



**STATISTICS**

# **State of Play: Importance, Conceptual Fragmentation and Weak Data Sources**

**7<sup>TH</sup> IMF STATISTICAL FORUM**

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# Outline

- I. Motivation
- II. Statistical framework: insufficient conceptual framework and fragmentation
- III. Estimation of the informal economy
- IV. Statistical agencies' measurement practices
  - Domestic activities: collection, compilation methods, capacity and resources
  - Cross-border: IMF's Balance of Payments Committee (BOPCOM) Task Force
- V. Way forward

# I. Motivation

# I. Motivation



(PHOTO: HANNAMARIAH/GETTYIMAGES/ISTOCK)

## Measurement of the informal economy is necessary for policymaking:

- Associated with poverty, lower income, lower productivity, and lack of social protections for workers
- Informal economy may respond differently to policies designed for the regulated economy
- Important share of many developing and emerging market economies
- Digital platforms transforming the role of households in production - are they increasing the size of the informal economy?
- IMF research on this topic since the early 1980s
- However, little knowledge! Lacking (official) statistics

## **II. Statistical Framework: Insufficient conceptual framework and fragmentation**

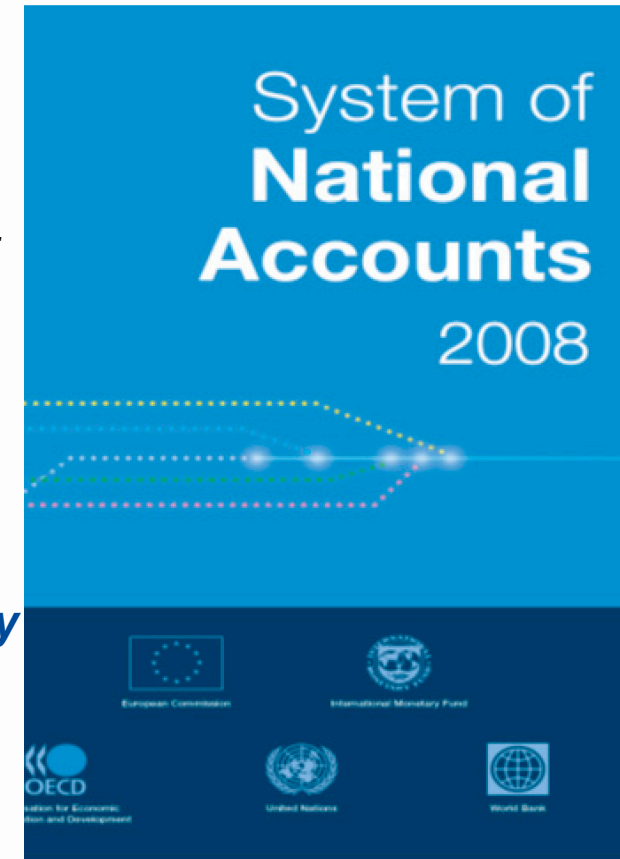
## II.1. What is the informal economy?

- **Term used broadly** to describe the part of the economy that may not be covered in official statistics, production taking place outside the regulated economy, or the production of households
- **Term has been used interchangeably with others** to describe not only the activities, but also consumers, and employment that may elude official statistics
- Diverse presentations at this Forum in part shows that the **informal economy is being interpreted in different ways**
- Also sometimes used interchangeably with **informal sector**
  - Distinction in International Labour Organization (ILO) standards
- Several publications: System of National Accounts, Balance of Payments manual, several manuals/handbooks: ILO informal sector and informal employment, OECD Handbook

## II.2. Informal Economy in the 2008 System of National Accounts (SNA)

2008 SNA chapter 25 outlines two approaches with different goals:

- Ensure that all activities including those that may be described as “hidden” or “underground” are encompassed in measures of total activity
  - **Goal is an accurate measure of economic activity**
- Define what is meant by the **subset of economic units** that can be considered “**informal**”
  - *Recognizes the analytical importance, especially in developing countries, of measuring that part of the economy that reflects the contribution of people without formal jobs to economic activity*
- The goals and concepts of the two approaches in the SNA overlap but they are **NOT** the same.
  - E.g. SNA notes that some informal activity can be observed (in a statistical sense)



## II.3. Non-observed Activities

Focus is on exhaustive estimates of activity regardless of the type of activity

**Non-observed activities:** range of activities that are most likely to be non-observed in regular data collection processes and activities that may be missed because of deficiencies in the regular data collection process  
(*The Handbook on Measuring the Non-Observed Economy*, OECD, 2002)



**Informal activities**

Informal sector definition  
(next slide)



**Underground activities**

Activities that are legal but are concealed from the authorities



**Illegal activities**

Production of products whose sale, distribution or possession is forbidden by law

Legal production activities that become illegal when carried out by unauthorized producers



## II.4. Boundary Problems and Overlaps

- May be considerable overlap between informal, underground, and illegal transactions.
- Overlaps could introduce inconsistencies in estimation for a given economy over time.
- Could undermine cross-country comparability as countries adopt conflicting concepts.



**Informal  
activities**



**Underground  
activities**



**Illegal  
activities**

**Where is the  
frontier between  
the three?**

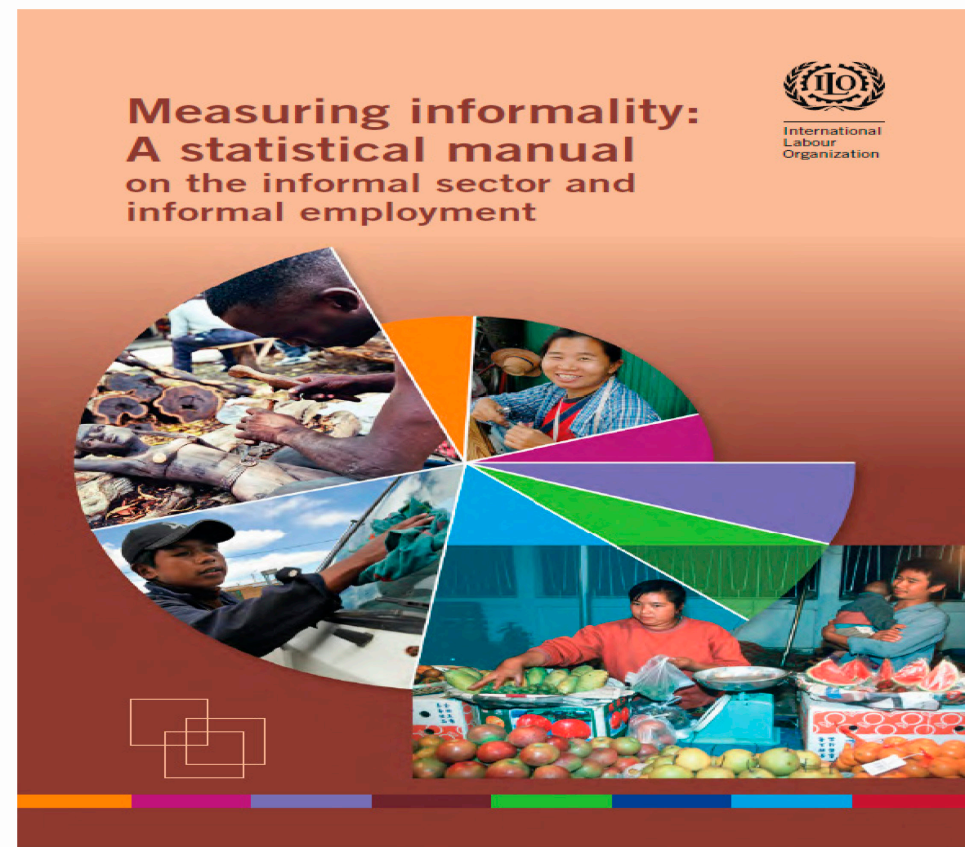


## II.5. Informal sector

**Informal sector:** Consisting of units engaged in the production of goods and services... primary objective of generating employment and incomes to persons concerned. These units typically operate at a low level of organization, with little or no division between labor and capital... Labor relations- where they exist- are based mostly on casual employment, kinship or personal and social relations...

(Fifteenth International Conference on Labor Statisticians, 15<sup>th</sup> ICLS, 1993)

- ILO provides guidance on measurement
- 2008 SNA and Handbook on Non-Observed Economy follow ILO definition of the informal sector
- **Household units engaged in informal activities constitute the informal sector- a subset of the household sector**
  - However, not a formally recognized institutional sector of the SNA
- **ILO currently revising the standards (see Frosch presentation in this session)**



## II.6. Informal economy: cross-border

- Much of the work on exhaustive macroeconomic statistics and unmeasured activity focus on the domestic economy.
- However, some guidance is included in **Balance of Payments Manual (BPM6)**
  - **International accounts cover all economic phenomena irrespective of whether they are illegal or legal**
  - BPM6 address some **informal activity such as shuttle trade** (goods for resale acquired by travelers) and **informal remittances**
- **Eurostat's Handbook on the compilation of statistics on illegal economic activities in national accounts and balance of payments**
  - Provides overview of conceptual and practical issues related to the compilation of statistics on illegal economic activities in national accounts and international accounts

## II.7. Approach for the perimeter

This Forum is a first attempt to revisit the perimeter of what constitutes the informal economy in a practical way.

The informal economy broadly defined should comprise: both **domestic activities and related cross-border transactions**

- ✓ **Households producing goods and market services**
- ✓ **Activities performed by non-registered firms or by registered firms that may be concealed from the authorities to avoid the payment of taxes, or are simply illegal.**
- If activities not covered in regular source data then indirect estimation techniques should be used
- Perimeter excludes production of services for own-final use (e.g. owner-occupied housing)

## II.8. Illicit financial flows

- Related to the informal economy through the production of illegal goods and services
- Considerable debate over definition
- Definition used in IMF Factsheet “...the movement of money across borders that is illegal in its source (e.g. corruption, smuggling), its transfer (e.g. tax evasion), or its use (e.g. terrorist financing)”
  - Illicit financial flows can have a big impact on the economic stability of a country and the broader global financial system.
    - ▶ Can drain foreign exchange reserves, lower tax receipts and reduce government revenue.
    - ▶ Divert resources from public spending and can cut the capital available for private investment.
    - ▶ Illegal flows can also encourage criminal activity, undermining the rule of law and political stability of a country.
    - ▶ Finally, destabilizing flows can have a negative impact on the broader economy.
  - Broader definitions include transactions that are considered undesirable, immoral, or unacceptable
- Task Force on the Statistical Measurement of Illicit Financial Flows launched by United Nations Conference on Trade and Development (UNCTAD) and United Nations Office on Drugs and Crime (UNODC)

# **III. Estimation of the informal economy**

# III.1. Estimation of the informal economy

## Official estimation

- **Official statistics agencies** generally **do not publish specific estimates** of the informal economy. **Focus instead on developing accurate (exhaustive) estimates** of economic activity.
- But this forum shows, even if separate statistics are not published, **countries apply various estimation techniques to account for these activities.**

## Non-official estimation

*Estimates vary, but show that it is large*

- **Based on macro indirect approaches**, such as:
  - Discrepancy between national expenditure and income statistics
  - Discrepancy between the official and actual labor force
  - “Electricity consumption” approach
  - “Monetary transaction” approach
  - “Currency demand” approach
  - **“Multiple Indicators, Multiple Causes” (MIMIC) models**
  - **Dynamic general equilibrium (DGE) models**

## III.2 Estimation of Informal Economy—Country Practices

Survey of the practices of 108 developing economies covered by the IMF's Regional Technical Assistance Centers (Africa, Caribbean, Central America, Middle East, South Asia, Pacific)

Results show:

- ✓ No common, comparable definition of the informal economy
  - ✓ Some include agriculture production by households
- ✓ Difficulty in delineating formal and informal
- ✓ Very different compilation methods
  - ✓ Determined largely by data sources and resource capacity
- ✓ Illegal activities largely ignored



# **IV. Statistical Agencies' Measurement Practices**

## IV.1. Statistical agencies' data collection

- Data collection methods comprise mainly of surveys of individuals and/or households such as household budget (income & expenditure) and labor force surveys
- Enterprise or Establishment Censuses/Surveys
- Living standards measurement surveys (LSMS)- seek to derive qualitative and quantitative measures of poverty- may provide (limited) data on informal activity
- Range of mixed surveys that focus specifically on informal or other non-observed activities
  - Combine two or three modular components that cover individuals and/or households, and enterprises
  - Attempt to identify households engaged in informal activity as a first step, then measure the transactions

## IV.2. Different types of surveys for the measurement of informal sector, by sub-regions in Africa

Types of surveys	Northern Africa	Western Africa	Central Africa	Eastern Africa	Southern Africa	Africa
Mixed surveys (1-2 or 1-2-3)	1	6	4		2	13
Mixed surveys (others)	1		1	3	4	9
Combined surveys		1		1		2
Establishment censuses and surveys	4	9	2		1	16
Living standards measurement surveys (LSMS)		6	1	2	2	11
Labor force surveys	4	2		3	8	17
Total number of countries in region	4	14	6	4	12	40

Source: United Nations Economic Commission for Africa. Xianoning Gong and Jacques Charmes. April 2016. *Incorporating Informal Sector into National Accounts: Country Experience and Practice in Africa*

## IV.3. National Accounts: estimation methods (1)

General indirect compilation methods (emphasis put on measuring total economic activity):

- **Supply based methods:** rely on the supply of inputs that are used in producing goods and services
  - E.g. instead of relying on reports by small construction firms, gross output is calculated from data on sales of construction materials together with estimated labor inputs, fixed capital stock, and profit margins etc.
- **Labor input methods:** labor input estimates provide “weighting factors” to “gross-up” enterprise survey-based estimates
  1. Obtain estimates of supply of labor input to GDP, for selected economic activity and size of enterprise, from a household labor force survey and/or other demographic sources
  2. Obtain estimates of output per unit of labor input and value-added per unit of labor input for the same activity and size breakdown from regular or special purpose enterprise survey
  3. Multiply the labor input estimates by the per unit ratios to get output and value-added for activity and size categories
  - Depends on reliable estimates of labor input and per unit ratios at detailed level of economic activity
  - Can be used to estimate production in total within an economic activity or just that part of production that is non-observed through enterprise surveys

## IV.3. National Accounts: estimation methods (2)

- **Income based methods:** data are available from administrative sources and can be used to obtain an indication of production. Adjustments are usually necessary to account for activities not covered by tax laws and for underreporting of incomes for tax purposes.
  - E.g. tax audits in which samples of tax returns are subjected to detailed examination can provide correction factors to adjust for under-reporting of incomes.
- **Commodity-flow method:** involves balancing total supplies and uses of individual products
  - Effective if a product has one or two main uses
  - Specific application: output of retail trade derived from shares of products passing through and margin rates
- **Supply and use framework:** records total supply and use of goods and services. Can be seen as an economy-wide application of the commodity-flow method
  - Framework helps to detect gaps and inconsistencies in the data
  - Discrepancies between supply-use balances indicate missing items or other weaknesses
  - May give an indication of the extent and level of informal economy activities

## IV.4. Statistical capacity and resource availability

- Unavailability of resources and lack of statistical capacity are key impediments to measuring the informal economy
- Coverage of informal activity requires collection of source data, especially surveys and censuses
  - Household surveys are costly. Many developing countries attempt to undertake these surveys at regular 5 to 10-year intervals, but may be less frequent in practice
- Supply and use tables are useful and some advanced economies compile annually
  - Because of cost and time-consuming nature, are occasional exercises in many developing countries
- Given cost and limitations, **what are the options for addressing data needs and statistical capacity?**

## IV.5. BOPCOM Task Force on the Informal Economy

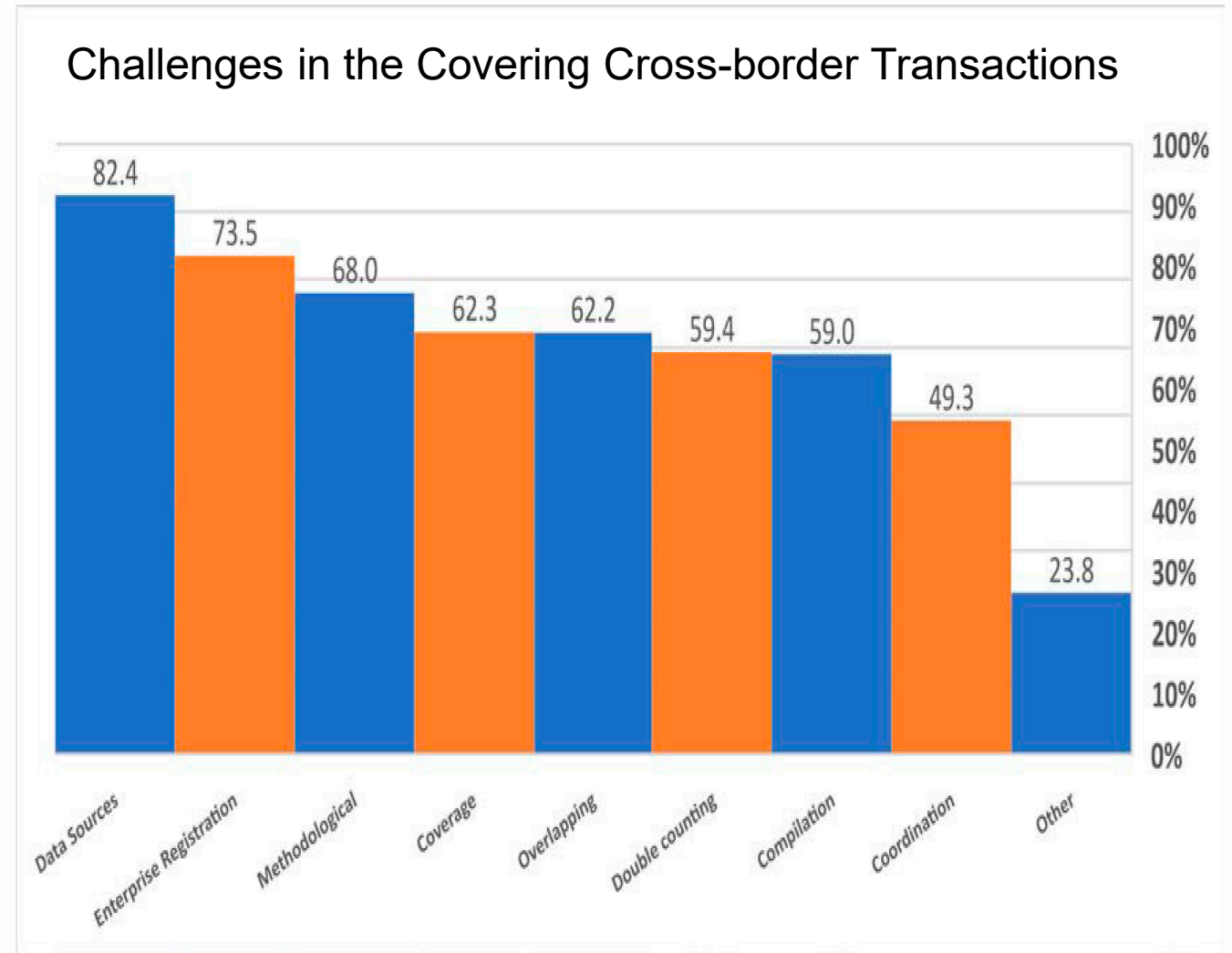
- IMF Committee on Balance of Payments Statistics
  - *A leading cause of gaps in cross-border transactions and positions statistics is the omission of activities that are outside the scope of the regular statistical inquiries and data collection systems*
- Established the Task Force on Informal Economy in 2017
- Proposed a common term “informal economy” and a broad typology comprising informal, underground, and illegal activities

### Objectives

- ✓ Develop an appropriate strategy for addressing existing gaps
- ✓ Promote more comprehensive coverage of transactions and positions in the external sector statistics
- ✓ **Launched webpage that disseminates country practices;** identifying encouraged collection, compilation, and dissemination practices for the international accounts  
<https://www.imf.org/en/Data/Statistics/informal-economy-data>

## IV.6. BOPCOM Task Force on the Informal Economy

- Survey focused on cross-border transactions and positions
  - 111 responses provided by 93 economies in 2018
  - Greatest challenges for compilers:
    - Data sources
    - Enterprise registration
    - Methodology





# V. Way Forward

# V.1. Perimeter of the informal economy

- **Proposed perimeter of the informal economy broadly defined** should comprise: both **domestic activities and related cross-border transactions**
  - ✓ **Households producing goods and market services**
  - ✓ **Activities performed by non-registered firms or by registered firms that may be concealed from the authorities to avoid the payment of taxes, or are simply illegal**
- Does the definition adequately address the measurement parameters?
- IMF is proposing the measurement of the informal economy as a fourth top priority for a future update of the 2008 SNA and BPM6
- International coordination and cooperation is key, including statistical offices and analytical needs

## V.2. Estimation of the informal economy

- **Estimation of the informal economy**
  - Non-official estimates use macro indirect approaches
    - Multiple Indicators, Multiple Causes (MIMIC) and Dynamic General Equilibrium (DGE) models stand out in their year and country coverage (methods used by researchers in this Forum)
  - Official estimates generally do not publish breakdowns of informal versus formal economy
  - **Can/should statistical agencies publish official estimates of the informal economy?**
- **Can we agree on best/good estimation practices for statistical agencies?**
  - General approaches include supply-based methods (including labor input), income-based methods, and commodity-flow method
  - Can there be recommended (standard approaches) to estimate the informal economy especially in the case of weak or lacking data sources?
    - ✓ Identify compilation challenges and how to overcome them
    - ✓ Identify country best/good practices; suitable for statistical capacity and available resources
  - Peer learning, to be facilitated much more forcefully

## V.3. New data sources, techniques, technology

- **Are there new estimation techniques and data sources that can be used?**
  - Satellite nightlights, mobile phone data, and digital platform data are potential new data sources
- **How can official statistics better measure the informal economy?**
  - Critical assessment of data sources, data collection infrastructure, and compilation methods
  - National statistical compilers need resources and access to new and old data sources
- **Goal of the Forum is to identify key takeaways concerning the conceptual and compilation issues for measuring the informal economy**
- **IMF Statistics Department will take note and make recommendations for countries**
  - Special focus on low income countries

**Thank You!**