



Title: Theoretical Reflections and Empirical Evidence on Informal Employment: an application using panel data with small within country-variation

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Introduction

*Importance of Informal Economy and Informal Employment:

related to poverty and precariousness
scarcity of human capital and physical capital

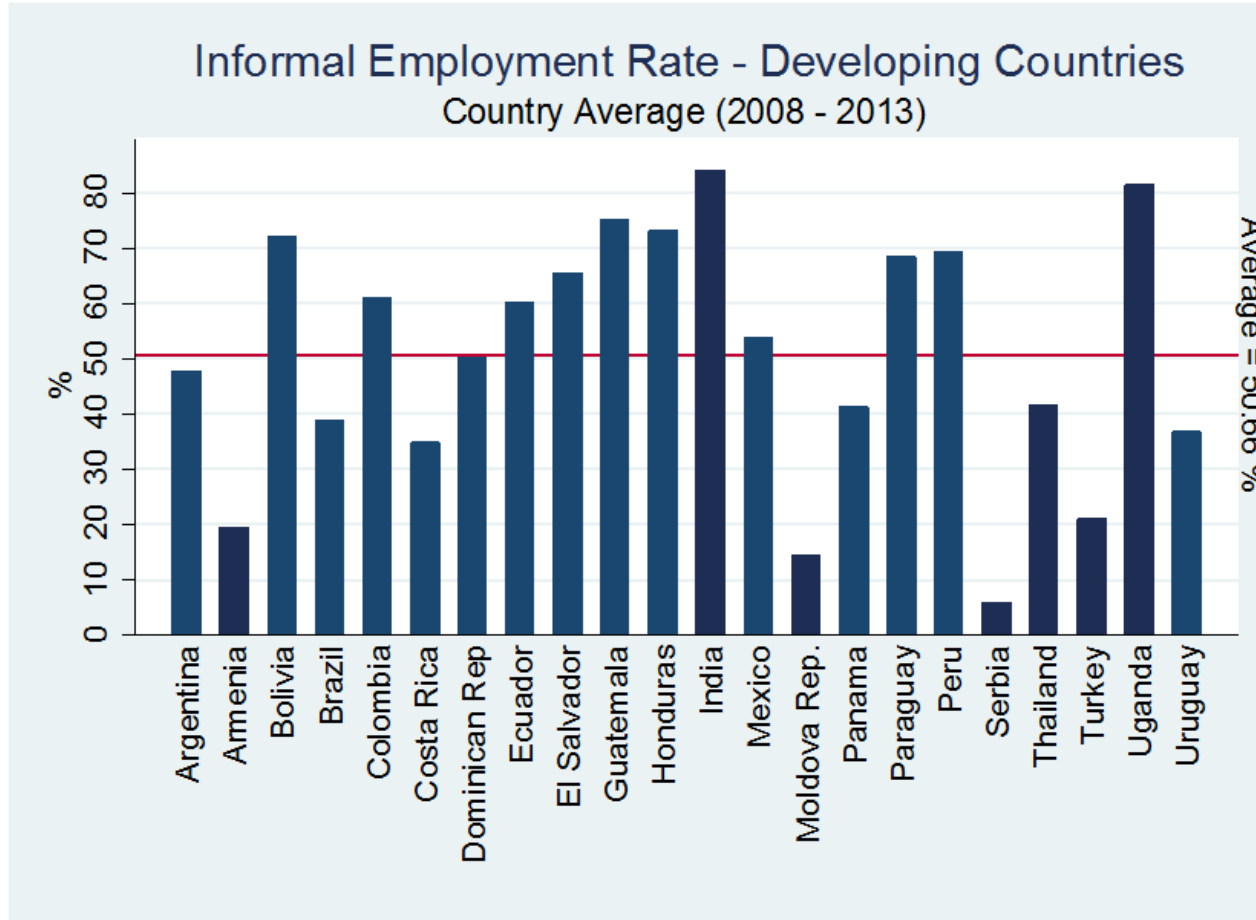
*In Latin America and many developing countries, the informal employment continues to be substantial

Informal employment rate in Bolivia, Guatemala, and Honduras is above 70%
In Paraguay and Peru is above 60%

*In Mexico, 26% of GDP is produced by the informal sector and other informality forms

*Informality is associated with poverty and precarious jobs

Introduction



Introduction

*The 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” (ILO, 2002).

The informal economy emerges as result of two kinds of economic activities (ibid):

- (a) economic activities in the informal sector and
- (b) informal economic activities in the formal sector (outside the informal sector)

Introduction



Economic activities in the informal sector



Informal economic activities in the formal sector

Informal
Economy



Introduction

The informal sector is “...characterized as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned.

Characteristics of informal units (informal sector):

Typically operate at a low level of organization

little or no division between labor and capital as factor of production and on a small scale

Labor relations are based mostly on casual employment, kinship or personal and social relation

No contractual arrangements with formal guarantees

Introduction

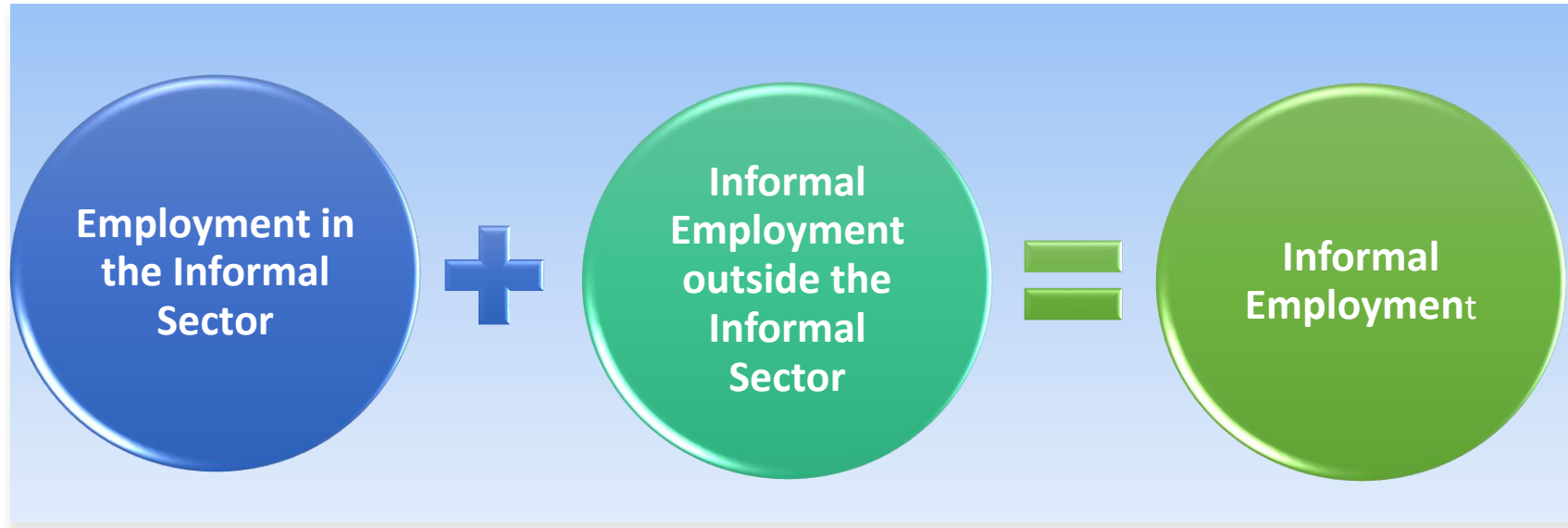
Informal economic activities outside the informal sector, also known as ‘other forms of informality’ , are those that

“...although they are operating within the formal reach of the law, the law is not applied or not enforced; or the law discourages compliance because it is inappropriate, burdensome, or imposes excessive costs.”

(ILO, 2002).

Introduction

Employment in the informal economy :



Informal employment “encompasses persons in employment who, by law or in practice, are not subject to national labour legislation and income tax or entitled to social protection and employment benefits. Informal employment can exist in both the informal and the formal sector of the economy.” (ILO 2013, p. 4).

The 17th International Conference of Labour Statisticians defined informal employment as the total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises, or households, during a given reference period (Hussmanns, 2004)

The Non-retributed factors approach (economic approach)

Under this approach, we consider as informal economy, all economic activities in which, at least one factor of production is non-retributed or under-retributed

(Guillermo y Angulo, (2012))



Under-retributed labor



Non-retributed Public Space
(social fixed capital)

➤ This approach proposes that non-retribution or under-retribution of factors of production is related to scarcity

➤ Scarcity translates into high factor prices (high production costs)

➤ Informal Economic units avoid these high costs

➤ The scarce factors are:

➤ human capital
➤ Physical capital

Methodology

The aim is to show some empirical evidence regarding the influence of physical capital and human capital on informal employment rates.

We define a model based on a panel data set

Have data for 46 countries (22 developing countries, among which 15 are Latin American countries, and 24 developed countries) with a time span from 2008 to 2013.

The panel is unbalanced

The limitation of data coverage across countries is an obvious disadvantage for:

Identification of the factors that may influence the informal employment rate

Magnitude and direction of factor's influence may be affected

small within country variation, data characteristic that must be taken into account when choosing the model estimation technique

The Model and Estimation Methodology

Based on the data characteristics, we initially set up the following model to estimate, for each country i at time t ,

$$\begin{aligned} infe_{it} = & \alpha_i + \gamma_1 dc_{it} + \beta_2 gdp_g_pc_{it} + \gamma_2 (dc_{it} \times gdp_g_pc_{it}) + \beta_3 lgf_{cf_pc_{it-1}} \\ & + \gamma_3 (dc_{it} \times lgf_{cf_pc_{it-1}}) + \beta_4 educ_{it} + \gamma_4 (dc_{it} \times educ_{it}) + \beta_5 ci_{it} \\ & + \gamma_5 (dc_{it} \times ci_{it}) + \beta_6 tsb_{it} + \gamma_4 (dc_{it} \times tsb_{it}) + e_{it} \end{aligned}$$

$infe_{it}$ = informal employment rate for country i at time t

dc_{it} = binary variable taking the value one if country i is a developed country and zero otherwise (time invariant for the sample period).

$gdp_g_pc_{it}$ = GDP per capita growth (annual rate) for country i at time t

$lgf_{cf_pc_{it-1}}$ = natural log of the Gross Fixed Capital Formation per capita for country i

at time $t-1$

Estimation Results

Dependent Variable: <i>infe_{it}</i>			
Variable	Coefficient	Std. Error	P-val
<i>_cons</i>	162.9782***	12.8534	0.000
<i>dc_{it}</i>	-135.0791***	15.2729	0.000
<i>gdp_{g_pc}_{it}</i>	0.4208	0.3060	0.170
<i>dc_{it} × gdp_{g_pc}_{it}</i>	-0.6982**	0.3427	0.043
<i>lgf_{cf_pc}_{it-1}</i>	-15.0382***	1.9843	0.000
<i>dc_{it} × lgf_{cf_pc}_{it-1}</i>	13.7366***	2.1872	0.000
<i>educ_{it}</i>	-1.1246***	0.1672	0.000
<i>dc_{it} × educ_{it}</i>	0.8897***	0.1752	0.000
<i>ehat_{ci}_{it}</i>	-0.5786***	0.1215	0.000
<i>dc_{it} × ehat_{ci}_{it}</i>	0.4503***	0.1313	0.001
<i>tsb_{it}</i>	0.0533	0.0461	0.249
<i>dc_{it} × tsb_{it}</i>	-0.0289	0.0690	0.675
Number of obs = 241			
F(11, 229) = 104.69			
Prob > F = 0.0000			
Adj R-squared = 0.8262			

Source: Own estimations. (***), (**) statistically significant coefficient at 1 and 5 percent respectively.

The effects of the explanatory variables on the informal employment rate are bigger for developing countries.

Except for the GDP per capita growth rate in developing countries, and the time to start a business variable, all coefficients are statistically significant (at 1% and 5% significance levels).

A one percentage-point increase in the GDP per capita growth rate will reduce the informal employment rate –vulnerable employment– by 0.7 percentage points, on average.

A one percentage-point increase in gross fixed capital formation per capita that took place in the previous year (*t-1*) will (on average) decrease the informal employment rate by approximately 0.15 and 0.013 percentage-points (at time *t*) in developing and developed countries respectively.



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