Mixed surveys

Good practices to improve contact, response rates and data quality

Choice of the date, time and place of the interviews

Together with the respondents themselves

Approaching the informal entrepreneur

Advance information regarding the survey and its purpose
Formal assurance of confidentiality of the information provided

Interviewers

Sound training and supervision is essential!!

Questionnaire

Short and simple
Questions should be easily understandable
Questions should refer to the respondents’ specific situation and nature of their activities
Short reference periods
Mixed surveys

Good practices to improve contact, response rates and data quality

Place of interview
Where the business takes place (for units with premises outside the owner’s dwelling)

Time lag between phases
Should be as short as possible

Avoid substitution of entrepreneurs
Introduces bias into the estimates

Reference period
Flexible as much as possible
One month
Mixed surveys
Good practices: How to represent seasonal variations

Solutions which are difficult to put in place

Cover the whole year with sub-round samples -> hardly possible
- Overlapping
- Entirely independent (preferred)
  - Minimizes the areas to be covered each sub-round
  - Listing activity can be staggered
  - Time lag between phases can be reduced
- Ensure that all geographic areas and kind-of-activities are covered
  - Because seasonality may differ between agricultural, touristic, industrial areas and activities

Use retrospective questions -> but reference period needs to be short!!

Solutions that are possible

Use short reference periods, supplemented by questions on the variations in business activity over the year with broad answer categories per month (higher/average/lower)
Derived variables and Indicators

Overview

Introduction
Data items
Some derived variables
How to construct derived variables
Type of production unit and nature of the job: basic table
Main indicators
On employment
On informal sector units
Presentation of results
Metadata
Dissemination of results
Derived variables and indicators

Introduction

End product of any data collection exercise
Directly in contact with users
Derived variables and tabulations must be agreed before data collection stage
Together with users of the statistics

Educate users, including journalists
Concepts
What the statistics say and do not say

Important to release statistics
Formats that are user-friendly for common users
More detail and complexity for specialised users
Methodological information
Micro-data
Derived variables and indicators

Data items

1. **Persons employed in the informal sector and/or in informal jobs**
   - Characteristics of persons
   - Characteristics of their jobs
   - Remuneration received

2. **Informal sector units**
   - Characteristics of economic units
   - Conditions of business operation
   - Expenditures (Compensation of employees, Purchase of goods and services)
   - Sales
   - Inventories
   - Production for own final use
   - Taxes paid, subsidies received
   - Fixed capital formation

3. **Informal sector entrepreneurs**
   - Characteristics of entrepreneurs
   - Characteristics of employment conditions

4. **Members of households with informal sector entrepreneurs**
Derived variables and indicators

Some derived variables

**Employed persons**

Persons in informal employment
- In the informal sector
- In the formal sector
- In households

Persons in the informal sector
- In formal employment

**Informal sector units**

Number of informal sector units
Number of informal sector entrepreneurs
- Own account
- Employers

Gross output, intermediate consumption, operating surplus
Total value added

Each one of these groups can be further disaggregated into meaningful groups
Employees in the informal sector who have formal employment

Informal sector entrepreneurs
(Own account workers, employers and members of producers’ cooperatives in the informal sector) - cells 3, 4, 8

Employees in the formal sector who have informal employment

Employees in the formal sector who have formal employment

Contributing family workers in the informal sector - cell 5

Contributing family workers in the formal sector - cell 1

Employees in households producing exclusively for own final use - cell 10

Employees in households producing exclusively for own final use who have informal employment - cell 9

Own account workers in households producing exclusively for own final use - cell 10

International Labour Office
Department of Statistics
Derived variables and indicators

How to construct derived variables - steps

- Based on agreed definition of the derived variable
- Identify relevant questions
- For each question, identify the answer categories that qualify for inclusion
- Identify the combination of relevant questions and answer category that will classify a person/job/unit in the group
Derived variables and indicators

How to construct derived variables - example: employment in the informal sector

1. Agree on a definition of employment in the informal sector, e.g., in the model questionnaire
   a) All self employed persons who work in unincorporated enterprises other than those registered and do not have a complete set of accounts;
   b) All paid employees in unincorporated enterprises who know that they are either not registered or in the process of being registered with no complete set of accounts; or, if they do not know whether they are registered or not, those whose wages do not get deductions for income tax payments

2. Identify relevant questions
Derived variables and indicators

How to construct derived variables - example: employment in the informal sector

2. Identify relevant questions

Status in employment
- Paid and self employment

Institutional sector
- Household enterprises, other

Type of ownership
- Unincorporated, incorporated

Registration
- Registered, not registered, in the process, unknown

Bookkeeping
- Keeps records, does not keep records

Deduction for income tax payments
- Tax is deducted, not deducted
**Derived variables and indicators**

How to construct derived variables - example: employment in the informal sector

**First group:** All self-employed persons who work in unincorporated enterprises other than those registered and do not have a complete set of accounts

<table>
<thead>
<tr>
<th>B5</th>
<th>In this job/activity, were you ...?</th>
<th>READ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Employee (working for someone else for pay in cash or in kind)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Employer (employing one or more employees)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Own-account worker (not employing any employee)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Helping without pay in the business or farm of another household/family member</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Member of a producers’ cooperative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (specify):</td>
</tr>
</tbody>
</table>

B5 = 2, 3, 4, 5

<table>
<thead>
<tr>
<th>B16</th>
<th>Do you work in a ...?</th>
<th>READ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Government institution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>State-owned enterprise</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-governmental/non-profit organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private business or farm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private household</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Embassy, International organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (specify):</td>
</tr>
</tbody>
</table>

B16 = 4

181
## Derived variables and indicators

**How to construct derived variables - example: employment in the informal sector**

<table>
<thead>
<tr>
<th>B17</th>
<th>What is the type of ownership of your business/farm (or the business/farm where you worked)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual owner (or with other household members).................................................. 1</td>
</tr>
<tr>
<td></td>
<td>Partnership with members of other households ................................................................... 2</td>
</tr>
<tr>
<td></td>
<td>Incorporated enterprise (ltd., plc., inc.) ......................................................................... 3</td>
</tr>
<tr>
<td></td>
<td>Other (specify):__________________________ ...................................................................... 4</td>
</tr>
</tbody>
</table>

B17 = 1, 2, 4

<table>
<thead>
<tr>
<th>B18</th>
<th>Was your business/farm (or the business/farm where you worked) registered at the [RELEVANT GOVERNMENT ENTITY]?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes.............................................................................................................................. 1</td>
</tr>
<tr>
<td></td>
<td>In the process of becoming registered ......................................................................... 2</td>
</tr>
<tr>
<td></td>
<td>No.............................................................................................................................. 3</td>
</tr>
<tr>
<td></td>
<td>Don’t know ................................................................................................................. 4</td>
</tr>
</tbody>
</table>

B18 = 2, 3, 4

<table>
<thead>
<tr>
<th>B19</th>
<th>Does your business/farm keep a complete record of accounts (assets and expenditures)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes.............................................................................................................................. 1</td>
</tr>
<tr>
<td></td>
<td>No.............................................................................................................................. 2</td>
</tr>
<tr>
<td></td>
<td>Don’t know ................................................................................................................. 3</td>
</tr>
</tbody>
</table>

B19 = 2

B5 = 2, 3, 4, 5 and B16 = 4 and B17 = 1, 2, 4 and B18 = 2, 3, 4 and B19 = 2
**Derived variables and indicators**

**How to construct derived variables - example:** employment in the informal sector

The second group includes all paid employees in unincorporated enterprises who know that they are either not registered or in the process of being registered with no complete set of accounts; and, if they do not know whether they are registered or not, those whose wages do not get deductions for income tax payments.

<table>
<thead>
<tr>
<th>B5</th>
<th>In this job/activity, were you ...?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>READ</strong></td>
</tr>
<tr>
<td></td>
<td>Employee (working for someone else for pay in cash or in kind) .......... 1 □</td>
</tr>
<tr>
<td></td>
<td>Employer (employing one or more employees) ................................... 2 □</td>
</tr>
<tr>
<td></td>
<td>Own-account worker (not employing any employee) ............................. 3 □</td>
</tr>
<tr>
<td></td>
<td>Helping without pay in the business or farm of another household/family member .......................................................... 4 □</td>
</tr>
<tr>
<td></td>
<td>Member of a producers’ cooperative ................................................. 5 □</td>
</tr>
<tr>
<td></td>
<td>Other (specify): ................................................................. 6 □</td>
</tr>
</tbody>
</table>

\[ B5 = 1.6 \]
### Derived variables and indicators

**How to construct derived variables - example: employment in the informal sector**

<table>
<thead>
<tr>
<th>B16</th>
<th>Do you work in a ...?</th>
<th>READ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Government institution</td>
<td>1 (\rightarrow) B20</td>
</tr>
<tr>
<td></td>
<td>State-owned enterprise</td>
<td>2 (\rightarrow) B20</td>
</tr>
<tr>
<td></td>
<td>Non-governmental/non-profit organization</td>
<td>3 (\rightarrow) B20</td>
</tr>
<tr>
<td></td>
<td>Private business or farm</td>
<td>4 (\rightarrow) B20</td>
</tr>
<tr>
<td></td>
<td>Private household</td>
<td>5 (\rightarrow) B23</td>
</tr>
<tr>
<td></td>
<td>Embassy, international organization</td>
<td>6 (\rightarrow) B20</td>
</tr>
<tr>
<td></td>
<td>Other (specify):</td>
<td>7 (\rightarrow) B20</td>
</tr>
</tbody>
</table>

**B16 = 4**

<table>
<thead>
<tr>
<th>B17</th>
<th>What is the type of ownership of your business/farm (or the business/farm where you worked)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual owner (or with other household members).</td>
</tr>
<tr>
<td></td>
<td>Partnership with members of other households</td>
</tr>
<tr>
<td></td>
<td>Incorporated enterprise (ltd., plc., inc.)</td>
</tr>
<tr>
<td></td>
<td>Other (specify):</td>
</tr>
</tbody>
</table>

**B17 = 1, 2**

<table>
<thead>
<tr>
<th>B18</th>
<th>Was your business/farm (or the business/farm where you worked) registered at the [RELEVANT GOVERNMENT ENTITY]?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes ........................................................................................................................................</td>
</tr>
<tr>
<td></td>
<td>In the process of becoming registered .......................................................................................</td>
</tr>
<tr>
<td></td>
<td>No ..........................................................................................................................................</td>
</tr>
<tr>
<td></td>
<td>Don’t know ..............................................................................................................................</td>
</tr>
</tbody>
</table>

**B18 = 2, 3**

<table>
<thead>
<tr>
<th>B19 (*)</th>
<th>Does your business/farm keep a complete record of accounts (assets and expenditures)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes .........................................................................................................................</td>
</tr>
<tr>
<td></td>
<td>No .........................................................................................................................</td>
</tr>
<tr>
<td></td>
<td>Don’t know .........................................................................................................</td>
</tr>
</tbody>
</table>

**B19 = 2**
Derived variables and indicators

How to construct derived variables - example: employment in the informal sector

- **B18**: Was your business/farm (or the business/farm where you worked) registered at the [RELEVANT GOVERNMENT ENTITY]?
  - Yes................................................................. 1
  - In the process of becoming registered................. 2
  - No......................................................................... 3
  - Don’t know .......................................................... 4

- **B14**: Does your employer deduct income tax from your salary/wage?
  - Yes................................................................. 1
  - No......................................................................... 2
  - Don’t know .......................................................... 3

B5 = 1, 6 and B16 = 4 and B17 = 1, 2 and
(B18 = 2, 3 and B19 = 2) or (B18 = 4 and B14 = 1)
Derived variables and indicators

How to construct derived variables - example: employment in the informal sector

- **B16. Institutional sector**
  - 5. Private household
  - 1, 2, 3, 6. Others
  - 4, 7. Private business or farm

- **B17. Type of ownership**
  - 3. Incorporated enterprise
  - 1, 2, 4. Others

- **B18. Business registration**
  - 1. Yes
  - 4. Don’t know
  - 2. In progress
  - 3. No

- **B14. Income tax deduction from pay**
  - 1. Yes
  - 2, 3. No/Don’t know

- **B19. Complete record of accounts kept**
  - 2. No

---

**Employment in households**

**Formal sector employment**

**Informal sector employment**
### Derived variables and indicators

#### Type of production unit and nature of the job: basic table

<table>
<thead>
<tr>
<th>Type of production unit</th>
<th>Nature of the job</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Informal employment</td>
</tr>
<tr>
<td>Total employment</td>
<td>A</td>
</tr>
<tr>
<td>Informal sector</td>
<td>D</td>
</tr>
<tr>
<td>Formal sector</td>
<td>G</td>
</tr>
<tr>
<td>Households</td>
<td>J</td>
</tr>
<tr>
<td>Employment in agriculture</td>
<td>M</td>
</tr>
</tbody>
</table>

*International Labour Office|
*Department of Statistics*
Derived variables and indicators
Main indicators of employment

- **Informal employment rate**
  \[ \frac{A}{C} \times 100 \]

- **Informal sector employment rate**
  \[ \frac{F}{C} \times 100 \]

- **Informal employment outside the informal sector rate**
  \[ \frac{(G + J)}{C} \times 100 \]

- **Formal employment in the informal sector rate**
  \[ \frac{E}{C} \times 100 \]

- **Ratio of informal sector employment to informal employment**
  \[ \frac{F}{A} \times 100 \]

*Calculated by sex, kind of economic activity, age groups, urban/rural, etc.*

*If informal sector/informal employment covers only non-agriculture, then the denominator relates to non-agriculture employment.*
## Derived variables and indicators

### Basic table for selected African countries

<table>
<thead>
<tr>
<th>Country (Year)</th>
<th>Non-agricultural employment</th>
<th>Total informal employment</th>
<th>Employment in the informal sector</th>
<th>Informal employment outside the informal sector</th>
<th>Informal employment in the informal sector</th>
<th>Formal employment in the informal sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberia (2010)</td>
<td>573</td>
<td>342</td>
<td>284</td>
<td>61</td>
<td>281</td>
<td>3</td>
</tr>
<tr>
<td>Madagascar (2005)</td>
<td>1727</td>
<td>1271</td>
<td>893</td>
<td>378</td>
<td>893</td>
<td>0</td>
</tr>
<tr>
<td>Mali (2004)</td>
<td>1443</td>
<td>1180</td>
<td>1029</td>
<td>163</td>
<td>1017</td>
<td>12</td>
</tr>
<tr>
<td>South Africa (2010)</td>
<td>12504</td>
<td>4089</td>
<td>2225</td>
<td>1864</td>
<td>2225</td>
<td>0</td>
</tr>
<tr>
<td>Uganda (2010)</td>
<td>3788</td>
<td>2597</td>
<td>2243</td>
<td>512</td>
<td>2085</td>
<td>158</td>
</tr>
<tr>
<td>Zambia (2008)</td>
<td>1324</td>
<td>920</td>
<td>854</td>
<td>155</td>
<td>765</td>
<td>89</td>
</tr>
<tr>
<td>Zimbabwe (2004)*</td>
<td>1760</td>
<td>909</td>
<td>698</td>
<td>211</td>
<td>698</td>
<td>0</td>
</tr>
</tbody>
</table>
## Derived variables and indicators

**Basic indicators for selected African countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Informal employment rate</th>
<th>Employment in the informal sector rate</th>
<th>Informal employment outside of informal sector rate</th>
<th>Formal employment in the informal sector rate</th>
<th>Ratio of informal sector employment to informal employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesotho (2008)</td>
<td>34.9</td>
<td>49.1</td>
<td>21.6</td>
<td>35.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Liberia (2010)</td>
<td>59.7</td>
<td>49.6</td>
<td>10.6</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Madagascar (2005)</td>
<td>73.6</td>
<td>51.7</td>
<td>21.9</td>
<td>0.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Mali (2004)</td>
<td>81.8</td>
<td>71.3</td>
<td>11.3</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td>South Africa (2010)</td>
<td>32.7</td>
<td>17.8</td>
<td>14.9</td>
<td>0.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Uganda (2010)</td>
<td>68.6</td>
<td>59.2</td>
<td>13.5</td>
<td>4.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Zambia (2008)</td>
<td>69.5</td>
<td>64.5</td>
<td>11.7</td>
<td>6.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Zimbabwe (2004)*</td>
<td>51.6</td>
<td>39.7</td>
<td>12.0</td>
<td>0.0</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Employment in the informal sector and informal employment as a percentage of non-agricultural employment, selected African countries

- Lesotho (2008)
- Liberia (2010)
- Madagascar (2005)
- South Africa (2010)
- Uganda (2010)
- Zambia (2008)
- Zimbabwe (2004)*

International Labour Office
Department of Statistics
Informal employment by type of production unit, selected African countries

Lesotho (2008)

Liberia (2010)

Madagascar (2005)

Mali (2004)

South Africa (2010)

Uganda (2010)

Zambia (2008)

Zimbabwe (2004)*

Informal employment outside of informal sector

Informal employment in the informal sector
Employment in the informal sector by nature of job, selected African countries

- Lesotho (2008)
- Liberia (2010)
- Madagascar (2005)
- South Africa (2010)
- Uganda (2010)
- Zambia (2008)
- Zimbabwe (2004)*

International Labour Office
Department of Statistics
Derived variables and indicators
Main indicators of informal sector units

Informal sector units

Informal sector entrepreneurs
  Own account entrepreneurs
  Employers

Workers engaged in informal sector units
  Contributing family workers
  Paid employees

Households with informal sector entrepreneurs

Gross value added
  Gross output
  Intermediate consumption
  Compensation of employees
  Mixed income
### Derived variables and indicators

**Presentation of results - Moldova**

#### Table 44. Employed persons by type of production unit and job, age group, sex and area, year 2008

<table>
<thead>
<tr>
<th>Sex, area, age group</th>
<th>Total employment</th>
<th>Formal employment</th>
<th>Total</th>
<th>Formal</th>
<th>Informal sector employment</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>1251.0</td>
<td>861.4</td>
<td>389.6</td>
<td>988.2</td>
<td>861.4</td>
<td>126.8</td>
</tr>
<tr>
<td>15-24 years</td>
<td>124.3</td>
<td>77.7</td>
<td>46.6</td>
<td>101.6</td>
<td>77.7</td>
<td>23.9</td>
</tr>
<tr>
<td>25-34 years</td>
<td>254.2</td>
<td>171.3</td>
<td>82.9</td>
<td>202.6</td>
<td>171.3</td>
<td>31.2</td>
</tr>
<tr>
<td>35-44 years</td>
<td>308.1</td>
<td>217.3</td>
<td>90.7</td>
<td>246.8</td>
<td>217.3</td>
<td>29.5</td>
</tr>
<tr>
<td>45-54 years</td>
<td>354.6</td>
<td>260.8</td>
<td>93.8</td>
<td>289.8</td>
<td>260.8</td>
<td>29.0</td>
</tr>
<tr>
<td>55-64 years</td>
<td>169.2</td>
<td>120.1</td>
<td>49.2</td>
<td>131.0</td>
<td>120.1</td>
<td>10.9</td>
</tr>
<tr>
<td>65 years and over</td>
<td>40.7</td>
<td>14.2</td>
<td>26.5</td>
<td>16.4</td>
<td>14.2</td>
<td>2.3</td>
</tr>
</tbody>
</table>

#### Men

<table>
<thead>
<tr>
<th>Age group</th>
<th>Total employment</th>
<th>Formal employment</th>
<th>Total</th>
<th>Formal</th>
<th>Informal sector employment</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24 years</td>
<td>628.8</td>
<td>422.6</td>
<td>206.2</td>
<td>484.5</td>
<td>422.6</td>
<td>61.9</td>
</tr>
<tr>
<td>25-34 years</td>
<td>131.6</td>
<td>83.0</td>
<td>48.7</td>
<td>100.2</td>
<td>83.0</td>
<td>17.3</td>
</tr>
<tr>
<td>35-44 years</td>
<td>143.1</td>
<td>96.2</td>
<td>46.9</td>
<td>108.3</td>
<td>96.2</td>
<td>12.1</td>
</tr>
<tr>
<td>45-54 years</td>
<td>168.7</td>
<td>122.4</td>
<td>46.2</td>
<td>135.6</td>
<td>122.4</td>
<td>13.2</td>
</tr>
<tr>
<td>55-64 years</td>
<td>92.6</td>
<td>68.9</td>
<td>23.7</td>
<td>73.8</td>
<td>68.9</td>
<td>4.9</td>
</tr>
<tr>
<td>65 years and over</td>
<td>22.0</td>
<td>9.5</td>
<td>12.5</td>
<td>10.4</td>
<td>9.5</td>
<td>0.0</td>
</tr>
</tbody>
</table>

#### Women

<table>
<thead>
<tr>
<th>Age group</th>
<th>Total employment</th>
<th>Formal employment</th>
<th>Total</th>
<th>Formal</th>
<th>Informal sector employment</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24 years</td>
<td>622.3</td>
<td>438.8</td>
<td>183.5</td>
<td>503.7</td>
<td>438.8</td>
<td>65.0</td>
</tr>
<tr>
<td>25-34 years</td>
<td>53.5</td>
<td>35.0</td>
<td>18.4</td>
<td>45.5</td>
<td>35.0</td>
<td>10.4</td>
</tr>
<tr>
<td>35-44 years</td>
<td>122.6</td>
<td>88.4</td>
<td>34.2</td>
<td>102.3</td>
<td>88.4</td>
<td>14.0</td>
</tr>
<tr>
<td>45-54 years</td>
<td>165.0</td>
<td>121.2</td>
<td>43.8</td>
<td>138.6</td>
<td>121.2</td>
<td>17.4</td>
</tr>
<tr>
<td>55-64 years</td>
<td>185.9</td>
<td>138.4</td>
<td>47.6</td>
<td>154.2</td>
<td>138.4</td>
<td>12.0</td>
</tr>
<tr>
<td>65 years and over</td>
<td>76.6</td>
<td>51.2</td>
<td>25.4</td>
<td>57.2</td>
<td>51.2</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>18.7</td>
<td>4.7</td>
<td>14.0</td>
<td>6.0</td>
<td>4.7</td>
<td>0.0</td>
</tr>
</tbody>
</table>

International Labour Office
Department of Statistics
### Table 47. Employed persons by type of production unit and job, status in employment, sex and area, year 2008

<table>
<thead>
<tr>
<th>Sex, area, status in employment</th>
<th>Total employment</th>
<th>Formal employment</th>
<th>Informal employment</th>
<th>Formal sector enterprises</th>
<th>Infor- mal sector enterprises</th>
<th>House- holds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1251.0</td>
<td>861.4</td>
<td>389.6</td>
<td>988.2</td>
<td>891.4</td>
<td>125.8</td>
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<tr>
<td>Employee</td>
<td>850.3</td>
<td>729.4</td>
<td>120.9</td>
<td>833.2</td>
<td>729.4</td>
<td>103.8</td>
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<tr>
<td>Self-employed</td>
<td>400.7</td>
<td>320.9</td>
<td>208.7</td>
<td>155.0</td>
<td>132.0</td>
<td>23.0</td>
</tr>
<tr>
<td>Men</td>
<td>628.8</td>
<td>422.6</td>
<td>206.2</td>
<td>484.5</td>
<td>422.6</td>
<td>61.9</td>
</tr>
<tr>
<td>Employee</td>
<td>408.4</td>
<td>342.7</td>
<td>65.8</td>
<td>398.1</td>
<td>342.7</td>
<td>55.5</td>
</tr>
<tr>
<td>Self-employed</td>
<td>220.3</td>
<td>79.9</td>
<td>140.4</td>
<td>66.3</td>
<td>79.9</td>
<td>6.4</td>
</tr>
<tr>
<td>Women</td>
<td>622.3</td>
<td>438.8</td>
<td>283.5</td>
<td>503.7</td>
<td>438.8</td>
<td>65.0</td>
</tr>
<tr>
<td>Employee</td>
<td>441.9</td>
<td>386.8</td>
<td>55.1</td>
<td>435.1</td>
<td>386.8</td>
<td>48.3</td>
</tr>
<tr>
<td>Self-employed</td>
<td>180.4</td>
<td>52.0</td>
<td>128.3</td>
<td>68.7</td>
<td>52.0</td>
<td>16.6</td>
</tr>
<tr>
<td>Urban</td>
<td>559.2</td>
<td>471.3</td>
<td>87.9</td>
<td>523.1</td>
<td>471.3</td>
<td>51.7</td>
</tr>
<tr>
<td>Employee</td>
<td>490.7</td>
<td>436.3</td>
<td>54.4</td>
<td>486.4</td>
<td>436.3</td>
<td>50.1</td>
</tr>
<tr>
<td>Self-employed</td>
<td>68.5</td>
<td>35.1</td>
<td>33.5</td>
<td>36.7</td>
<td>35.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Rural</td>
<td>691.8</td>
<td>390.1</td>
<td>301.8</td>
<td>465.1</td>
<td>390.1</td>
<td>75.1</td>
</tr>
<tr>
<td>Employee</td>
<td>359.6</td>
<td>293.1</td>
<td>66.5</td>
<td>346.8</td>
<td>293.1</td>
<td>21.4</td>
</tr>
<tr>
<td>Self-employed</td>
<td>332.2</td>
<td>96.9</td>
<td>235.3</td>
<td>118.3</td>
<td>96.9</td>
<td>21.4</td>
</tr>
</tbody>
</table>

International Labour Office
Department of Statistics

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Derived variables and indicators

Metadata

Methodological and quality information of the statistics

Methodological metadata are needed ...

To facilitate sharing, querying, interpreting and understanding the data
To facilitate the processing of data
To harmonize national statistics to prepare regional/global estimates

Quality of data metadata are needed ...

To evaluate the validity of statistics as a representation of the reality

Particularly important for informality because

The field is relatively new
There are differences in national definitions and in time
Metadata need to be provided in a consistent manner

Need to determine which information to provide

Depending on intended uses of the data

For informality, the uses are very different
So, it is not easy to decide which information to provide

Various international initiatives

That try to standardize the way metadata are to be organised and transmitted

Data Documentation Initiative (DDI)
ISO/IEC 11179
Standard of Data and Metadata Exchange (SDMX)
Data and Metadata Reporting and Presentation Handbook
Derived variables and indicators

Dissemination

**Paper reports**
- Advance release
- Methodological report
- Detailed survey report

**Computer-based products**
- Internet
- Compact Disks
- Micro-data (anonymised)

**Promotional efforts**
- Press releases
- Brochures for the general public
- Organized conferences
- Articles for newspapers, magazines, professional journals

Cheaper way to disseminate more results
Wider audience
Create more user demand
Informality in the national accounts
Informality and national accounts

Overview

Two objectives

Importance for national accounts

The System of National Accounts
  - Lack of balance between supply and use of goods and services
  - The SNA institutional units
  - The household sector

Three approaches to measure GDP directly

Data needed to estimate production of informal sector units

Indirect estimates: labour input method
Informality and national accounts

Two objectives

1. Identify the type of statistics required to compile national accounts exhaustively

2. Raise awareness among national accountants that it is better to have direct measures of informality

National accountants often complain that they cannot rely on existing data

Survey statisticians complain that the national accountants do not use their data

So a dialogue should exist between the users and producers to ensure that the data collected will be used
Informality and national accounts
Importance of statistics on informality

Complete national accounts
The share of economic activities undertaken in informal sector units in total gross domestic product (GDP)
Share of informal employment in total employment

Requirements
Informality should be measured accurately and exhaustively
Production, expenditures, etc., should be measured coherently with same items for the formal sector
Informality and national accounts

The System of National Accounts, SNA

Objectives

Provides a comprehensive, consistent and flexible set of macro-economic accounts to be used for policy making, analysis and research.

Acknowledges the importance of the informal sector.

Dedicates a chapter to informality – « Chapter 25. Informal aspects of the economy »

Promotes international comparability

When compiling national accounts as an analytical tool.

When reporting national accounts.

However, lack of comparability between countries is still important, especially for informality.

Different defining criteria.

Different methodologies to estimate production.
Informality and national accounts

Important factor in the lack of balance supply and use of goods and services

In theory:

the supply of goods and services produced in, and imported from, an economy

= the sum of the goods and services used during a reference period (accounting period)

In practice, this equation seldom balances

Because different sources of information are used to estimate the supply and use of goods and services

Also, because of the omission/inadequate measurement of the economic activities of informal units!!

Goods and services are used

a) for intermediate consumption,

b) for final consumption,

c) for capital formation or

d) for export
Informality and national accounts

Why is it an important balancing factor?

Goods and services produced by informal units are sold in markets and used by others (households, other units)

The use of these goods and services is captured when collecting information on expenditures (of households, of units)

But the production of informal units is seldom measured in list-based establishment surveys

National accounts calculations need to reconcile statistics from different sources. It is this exercise that has led national accountants to recognise the imbalance in the supply and use of goods and services and the importance of measuring the contribution of the informal sector with direct surveys.
Informality and national accounts
The SNA institutional units (economic units)

Basic unit of measurement in the SNA
Are capable of owning assets and incurring liabilities on their own behalf
Are classified in institutional sectors based on their main functions, behaviour and objectives
  Non-financial corporations
  Financial corporations
  General government
  Non-profit institutions serving households (NPISH)
Household sector
  The informal sector is a subsector of the household sector
Informality and national accounts
The Household sector in SNA

The Household sector is subdivided into five subsectors:

The informal sector units
Formal sector units
Units producing goods and services solely for own final use

Some may hire employees (e.g., paid domestic workers)

Households that do not produce any good or service
Institutional households (prisons, religious orders, retirement homes)

Statistics should be available NOT ONLY on informal sector units but on all other units, during the same reference period.
At least on the informal sector, on a regular basis and comprehensively.
Informality and national accounts

Informal employment in national accounts

Informal employment outside of the informal sector

Can provide a basis for estimating underground production in units outside of the informal sector

- In government, corporations, NPISHs
- In unincorporated enterprises (household sector) that are not informal

But be careful of duplicating output in the corporations sector because

- Output is estimated based on their records of production
  - Which covers all employment, including informal employment
- Output and intermediate consumption is not available by formal/informal employment dichotomy
Informality and national accounts
Calculating labour productivity

In the informal sector
Output in the informal sector/employment in the sector

Of informal employment
Not straightforward, as it is not possible to estimate the output that is due to informal employment
Rough estimates may be made with labour input matrices
Informality and national accounts

Three approaches to measure GDP directly

Three approaches in SNA to measure GDP:
- Production approach
- Income approach
- Expenditure approach

Theoretically, the three estimates of GDP should be the same.

In practice, it is seldom the case given different data sources used.

Most countries use a mix of production and expenditure approaches.

Especially when data sources are scarce.

The production approach is the most basic.
At least some statistics on production by kind of activity are available from administrative sources in all countries, even if not complete.

Only production and income accounts can be compiled for informal units.
Informality and national accounts

Production approach

**Gross value added**

\[= \text{Total output} - \text{intermediate consumption}\]

**Net value added**

\[= \text{GVA} - \text{consumption of fixed capital}\]

**GDP**

\[= \text{GVA} + \text{taxes} - \text{subsidies (on products not included in the value of output)}\]

**Output**

Quantity of goods or services produced in a given time period, by economic units, whether consumed or used for further production

\[= \text{Sales} + \text{changes in inventories} + \text{production of goods for own final use/barter/given for free to others} - \text{purchases of goods and services for resale}\]

**Intermediate consumption**

Value of goods and services consumed or used up as inputs in production by enterprises, including raw materials, services and various other operating expenses

**Consumption of fixed capital**

Depreciation of fixed assets (land, buildings, equipment)

Decline in the value of fixed assets
Informality and national accounts

Income approach

GDP

\[ \text{GDP} = \text{Compensation of employees} + \text{gross mixed income} + \text{gross operating surplus} + \text{taxes - subsidies on production and imports} \]

Compensation of employees

Cost of labour factor

\[ = \text{wages (basic, bonuses, allowances)} + \text{social security contributions} \]

Gross mixed income

Gross profit of unincorporated enterprises

\[ = \text{Output} - \text{operating expenses} \]

\[ (= \text{intermediate consumption} + \text{compensation of employees} + \text{taxes - subsidies}) \]

Operating surplus

Income earned from the capital factor (for incorporated enterprises)

\[ = \text{gross output} - \text{compensation of employees} \]
Informality and national accounts
Expenditure approach

GDP

Final consumption expenditure
+ gross capital formation
+ exports - imports

Gross capital formation
Acquisition of new or existing fixed assets - disposals of fixed assets

Final consumption expenditure
Final consumption of households, non-profit institutions and governments + changes in inventories + exports - imports
Informality and national accounts

Value added at basic, producers' and purchasers' prices

At basic prices

GVA (before taxes or subsidies on goods and services)

Producers' prices

= GVA at basic prices + taxes on production - subsidies
  (Before value added tax, transport charges and wholesale/retailers' margins)

Purchasers' prices

= GVA at producers' prices + taxes and commercial margins

Intermediate consumption is always computed at purchaser' prices
Informality and national accounts
Data needed to estimate production of informal sector units

Value of output produced

- Value of sales of goods and services produced (and quantities)
- Value of output for own final use and bartered
- Value of sales (of goods and services) purchased for resale in the same condition
- Value of goods and services produced as fixed assets (construction, software)

Value of intermediate consumption *

- Cost of raw materials and supplies (and quantities)
- Purchase of services (rental of buildings, machinery and vehicles, maintenance, transport, insurance, licence fees, etc.)
- Purchase of goods and services for resale in the same condition as received

* International Labour Office Department of Statistics
Informality and national accounts

Data needed to estimate production of informal sector units

Change in inventories (stocks)*

Opening and closing stocks of:
- Fuels, materials, supplies
- Finished and semi-finished goods
- Goods purchased for resale in the same condition as received

Compensation of employees

- Wages to employees, in cash and in kind, bonuses and allowances
- Social security contributions (health, pension, invalidity, unemployment)

Taxes on production and imports

Subsidies on production and imports

Consumption of fixed capital

- Depreciation of fixed assets (land, buildings, equipment)
- Decline in the value of fixed assets
Informality and national accounts
Calculating GVA of informal sector: example of Colombia

Data items:

Q30 - Q32 - Production (manufacturing), sales (trade) or income (services) in low, normal and high months
Q33-Q35 - Expenditures on raw materials, merchandise sold and packaging in low, normal and high months
Q29 - Indication of which months had low, normal and high activity (or were inactive = 0)
Q28 - Wages and social security contributions for workers
Q36 - Expenditures on services by item

Production approach: calculate derived variables:

Estimate total production/sales/income in the year
Estimate total intermediate consumption in the year

GVA = Total production/sales/income - Total intermediate consumption
Informality and national accounts
Calculating GVA of informal sector in Colombia

Total production/income/sales in the year =
(Number of months in Q29 which are “high”) * Q30
+ (Number of months in Q29 which are “normal”) * Q31
+ (Number of months in Q29 which are “low”) * Q32

Total intermediate consumption in the year =
(Number of months in Q29 which are “high”) * Q33
+ (Number of months in Q29 which are “normal”) * Q34
+ (Number of months in Q29 which are “low”) * Q35
+ Total in Q36
Informality and national accounts
Calculating GVA of informal sector in Colombia

OR

Income approach: calculate derived variables

- Compensation of employees
- Gross mixed income

GDP = compensation of employees + gross mixed income (+ taxes - subsidies)

Compensation of employees = Wages in Q28 + Social security contributions in Q28

Gross mixed income = Total production/sales/income in the year
- Intermediate consumption
- Compensation of employees
  - (Taxes - subsidies)
Informality and national accounts

Indirect estimates: labour input method

When to use it

To improve the coverage of informal units
To estimate value added for informal units for years in which a direct survey is not carried out

Labour input method is an indirect method involving three steps

1. Estimate labour input (in terms of jobs) in the informal sector by (detailed) kind of activity (using LFS)
2. Estimate value added per unit of labour input with the same kind of activity breakdown for units covered by existing establishment surveys (ideally covering the informal sector)
3. Multiply the labour input estimates by the per unit productivity estimates to obtain the output and value added of the informal sector by economic activity.
Informality and national accounts
Indirect estimates: labour input method

Rationale:
The LFS will identify labour inputs in enterprises that may be excluded from the ES or because the ES does not report them.

Requirements
Can only be applied for those industries for which both labour input and GVA are available.
The level of industry detail usually depends on the LFS, but the industries covered depend on ES.
As much as possible, use standard labour input estimates in both sources:
- Jobs (not persons!!), hours of work or full-time equivalents
- Similar reference period
- Same geographic coverage
- Similar definition of informal sector
Informality and national accounts

Indirect estimates: labour input method

Comparing the two sets

Identify labour input missing from the ES - indicator of production not covered in ES
Beware that labour input may be missing from both surveys

Estimate output and value added per unit of labour input ratios
Estimation of “adjusted” output and value added
# Informality and national accounts

## Indirect estimates: labour input method

<table>
<thead>
<tr>
<th>Informal sector</th>
<th>LFS</th>
<th>ES</th>
<th>Labour input ratio</th>
<th>Adjusted GVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry 1</td>
<td>$X_{LFS1}$</td>
<td>$X_{ES1}$</td>
<td>$Y_{ES1}$</td>
<td>$X_{LFS1}/X_{ES1}$</td>
</tr>
<tr>
<td>Industry 2</td>
<td>$X_{LFS2}$</td>
<td>$X_{ES2}$</td>
<td>$Y_{ES2}$</td>
<td>$X_{LFS2}/X_{ES2}$</td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry i</td>
<td>$X_{LFSi}$</td>
<td>$X_{ESi}$</td>
<td>$Y_{ESi}$</td>
<td>$X_{LFSi}/X_{ESi}$</td>
</tr>
</tbody>
</table>

The labour inputs should be measured using the same units, i.e., jobs, hours. The informal sector needs to be defined in a similar way in both surveys. Can be done for formal sectors as well.

International Labour Office
Department of Statistics