Measuring the informality in Colombia

IMF Seventh Statistical Forum
November 2019
Outlook

1. Conceptual approaches to informality

2. How measure
   1. Informality in the labor market (GEIH) and informality in firms (Micro Business Survey)
   2. Index of Business Formality
   3. Economic Census 2021
1. Conceptual approaches to informality
Concept of the informal economy

Non-statical perspective:
Informality means legal economic activity taking place below the radar of government. It takes many forms, from the unregistered small firm, to the street vendor, to the large, registered “formal” firm that employs a share of its workers without offering them written contracts with access to benefits and unemployment protection. (Oviedo, A. M., Thomas, M. R., & Karakurum-Özdemir, K. (2009). *Economic informality: causes, costs, and policies—a literature survey*. The World Bank.)

Statical perspective:
Informal economy: refers to all economic activities by workers and economic units that are—in law or in practice- not covered or insufficiently covered by formal arrangements. (104th ILC. (2015). *Recommendation No. 204 concerning the transition from the informal to the formal economy*. International Labor Organization.)
Schools of thought

Dualism
Considers that the economy is made up of two distinct sectors: a formal and urban sector, with a high level of marginal labor productivity; and, a rural informal sector with low productivity and a surplus of unproductive labor.

Legalism
Informality is a consequence of the firm's rational decisions, based on the legal conditions of the economy.

Structuralism
Believes that informality arises as a result of the structural relationship between capital and labor.

Institutionalism
Informality is the result of transaction costs and the regulatory market.

Index of business formality
2. How we measure
2.1. Informality in the labor market (GEIH) and informality in firms (Micro Business Survey)
Informality metrics in Colombia: How we currently track the phenomenon

Currently the definition adopted by DANE for the measurement of informal employment refers to the 15th ICLS resolution of 1993 and to the recommendations of the DELHI group: A worker is considered informal if he works in an establishment of up to five workers, excluding the independent ones who are dedicated to their profession and to government employees. On the other hand, it is considered that social security is also an important approximation to the degree of formality of employment.

Flow of Characterization:

1. Household surveys application
   - Great Integrated Household Survey (GEIH, for its acronym in Spanish)
     - Structure of workforce
     - Sociodemographic characteristics of the workforce, including social security access

2. Zoom on Self-employed and micro-business owners with a maximum of 9 people employed
   - Micro Business Survey (Applies to target population identified through the GEIH Micro Business Module)
1990
- National Economic Census
- Start micro-estabishments survey

2002 – 2008
- Evolution and structure
- 14 metropolitan areas

2005 - 2011
- 24 metropolitan areas

2012 - 2016
- Start of the establishments panel

2012: Pilot test of the micro-business module (Employment Survey)

2013 - actuality: Starts continuous collection of the Micro-business module

2019: 28/5000
Micro Business Survey
- Two-stage mixed survey application
- First phase: Identification of micro businesses
- Second phase: Economic form widely applied
How we currently track the phenomenon

Employers
Self-employed

Unpaid Workers or Family Members

Own-account
Employers

Salaried
Employees in first job and self-employed in the second job

Filter Size: Maximum 9 people occupied

The Micro Business Module is enabled

Objectives of the module:
1. Identify freelancers who only offer workforce.
2. Identify owners of means of production (target population)

Location of the sources in a second operation and application of the economic form:
Micro Business Survey
How we currently track the phenomenon (ii)

## Micro business survey methodology

<table>
<thead>
<tr>
<th>Concept</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target population</strong></td>
<td>Self-employed workers and micro-business owners with a maximum of 9 employed persons who develop activities defined in the thematic scope of the research.</td>
</tr>
<tr>
<td><strong>Statiscal unit</strong></td>
<td>Micro-business: Economic unit with a maximum of 9 people employed that develops a productive activity of goods or services, with the purpose of obtaining an income, acting as owner or lessee of the means of production.</td>
</tr>
<tr>
<td><strong>Thematic coverage</strong></td>
<td>Disaggregation of the variables of income, sales, intermediate consumption and employed personnel for the sections: agriculture, livestock, forestry, fishing, mining and quarrying, manufacturing, construction, wholesale and retail trade; repair of motor vehicles and motorcycles, transportation and storage, accommodation and food services, real estate activities, other services (M-S sections of ISIC)</td>
</tr>
<tr>
<td><strong>Geographic coverage</strong></td>
<td>National, Municipalities, Rural areas</td>
</tr>
<tr>
<td><strong>Reference period</strong></td>
<td>Previous month, same month last year, previous year</td>
</tr>
<tr>
<td><strong>Collection period</strong></td>
<td>Twelve months: start of operations March 1st (ask for January and February)</td>
</tr>
<tr>
<td><strong>Sample size</strong></td>
<td>Approx. 90,000 micro businesses in the 12 months of operations</td>
</tr>
</tbody>
</table>
# Employment Matrix: Job offer by economic activity and occupational category 2018

<table>
<thead>
<tr>
<th>Sections ISIC Rev.</th>
<th>Economic Activity</th>
<th>Labour Supply</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 A.C. 12 clusters</td>
<td></td>
<td>Primary and secondary work and unpaid work</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Salaried</td>
<td>Self employed</td>
</tr>
<tr>
<td>A</td>
<td>Agriculture, forestry and fishing</td>
<td>1,113,974</td>
<td>2,461,417</td>
</tr>
<tr>
<td>B</td>
<td>Mining and quarrying</td>
<td>111,011</td>
<td>75,485</td>
</tr>
<tr>
<td>C</td>
<td>Manufacturing</td>
<td>1,308,322</td>
<td>945,591</td>
</tr>
<tr>
<td>D + E</td>
<td>Electricity, gas, steam and air conditioning supply; Water supply; sewerage, waste management and remediation activities</td>
<td>119,278</td>
<td>25,419</td>
</tr>
<tr>
<td>F</td>
<td>Construction</td>
<td>727,655</td>
<td>723,150</td>
</tr>
<tr>
<td>G + H + I</td>
<td>Wholesale and retail trade; repair of motor vehicles and motorcycles; Transportation and storage; Accommodation and food service activities</td>
<td>2,774,621</td>
<td>4,061,915</td>
</tr>
<tr>
<td>J</td>
<td>Information and communication</td>
<td>184,563</td>
<td>105,950</td>
</tr>
<tr>
<td>K</td>
<td>Financial and insurance activities</td>
<td>215,194</td>
<td>24,704</td>
</tr>
<tr>
<td>L</td>
<td>Real estate activities</td>
<td>232,835</td>
<td>42,892</td>
</tr>
<tr>
<td>M + N</td>
<td>Professional, scientific and technical activities; Administrative and support service activities</td>
<td>1,143,979</td>
<td>548,667</td>
</tr>
<tr>
<td>O + P + Q</td>
<td>Public administration and defence; compulsory social security; Education; Human health and social work activities</td>
<td>1,456,338</td>
<td>500,941</td>
</tr>
<tr>
<td>R + S + T</td>
<td>Arts, entertainment and recreation; Other service activities; Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use</td>
<td>873,801</td>
<td>756,751</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>10,261,571</strong></td>
<td><strong>10,272,882</strong></td>
</tr>
</tbody>
</table>

Source: DANE, National Accounts
Note. Totals differ from 12 to 25 groups due to rounding effect in figures
Last update: June 14, 2019
Cost of the formalization process
Number of micro businesses according to the owner's employment situation

Cost of the formalization process
Participation of micro businesses according to the main reason for the creation or constitution of the business or economic activity

Cost of the formalization process
Participation of micro businesses according to operating time

**Cost of the formalization process**

Participation of the Micro-businesses for holding records (commercial and tax registration)

2.2. Index of Business Formality
Source of the Index of Business Formality

Business Formalization Policy

DANE was commissioned by the Consejo Nacional de Política Económica y Social - CONPES, in its document 3956 named Política de Formalización Empresarial (Business Formalization Policy) to build an index of business formality.

About this document

1. This document incorporates a multidimensional view of the informality phenomenon (or the formalization process).
2. Moreover, it proposes a sequential approach to the informality of the firm, at different times of its life cycle.
3. Its unit of analysis is the company (in general) or microenterprise (specifically).
4. Additionally, it highlights that there is little information on the universe of microenterprises, their level of formality and the impact that state efforts have had on the matter.
To study the formalization process one can use the sequential analysis: starting from the entrance and ending in the tax dimension. This reflects the transit that a firm makes since entering the market to be completely formal. However, you can also go to the interpretation of each dimension individually to identify the main source of informality between firms and where the transit process is more difficult.
### Indicators by dimension (Colombian case)

#### Entrance
- 1. Commercial and tax registration (*Source: Economic establishments surveys and administrative records*)
- 2. Letter to the district planning office and the police announcing the opening of the firm (*No reliable source*)

#### Inputs
- 3. Legal hiring and remuneration (*No reliable source*)
- 4. Compliance of health, pension, occupational risks and social benefits laws (*Source: Direct informant through the household survey*)
- 5. Legal occupation and use of land (*Administrative records in some municipalities*)

#### Production
- 6. Firm compliance with sanitary, technical and environmental regulations (*Source: Economic establishments surveys and administrative records*)

#### Tax
- 7. Declare taxes (*Source: Economic establishments surveys and administrative records*)
- 8. Pay taxes (*Source: Administrative records*)
- 9. Have formal accounting (*Source: Economic establishments surveys and administrative records*)

---

<table>
<thead>
<tr>
<th>Law</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1801/2016</td>
<td>Law 1801/2016</td>
</tr>
<tr>
<td>410/1971</td>
<td>Decree 410/1971</td>
</tr>
<tr>
<td>390/2016</td>
<td>Decree 390/2016</td>
</tr>
</tbody>
</table>
**Index construction** *Top-down* approach: constructing a conceptual framework of some sort describing formalization process, including its constituents and determinants.

- **Definition of indicators and variables**
  - Given by the business formalization policy

- **Dimensional analysis**
  - Analytical approach to verify the proposed dimensionality

- **Harmonization of data**
  - Ensure that different sources capture variables in the same way

- **Aggregation of data**
  - Unify the variables of interest in a database

- **Weighting criteria**
  - Choose the weight of each indicator within its dimension; and, therefore, of the dimensions in the index

- **Assess the robustness of the synthetic index**
  - Factor analysis: consider only those variables that granted an amount of explained variance

---

**Index Final Version**

Economic Census
2021
Economics census key characteristics

**Objective**

Obtain updated statistical information of the main economic variables of the establishments of industry, commerce, services, construction and transport, located in the national territory in the year 2021.

**Questions to solve**

- What is produced?
- How is produced?
- How much is produced?

**Variables**

- Economic activity
- Production, sales and income
- Number and characteristics of employees
- Cost, expenses and assets
- Degree of formality

The economic census is being structured according to the logic of the *Generic Statistical Business Process Model – GSBPM*, produced by UN, OECD and Eurostat.
Economics census benefits

1. Know the characteristics of the formal and informal economic units, in order to facilitate and guide the design of public policies for the improvement of the economic and social conditions of the country.

2. Knowledge of employment by economic activity, institutional sector and regions.

3. Decrease in indirect calculations - "Not observed economy" (23% of estimated production).

4. Economic layer of the Multipurpose Cadastre.

5. Know the framework of companies in the informal sector and provide inputs to establish an index of business formality. In Colombia, informality is high: - 73.2% of microenterprises did not have a commercial register and RUT in 2015 (*) - The proportion of informal workers in the 13 cities and AM was 46.8% for the second quarter of 2019 (**) 

6. Have inputs for the calculation of macroeconomic variables used in the national and regional accounts of the country.

7. Updated and complete business directory.

(**) DANE, GEIH.
Economics census key characteristics: Economic unit

It is an institutional unit with the capacity, in its own right, to own assets, incur liabilities, make decisions and carry out economic activities and transactions with other units.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td>- General plan</td>
<td>- Marketing strategy</td>
<td>- Forms (Web, door by door)</td>
<td>- Acquisitions of admin. data</td>
<td>- Census Frame</td>
<td>- Count Economic units</td>
<td>- Processing</td>
<td>- First results</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Public consultation</td>
<td>- Operational strategy</td>
<td>- Test system</td>
<td>- Census Frame</td>
<td></td>
<td></td>
<td>- Classification, edition and imputation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Budget</td>
<td>- Forms</td>
<td>- Experimental Census</td>
<td>- Test system</td>
<td></td>
<td></td>
<td>- Partial base analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Production function</td>
<td>- Experimental Census</td>
<td></td>
<td>- Census Frame</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Field operation</td>
<td>- Processing</td>
<td>- Partial base analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Operation Tracking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Final results</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Economic Census Highlights**

- General plan
- Public consultation
- Budget
- Marketing strategy
- Operational strategy
- Forms
- Experimental Census
- Test system
- Forms (Web, door by door)
- Acquisitions of admin. data
- Census Frame
- Test system
- Experimental Census
- Count Economic units
- Field operation
- Operation Tracking
- Processing
- Classification, edition and imputation
- Partial base analysis
- Final results
- Final database
- Post Census Studies
- Expert Committee
- Evaluation Document
Measuring the informality in Colombia

IMF Seventh Statistical Forum
November 2019