Informality in the Process of Development and Growth

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Macroeconomics and Growth Team

About 30 years ago:

*The Other Path*

by Hernando de Soto

(and 20 years ago, my Ph.D. dissertation on informality and growth was published)
THE INVISIBLE REVOLUTION IN THE THIRD WORLD

THE OTHER PATH

HERNANDO DE SOTO

FOREWORD BY MARIO VARGAS LLOSA

I.B. TAURIS & Co Ltd
An alternative to the “Shining Path” to the communist revolution
Fundamentals
A definition of informality

“Informality” is a term used to describe the collection of firms, workers, and activities that operate outside the legal and regulatory frameworks or outside the modern economy.
Informality is rampant in the developing world

• In a typical developing country, the informal sector,
  - produces about 35 percent of GDP
  - employs around 70 percent of the labor force

• ... however, with considerable heterogeneity across regions and countries
Informality is an essential issue...

It implies that a large number of people and economic activities do not benefit from,

- appropriate technologies
- access to public services
- social protection
The positive side: flexibility and creativity
The negative side: inefficiency and risk
A History of Thought
Informality Schools of Thought

Lack of development
- ILO
- Worker’s rights

Bad governance
- Hernando de Soto
- Doing business
A new synthesis on the study of informality

What is the tradeoff that drives informality?

Public Finance

Taxation vs. Public services

Labor Markets

Labor costs vs. Capital costs
An Empirical Approach
Informality is a symptom of...

• Bad governance
  ➢ Excessive regulations
  ➢ Defficient provision of public services

• Lack of Development
  ➢ Low productivity
    o lack of capital
    o low levels of education
    o other socio-demographic factors (youth, rural...)
Informality and public services

Non-Pension Contribution (percent of labor force)

Law and Order (index: higher, better)

correlation: $-0.74^{***}$

$N = 95$
Informality and education

Correlation: -0.82***
N = 84

Non-Pension Contribution (percent of labor force)

Average Years of Secondary Schooling
Informality and sociodemographics

Non-Pension Contribution (percent of labor force)

Sociodemographic Factors, standardized

correlation: 0.83***
N = 110
## Informality determinants

<table>
<thead>
<tr>
<th>Explanatory variables:</th>
<th>Informality measures</th>
<th>Non-contributor to Pension Scheme</th>
<th>Self Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(% of labor force, average of 2000-2007)</td>
<td>(% of total employment, average of 1999-2007)</td>
</tr>
<tr>
<td><strong>Average of 2000-2007 by country</strong></td>
<td></td>
<td>[1]</td>
<td>[2]</td>
</tr>
<tr>
<td>Law and Order</td>
<td>-3.5079*</td>
<td>-3.5079*</td>
<td>-1.6825*</td>
</tr>
<tr>
<td>(ICRG, index ranging 0-6: higher, better)</td>
<td>-1.67</td>
<td>-1.67</td>
<td>-1.97</td>
</tr>
<tr>
<td>(The Fraser Institute, index ranging 0-10: higher, less regulated)</td>
<td>-2.34</td>
<td>-2.34</td>
<td>-2.37</td>
</tr>
<tr>
<td>Average Years of Secondary Schooling</td>
<td>-5.4929**</td>
<td>-5.4929**</td>
<td>-1.9791**</td>
</tr>
<tr>
<td>(Barro and Lee 2001)</td>
<td>-2.62</td>
<td>-2.62</td>
<td>-2.06</td>
</tr>
<tr>
<td>Sociodemographic Factors</td>
<td>20.7618***</td>
<td>20.7618***</td>
<td>6.1571***</td>
</tr>
<tr>
<td>(average of share of youth population, share of rural population, and share of agriculture in GDP)</td>
<td>5.57</td>
<td>5.57</td>
<td>4.85</td>
</tr>
<tr>
<td>Constant</td>
<td>115.0565***</td>
<td>115.0565***</td>
<td>55.5873***</td>
</tr>
<tr>
<td></td>
<td>10.78</td>
<td>13.54</td>
<td></td>
</tr>
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</table>

| No. of observations    | 74                   | 62                                |
| Adjusted R-squared     | 0.84                 | 0.80                              |
Explaining differences in informal labor: Peru vs. Chile

- Public Services: 27%
- Regulatory Freedom: 45%
- Education and Sociodemographics: 28%
Explaining differences in informal labor: Indonesia vs. S. Korea
Lessons from the empirical approach

• Informality is not explained by a single source
  ➢ It is a complex phenomenon that arises from the combination of various forces

• As with all other complex issues, informality is both a cause and a symptom:
  ➢ Informality lowers GDP growth
  ➢ But it’s better than unemployment!

• We need more theory to understand informality relationships...
A Model
Agents

• **Workers:**
  - Provide labor
  - Similar, basic skills

• **Capitalists:**
  - Provide capital through savings
  - May include both physical and human capital

• **Government:**
  - Benevolent but myopic
  - Determines a minimum wage
Two coexisting economies

- **Modern economy**
  - Technology that uses both capital and labor
  - Organized in firms

- **Rudimentary economy**
  - Technology that uses only labor
  - Represented mostly by the self employed
Informal and formal sectors

• **Formal sector:**
  - Part of the modern economy
  - High labor costs – government mandated

• **Modern Informal sector:**
  - Part of the modern economy
  - Low labor costs but high capital costs and lower total factor productivity

• **Rudimentary Informal sector:**
  - Subsistence for some
  - Reservation for others
Solution

• **Static:**
  - Total capital and total labor are fixed
  - TFP is also given
  - Capital and labor are allocated to different sectors of the economy

• **Dynamic:**
  - Capital is accumulated through optimal endogenous savings
  - Labor grows according to exogenous population growth and participation rates
  - TFP grows exogenously
Comparative statics

<table>
<thead>
<tr>
<th>Variable of Interest</th>
<th>Mandated Formal Wage</th>
<th>Total Factor Productivity</th>
<th>Informal capital cost</th>
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<tbody>
<tr>
<td>Modern informal sector wage</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Modern informal sector size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal sector size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital rental rate</td>
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## Comparative statics

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<tr>
<td>Modern informal sector wage</td>
<td>+</td>
<td>no effect</td>
<td>-</td>
</tr>
<tr>
<td>Modern informal sector size</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Formal sector size</td>
<td>-</td>
<td>+</td>
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<td>Capital rental rate</td>
<td>-</td>
<td>+</td>
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Dynamics

TFP & LF

W & K
Empirical application

• **Objective:**
  - Calibrate the model
  - Use it for projections

• **Data:**
  - Own calculations,
    - Labor data (based on ILO, WB)
    - Capital (based on WB, PWT)
    - TFP (based on WB, PWT, ILO)
  - Proxies:
    - Modern formal: contributors to pension
    - Rudimentary informal: vulnerable self employed
Scenarios

1. Reasonable
   ➢ Mandated wages grow as fast as labor productivity

2. Reformist
   ➢ Mandated wages grow less than labor productivity (by 1 pp)

• In all scenarios,
   ➢ The time horizon extends from 2010 to 2020 and 2030
   ➢ TFP in the next two decades is assumed to grow at the same rate as in the previous decade
A tool -- for informality projections

- Excel-based tool, containing,
  - Underlying data
  - Parameter assumptions
  - Initial conditions
  - Scenarios

- Flexible and modifiable
  - Useful for other researchers and policy makers

- Large sample of countries: 76 developing, 20 developed

- Developed in collaboration with Claudia Meza-Cuadra
A few examples
Colombia -- Formal and Informal Labor Over Time

% of labor force

2010 2020 2030

Reasonable

Reformist

Rudimentary Informality
Modern Informality
Formality

Graph showing the percentage of labor force in Colombia from 2010 to 2030 under reasonable and reformist scenarios.
Peru -- Formal and Informal Labor Over Time

Rudimentary Informality

Modern Informality

Formality

% of labor force

2010 2020 2030

Reasonable

Reformist

2010 2020 2030
Morocco -- Formal and Informal Labor Over Time

The diagram represents the percentage of the labor force in Morocco that is either formal, rudimentary informal, or modern informal over time. The data is broken down into two scenarios: Reasonable and Reformist, and projected from 2010 to 2030.

- **Rudimentary Informality**
- **Modern Informality**
- **Formality**

The Reformist scenario shows a higher percentage of formal employment compared to the Reasonable scenario, indicating a more progressive approach to labor reform.
Kenya -- Formal and Informal Labor Over Time

% of labor force

2010 2020 2030

Reasonable Reformist

Rudimentary Informality
Modern Informality
Formality
India -- Formal and Informal Labor Over Time

% of labor force

2010 2020 2030

Reasonable Reformist

Rudimentary Informality
Modern Informality
Formality

0% 20% 40% 60% 80% 100%
Indonesia -- Formal and Informal Labor Over Time

Reasonable vs. Reformist

% of labor force

Rudimentary Informality
Modern Informality
Formality

2010 2020 2030

2010 2020 2030
Vietnam -- Formal and Informal Labor Over Time

<table>
<thead>
<tr>
<th>Year</th>
<th>Reasonable</th>
<th>Reformist</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Rudimentary</td>
<td>Formality</td>
</tr>
<tr>
<td>2020</td>
<td>Informality</td>
<td>Modern</td>
</tr>
<tr>
<td>2030</td>
<td>Informality</td>
<td>Informality</td>
</tr>
</tbody>
</table>

Legend:
- Rudimentary Informality
- Modern Informality
- Formality

% of labor force
A Final Reflection: Compassion or Admiration?
The informal sector: Prometheus Unbound!