts and suppliers, but this practice varies widely across establishments – not only in the incidence of record keeping across enterprises, but in the types of records kept. In the India ISES, 32 per cent of enterprises reported keeping written business records, compared to only 4 per cent of urban enterprises in the ASUSE who “kept accounts”. Across cities, the share of enterprises in the ISES reporting that they kept written business records ranged from 7 per cent to 73 per cent (World Bank 2022a). Some of the variation may be in how questions are interpreted by respondents. Among those in the ISES who did not report keeping written records, 24 per cent reported that they keep business accounts separately from regular household expenses/accounting. **Table 3** shows that, while enterprises that keep written business records are more likely to keep budgets, etc., substantial shares of those not keeping written records also responded affirmatively to questions about other forms of record keeping in the ISES.

The India ISES data highlight the variation in types of record keeping within informal enterprises (including a substantial share that keep written records and maintain some accounts separate from household expenses, even if not written). The low share of urban enterprises in the ASUSE that keep accounts reflects far less variation. Greater clarity around a core set of questions, including on how enterprises keep records, is needed, particularly as the measures of record keeping/accounting substantially affect an understanding of informal-enterprise activity (Castaing et al. 2025).

Table 3. Enterprises adopting different types of accounting methods, by whether they keep written business records: India ISES, 2022 (per cent)

	Keeps written records	Does not keep written records
Has written budget for monthly costs	62.9	29.3
Made budget for costs for next year	51.6	20.3
Has a target for sales over next year	38.0	13.7
Compares actual sales to target on a monthly basis	15.7	10.1
Never compares actual sales to target	37.1	50.5
Prepares a profit/loss statement at least once a year	59.8	19.9
Number of sampled enterprises	3,637	6,943

4. Productivity

For labour productivity measurement, both the ISES and the ASUSE have questions on the hours the establishment and its worker(s) normally work over the last month, but without breaking down time-related inputs by individual workers. Constructing a measure of labour productivity is limited to the aggregate measure of hours worked by the enterprise. However, around 16 per cent of enterprise operators in the ISES were not able to recall how many hours the enterprise is normally operational in a month. In total, about 30 per cent of enterprises in the ISES did not know either their sales in the last month and/or hours of operation in the last month, confounding an even rough calculation of productivity. Within the ASUSE, the hours of operation in the last month were estimated by using a shorter recall period (number of hours the establishment normally worked in a day over the month, which could be used to calculate average monthly hours). There were no missing responses for this variable in the ASUSE. The narrower reporting period of a day versus a month was helpful in obtaining information. However, given the variation in the business activities of informal enterprises even over short time periods (due to seasonality, irregular income flows, uncertainties over input costs and other factors), using hours within the last day to extrapolate over the entire month is not ideal.

Constructing viable measures of workforce composition is another challenge in both the ISES and ASUSE. In the ISES, 27 per cent of enterprise owners reported not knowing how many paid workers were employed in the last month; for unpaid workers, this share went up to 39 per cent. In the ASUSE, on the other hand, there were two questionnaire modules on the number of workers; for enterprises with workers. The first asked about the number of individuals who work for the enterprise in an average month – not distinguishing paid versus unpaid workers. This question was asked over different quarters in the year (missing responses range, on average, from 10-15 per cent across quarters). The second module was similar to the ISES and asked the number of hired workers and unpaid family members who had worked during the last month. A key problem, however, was that the ASUSE module did not distinguish zero versus unknown (missing) responses. Only around one per cent of urban enterprises in the ASUSE had no response for hired workers, but 87 per cent had no response for unpaid family workers. Whether these enterprises had no unpaid workers at all, or did not know how many they had, is an open question. A distinction between these different situations needs to be made in future questionnaire design.

Reporting of all workers in an enterprise is a problem in enterprise surveys, particularly for unpaid workers. Testing different approaches that vary by recall time periods and season, as in the ASUSE, can be helpful in understanding at least a range of labour productivity estimates for these enterprises.

Finally, there is a measurement challenge in obtaining the data on capital assets required to construct reliable measures of total factor productivity. The ISES asked enterprises whether they owned vehicles, as well as whether machinery or equipment were used in the business, but not the value of these assets. Without data on the value of assets, even a rough measure of total factor productivity cannot be constructed. In the ASUSE, businesses are asked about the value of different land and non-land assets used in business activity. However, questions on the value of assets are time consuming to answer and also likely to be subject to substantial nonresponse, particularly among women (Hasanbasri et al. 2025).

5. Contracts

The ISES has data on whether enterprises have contracts or agreements around input purchases and/or sales, as well as a question on whether the enterprise had attempted to negotiate with their supplier for a lower price. Fifty-three per cent of enterprise owners reported that they had tried to negotiate with their supplier on pricing. However, among those who responded “no”, it was unclear whether they wanted to, tried and could not, whether the pricing was actually favourable to them, or if there was another reason. Additional data on types of working relationships – including whether there are written or verbal contracts and the length of commitment – are also important for policy design. The ASUSE has just one question on whether the enterprise (a) works on contract solely for another establishment or contractor; (b) is mainly on contract but also sells goods or services directly to other customers; or (c) mainly sells directly to customers but also on contract. The rise of gig and digital platform work calls for the implementation of the employment status categories in ICSE-18 to classify these workers correctly (ILO 2024b; Koolwal, Carré and Vanek 2024).⁶

6. Constraints to operations

The India ISES only had a few questions on constraints in the operation of the enterprises. Enterprises were asked if the supply of electricity and, separately, water, used in their business operations was sufficient. Around 40 per cent reported insufficient electricity as well as water. About 16 per cent said that the business had experienced harassment by government officials or the police.

Expanding the set of questions on constraints faced would be important for policy discussions around improving productivity. The ASUSE has a more detailed set of issues. Operators were asked to report, among a set of response categories, “the (most and next-most) severe problems faced by the establishment” over the last year (**Table 4**). “Shrinkage/fall of demand”

was reported by 56 per cent of respondents as the most severe problem, and another 16 per cent reported it as the next most severe problem. Natarajan and Sen (2026) also use earlier rounds of the ASUSE to show that falling demand is the most severe constraint enterprises face.

Table 4. Problems reported by urban non-registered enterprises over the last year, by most severe and next most severe: India ASUSE, 2021-2022 (per cent)

	Most severe problem	Next most severe problem
Erratic power supply/power cuts	3.7	1.9
Shortage of raw materials	4.2	4.1
Shrinkage/fall in demand	56.0	15.9
Non-availability/high cost of credit	6.4	16.2
Non-recovery of financial dues	5.8	19.8
Non-availability of labour as and when needed	0.5	1.2
Non-availability of skilled labour as and when needed	0.2	0.8
Labour disputes and related problems	0.1	0.2
Other	23.2	40.0

The response option for “shrinkage/fall in demand” was removed in the 2023-2024 ASUSE round. The expert team in the WIEGO- and SEWA-led initiative in India has recommended to the Government of India that this response option be reinstated in future rounds of the ASUSE. They have also recommended including response options on other relevant constraints, including (a) macroeconomic trends, crises such as pandemics and other shocks; (b) government policies and programmes that result in lack of secure tenure for the workplace; harassment, bribes and confiscation of goods; and

⁶ Dependent contractors maintain an intermediate status in employment between independent self-employment and dependent wage work (see ILO 2023b). They are economically dependent on another economic entity (such as sub-contractors) and do not exercise control over many of the decisions involved in their activities, such as how much to charge for their production or what to produce and how.

evictions without relocation to adequate areas; (c) price-related constraints, including price shocks and lack of ability to set prices for one's goods; and (d) lack of basic infrastructure, and inadequate transportation and public procurement (Chen forthcoming).

The team has also recommended a greater focus on covering micro informal enterprises, especially single-person or family units and those owned by women; and identifying whether home-based enterprises are truly independent or dependent on supply chains for contracts.

B. Ghana: comparing ISES and household-based enterprise surveys

For Ghana, the comparison of the number, and performance, of enterprises in the ISES and in other 2022 surveys of household nonfarm enterprises is based on several existing studies. **Table 5** presents a breakdown of the sample of enterprises in the 2022 Ghana ISES (World Bank 2022b). Since the questions asked in the Ghana ISES and the India ISES are similar, the indicators listed in **Annex 2** are relevant to both surveys. The studies from Ghana discussed in this section found similar measurement problems to those for India, including undercounting of enterprises in the ISES. However, these studies also found that the ISES provides information consistent with other surveys in Ghana on factors that affect enterprise performance.

Table 5. Cities and sampling information: 2022 Ghana ISES

	Number of enterprises	Universe of blocks	Number of blocks enumerated	% of blocks enumerated	% of own-account workers
Accra	12,277	15,208	1,447	9.5	60
Kumasi	13,243	9,766	1,273	13.0	53
Tamale	5,113	24,869	1,279	5.1	45

Note: Number of enterprises represents unweighted observations

Amankwah et al. (2025) compare the 2022 ISES with a 2022 LSMS household nonfarm enterprise module that was aligned with the Ghana Living Standards-7 structure, and within the same geographic areas in Ghana (Kumasi and Tamale). They conducted a head-to-head methodological assessment comparing enterprise counts, as well as socioeconomic characteristics of these enterprises. They found substantial undercounting of enterprises in the ISES compared to the LSMS. In Kumasi, for example, the LSMS counted around 120,000 enterprises, compared to 68,000 in the ISES; in Tamale, these numbers were 89,000 and 21,000, respectively. Apart from difficulties in surveying less-visible enterprises, they also discuss how the “real-time” survey approach in the ISES, that is, asking respondents only about current activities with no recall, can limit observation of enterprises operating outside peak hours, including night markets. The study also examined the risk that household survey approaches may double-count enterprises that are co-owned by multiple households. The analysis of the household survey, however, shows that among nonfarm enterprises that belong to co-owning households, nearly all (99 per cent) differed in terms of location and owner, while 93 per cent were uniquely geographically located as per their GPS coordinates, so the risk of double counting was likely to be low.

Despite count discrepancies, Amankwah et al. (2025) found that both survey instruments delivered similar descriptives on enterprises and consistent drivers of performance: bank account ownership, retail sector, mobile phone use, fixed premises outside the dwelling, and enterprise age correlated positively with sales and labour productivity. Further, home-based and mobile operations, and higher female workforce shares each correlated negatively with performance as measured by overall sales and sales per worker. Nevertheless, in regressions controlling for a range of socioeconomic variables, enterprises in the ISES had significantly lower sales and productivity than firms in the LSMS nonfarm household enterprise module. Overall, the authors recommend tightening ISES field protocols to mitigate undercount to better capture less visible and mobile/off-hour firms. In addition, multi-activity/co-ownership overcounts should be corrected, and question design across questionnaires should be harmonized.

Joubert and Beegle (2025) also highlight similar performance-related outcomes by comparing two Ghana surveys conducted in 2022 – the Ghana Informal Sector Measurement Study, a household-based survey in Ashanti and the Northern regions, and the ISES survey covering Accra, Kumasi and Tamale. They found low business association membership among informal microenterprises in both surveys (6 per cent in the ISES and 7 per cent in the household survey). Association membership was highly concentrated in specific trades: tailors (around 25-29 per cent), transport operators (around 20 per cent) and hairdressers/barbers (around 13 per cent) were much more likely to be organized, while retailers (around 1-3 per cent) and food vendors and weavers were rarely organized. Association membership was also more common among older, larger, incumbent firms and in sectors with higher needs for technical skills, but in regressions controlling for socioeconomic characteristics, men were less likely to be members than women (significant in the ISES, and negative but not significant in the household survey).

In summary, studies from Ghana show that household-based enterprise surveys produce a much higher number of enterprises than the enterprise-based survey; however, both types of surveys provide similar findings on the drivers of informal-enterprise performance.

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Annex 1

Accessing the World Bank ISES and LSMS

The World Bank provides free access to microdata, but the access points for Enterprise Surveys and LSMS household surveys differ slightly.

1. Informal Sector Enterprise Surveys (ISES)

- **Website:** Enterprise Surveys Portal, “Informal Sector Enterprise Surveys” tab
- **Access:**
 1. **Navigate:** Go to the [Enterprise Surveys Data Portal](#). You must create an account (free). Click "Log in" or "Register" at the top right.
 2. **Filter:** On the left hand side, under **Survey type**, filter by **Informal Enterprise Survey**. The currently available surveys, as well as documentation, are downloadable as zip files.

2. Living Standards Measurement Study (LSMS)

- **Website:** [World Bank Microdata Library](#), specific hub: [LSMS Website](#)
- **Access:**
 1. **Navigate:** Go to the [Microdata Library](#).
 2. **Search and filter:** Use the search bar to type the country name or filter by "Collection" selecting **LSMS**. On the left hand side, select year range of interest. Available surveys will come up as a list. You must register, log in, and fill out a short application form explaining your research. Approval is usually automatic or very fast (24-48 hours).
 3. **Download:** Once inside the dataset page, click the "Get Microdata" tab.

Annex 2

A. Indicators: Informal Sector Enterprise Surveys

- **Enterprise and owner characteristics**
 - Owner demographics (age, gender, education, years of experience)
 - Enterprise age (can construct by months and/or years)
 - Sector and main activity; sub-sector
 - Type of premises (within household; non-household with permanent structure; non-household with temporary structure; non-fixed premises)
 - Number of owners; ownership shares; involvement of household members
 - Share of owners that ever had a job with a contract (whether temporary or permanent)
- **Firm size and composition**
 - Number of paid and unpaid employees (including by highest and lowest number in the past year); share of family vs non-family workers
 - Share of workers who are women (independent of paid/unpaid)
 - Share of businesses where the number of workers (family and non-family) has increased, remained the same, or decreased since the Covid-19 outbreak
 - Share of workers that can read, write, and/or use a computer
- **Location and infrastructure**
 - Reason started business: (a) convenience of location or hours; (b) opportunity to start and develop a profitable business; (c) to have a secondary source of income; (d) unable to find another source of income
 - Share of businesses that locate within the household because of (multiple answers permitted): (a) costs less, (b) easier to manage family responsibilities, (c) no benefit to working outside household, (d) safer, (e) minimizes chance of being identified by tax authorities
 - Share of businesses whose main reason for choice of location is because of (one of following): (a) access to customers, (b) access to food and toilets, (c) access to water and electricity, (d) safety, (e) freedom from harassment
 - Share of businesses that require electricity to produce goods or provide services
 - Share of businesses connected to grid
 - Share of businesses that experienced power outages in last month
 - Share of businesses that use water for its operations
 - Share of businesses that experienced insufficient water supply in last month
 - Share of businesses that use (a) computers or tablets, (b) cellphone or smartphones for its operations

- **Hours and financial performance**

- Hours of operation
- Number of months per year the business operates
- Total sales of business in last month, and regular month
- Share of businesses whose total sales have increased/remained the same/decreased since Covid-19 onset
- Share of businesses who report their prices are lower/roughly similar/higher than registered businesses who offer similar products or services
- Total costs of workers in last month
- Total costs of electricity in last month
- Net profit or loss of business in last months (higher than usual, lower than usual, the usual)
- In last completed month, share of businesses that made (a) a profit, (b) a loss, (c) zero profit
- Share of businesses that had to (a) change location of business, (b) change products sold or services rendered, (c) adapt no-contact sales method, due to Covid-19 outbreak

- **Assets**

- Share of owners who own the location or space occupied by the business
- Share of businesses that use any machinery or equipment in current operations
- Share of businesses that use vehicles, cycles, carts and/or other modes of transport in current operations (not differentiated by type of transport)

- **Record keeping**

- Share of businesses that keep written records
- Share of businesses that keep accounts separately from household expenses
- Share of businesses that have made a budget for costs, and produced sales targets
- Share of businesses that are aware of registration practices in the central/provisional/district levels
- Share of businesses that are not registered due to (multiple options possible): (a) cost and time, (b) lack of information, (c) no benefit, (d) taxes, (e) did not want to incur inspections/meetings with officials, (f) did not want to make informal payments/bribes
- Share of businesses that believe that registering could provide one or more of the following benefits: (a) better access to financing/loans, (b) better access to raw materials, infrastructure services, government services, (c) fewer informal payments to pay, (d) better access to potential customers
- Share of businesses that have to give gifts, informal payments or bribes to continue operating

- **Business practices**

- Share of businesses producing or providing services under a contractual or other agreement for another business or person
- Share of businesses purchasing inputs or supplies under a contractual or other agreement
- Share of businesses that have tried to negotiate with supplier for a lower price
- Share of businesses that have engaged in different market research activities (e.g., in India ISES visited competitors to see what products they had; asked customers whether they should sell or produce any other goods; talked with former customers; used special offers to attract customers; asked suppliers which products were selling well)

- **Access to finance**

- Share of businesses financing their operations through bank loans, microfinance, supplier credit, family/friends
- Share of owners that have a bank account to run the business or activity
- Share of businesses that use mobile money for operations
- Share of businesses that have received any national or local government support in response to Covid-19 crisis

B. Indicators: Household surveys (with a focus on LSMS Nonfarm Enterprise Survey modules)

- **Enterprise identification and ownership**

- Owner demographics (age, gender, education)
- Start year of the enterprise
- Main activity and sub-activity; sector/classification
- Location (urban/rural, region)
- Form of business (sole proprietor, partnership, family-owned, etc.)
- Ownership structure (e.g., joint owners or profit sharing) within household and across households

- **Formality, licensing, and regulation**

- Existence of business license or permits
- Tax registration status (income tax, VAT)
- Existence of a separate business bank account
- Perceived regulatory hurdles and time to start

- **Enterprise operations and structure**

- Home-based vs. own/rented premises
- Hours of operation and days open
- Number of owners and share of family vs. non-family involvement
- Household participation in the enterprise

- **Employment and labor**

- Number of paid employees; number of family workers
- Hours worked across all workers
- Training provided to employees; skill gaps or needs
- Recruitment difficulties

- **Production, output, and performance**

- Months per year the enterprise is operational
- Revenue/sales in the last 12 months
- Profits or net income; gross margin; total costs
- Production quantity or units produced; price per unit
- Share of output sold to formal vs. informal clients

- **Inputs, assets, and capital stock**

- Value and number of assets (equipment, vehicles, premises)
- Land or premises owned vs. leased
- Inventory levels and value
- Use and costs of inputs; share of imported inputs
- Depreciation and asset replacement plans

- **Financing and access to credit**
 - Access to finance; whether credit was sought
 - Sources of finance (banks, microfinance, supplier credit, family/friends)
 - Loan amounts, interest rates, collateral requirements
 - Credit terms and repayment status
- **Technology, ICT, and digitalization**
 - Use of computers, smartphones, internet
 - Adoption of software, digital payments, online sales
 - Use of ICT to manage inventory, accounting, or marketing
- **Market access and value chains**
 - Primary markets (local, regional, national, export)
 - Relationships with suppliers and buyers; presence of contracts
 - Quality standards, certifications, branding
- **Management, records, and planning**
 - Existence of a formal business plan
 - Use of accounting/record-keeping systems; bookkeeping quality
 - Inventory management practices; budgeting and financial controls
- **Constraints, barriers, and business environment**
 - Perceived major constraints to growth (finance, power, licensing, taxes, crime, etc.)
 - Perceived costs/benefits of formalization
 - Barriers specific to informal operations (recognition, regulations)
- **Time use and household linkages**
 - Time spent on the enterprise vs. other household activities
 - Proportion of enterprise revenue used for household consumption or investment



About WIEGO

Women in Informal Employment: Globalizing and Organizing (WIEGO) is a global network supporting the movement of workers in informal employment, especially women and people living in poverty. We believe all workers should have equal economic opportunities, rights and protections. WIEGO works to expand research and statistics on the informal economy, promote change through policy advocacy, and build collective voice by supporting, strengthening and connecting organizations of workers in informal employment. Visit www.wiego.org

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Statistical Briefs

WIEGO Statistical Briefs are part of the WIEGO Publication Series. They 1) provide statistics on the informal economy and categories of workers in informal employment in accessible formats at the regional, country and city levels; and/or 2) describe and assess the methods for the collection, tabulation and/or analysis of statistics on workers in informal employment.