

Pathways of Formalization

Going Beyond the Formality Dichotomy

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(Work in progress. All figures are preliminary. Please do not quote)

Motivation

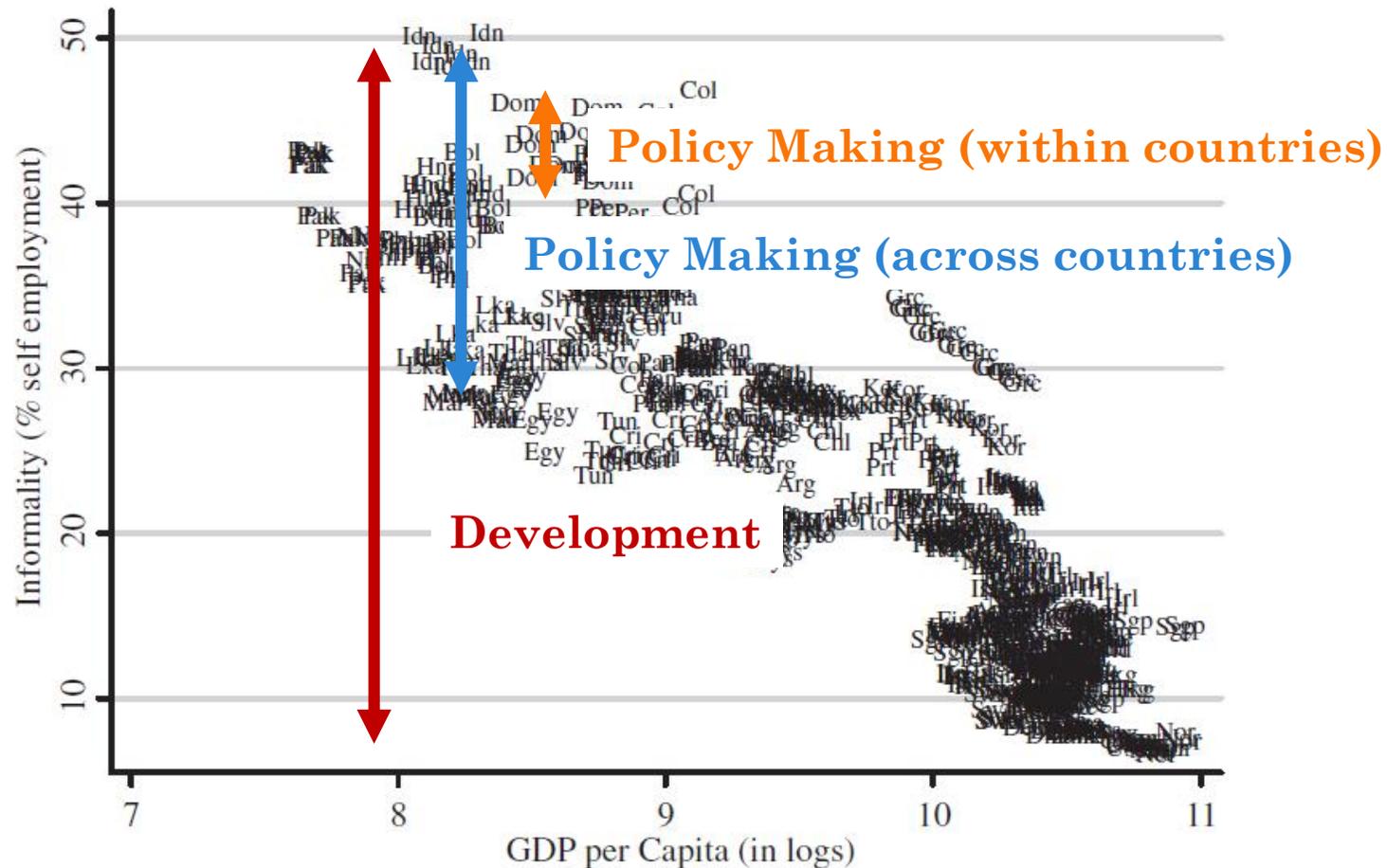
- **Strong (erroneous?) belief among policy makers that formalizing firms leads to large productivity and fiscal gains**
 - Productivity and employment gains from formalization programs remain for the most part quite modest
 - There are both advantages and disadvantages in being formal – many small firms choose to remain informal
 - Formal sector growth hinges mostly on the growth of formal sector firms, as opposed to the formalization of informal firms
- **Still, there could be gains for small firms in becoming formal, but...**

Objective of the study

...there is a poor understanding of the formalization process that may hinder effective policy making.

Informality Myths

- MYTH # 1: We can get rid of informality through good policy making



Informality Myths

- **MYTH # 2: There are “formal” and “informal” firms/workers**
 - Formality is usually treated as a “dual” concept
 - Yet, formalization is a gradual process. There are various pathways to formality.
- **MYTH # 3: There is only one type of informality**
 - Formality has multiple dimensions
 - Business and labor formality are related but different dimensions
- **MYTH # 4: Once the firm becomes formal, it stays formal forever**
 - The formality status is very dynamic
 - Some firms return to informality, even in times of massive formalization

Motivation

- **MYTH # 5: When formalization happens, all firms are evenly formalized across firm sizes**
 - There are large firms that employ informal workers
 - If employment generation concentrates on large firms, it can be that SMEs remain informal
- ***Our study documents new aspects of the formalization process***
 - *It documents business and labor formalization patterns*
 - *It analyses how both dimensions – business and labor – can affect one another*
 - *Focus of the paper: SMEs (firms and workers)*

Literature – Formalization Initiatives

- Business formalization and labor formalization are seen as separate areas:
 - Main initiatives for business formalization (information, one-stop shops, simplification of registration, costs reduction, inspection or incentives) show positive impacts but mostly in the short run
 - Regarding labor formalization, there have been studies on access to social security, changes in labor costs and enforcement, with inconclusive results.
 - A combination of firm and labor formalization schemes, such as the mono-tax system, show small positive effects that tend to disappear over time.
- Main approaches
 - Most of the studies interpret formalization as a dual and irreversible process
 - No studies on the effect of firm formalization on labor formalization, or vice-versa

How our study differs

- Our study looks at business and labor formalization jointly
- It also aims at understanding how both dimensions affect one another
- The questions are relevant from both an academic and a policy perspective:
 - Formalization is a gradual process
 - Firms respond to incentives and can both formalize and de-formalize

What kind of formality do we explore?

- **Business formality**
 - Complying with local regulations to operate
 - **Our indicator: Municipal license**
- **Labor formality**
 - Complying with labor regulations
 - **Our indicator: Payroll Registry (Ministry of Labor)**

	Registered firms		Unregistered firms
	License	No license	
Large			
- Formal Employment			
- Informal Employment			
SMES			
- Formal Employment			
- Informal Employment			

Focus on
SMES



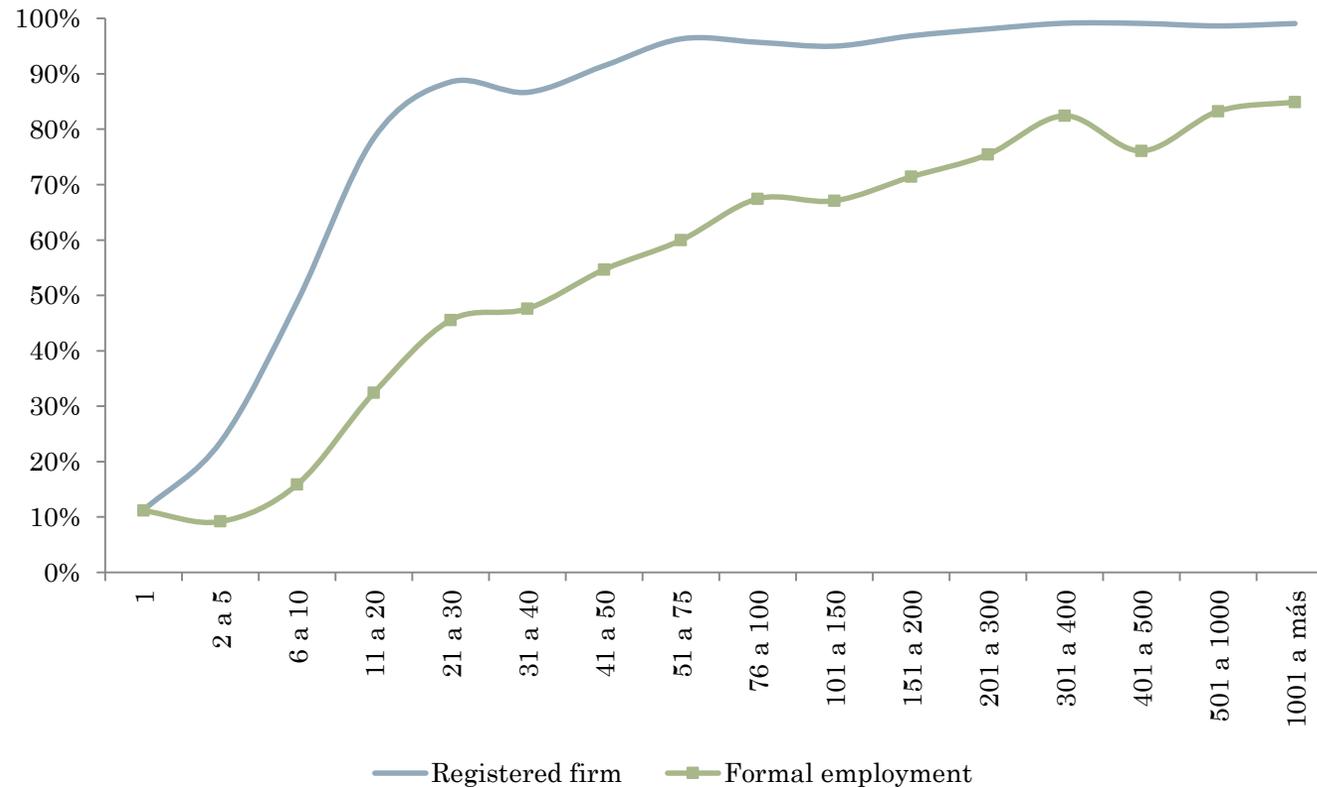
2. Peruvian context

SME initiatives/programs/laws

- Business formality
 - There are specific tax regimes for SMEs (RUS, RER, *Myte tributario*)
 - Municipal regulations
 - Sectoral regulations
- Labor formality
 - SME Law: reduction of labor costs (2003, extended in 2008 and 2013)
 - Electronic payroll
- Note:
 - We do not evaluate these regimes.
 - In Peru, business and labor formalization policies schemes are not connected

Business and labor formality by firm size

Peru: labor and business formality by firm size (2014)



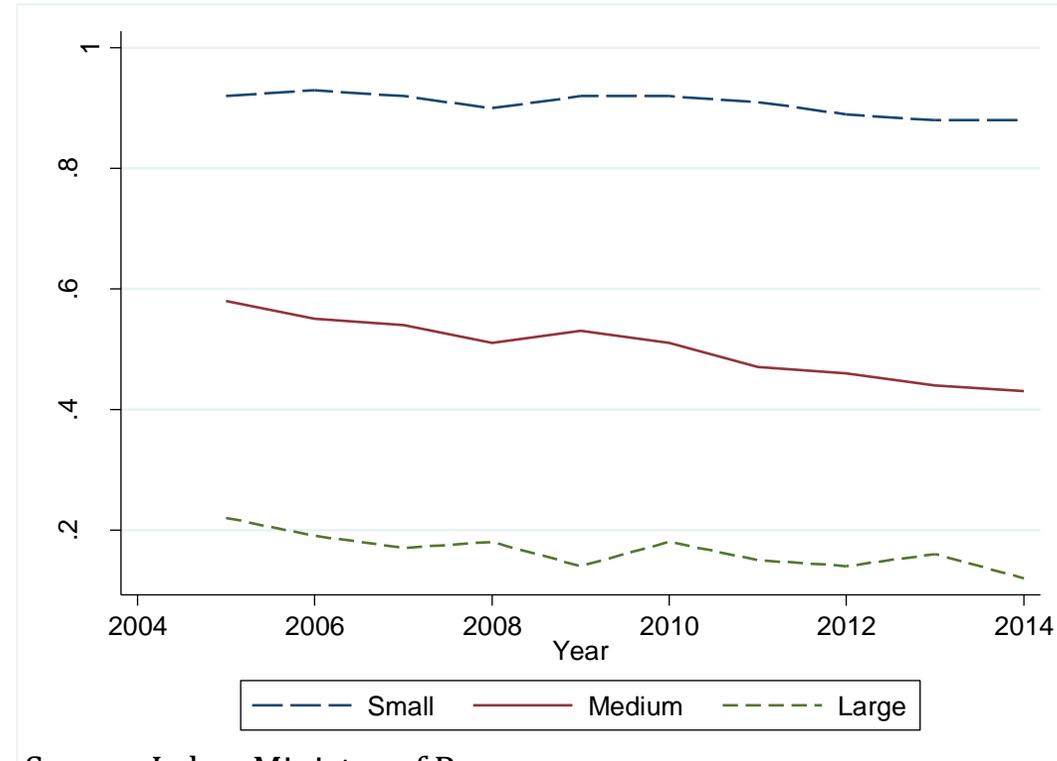
Source: Chacaltana (2016) based on ENAHO (2014).

- There is a strong correlation between informality and SMES
- Business registration and labor registration are different processes

Formalization is a slow process

- Peru (labor) informality rates:
 - 80% in 2007
 - 72% in 2016
- Composition of informal employment 2016:
 - Own-account workers: 40% (no RUC)
 - Wage workers: 43% (no SS)
 - SME: 29%
 - Medium and large: 14%
 - Other: 17%

Figure 1: Peru, Informality rates among wage earners, by firm size.



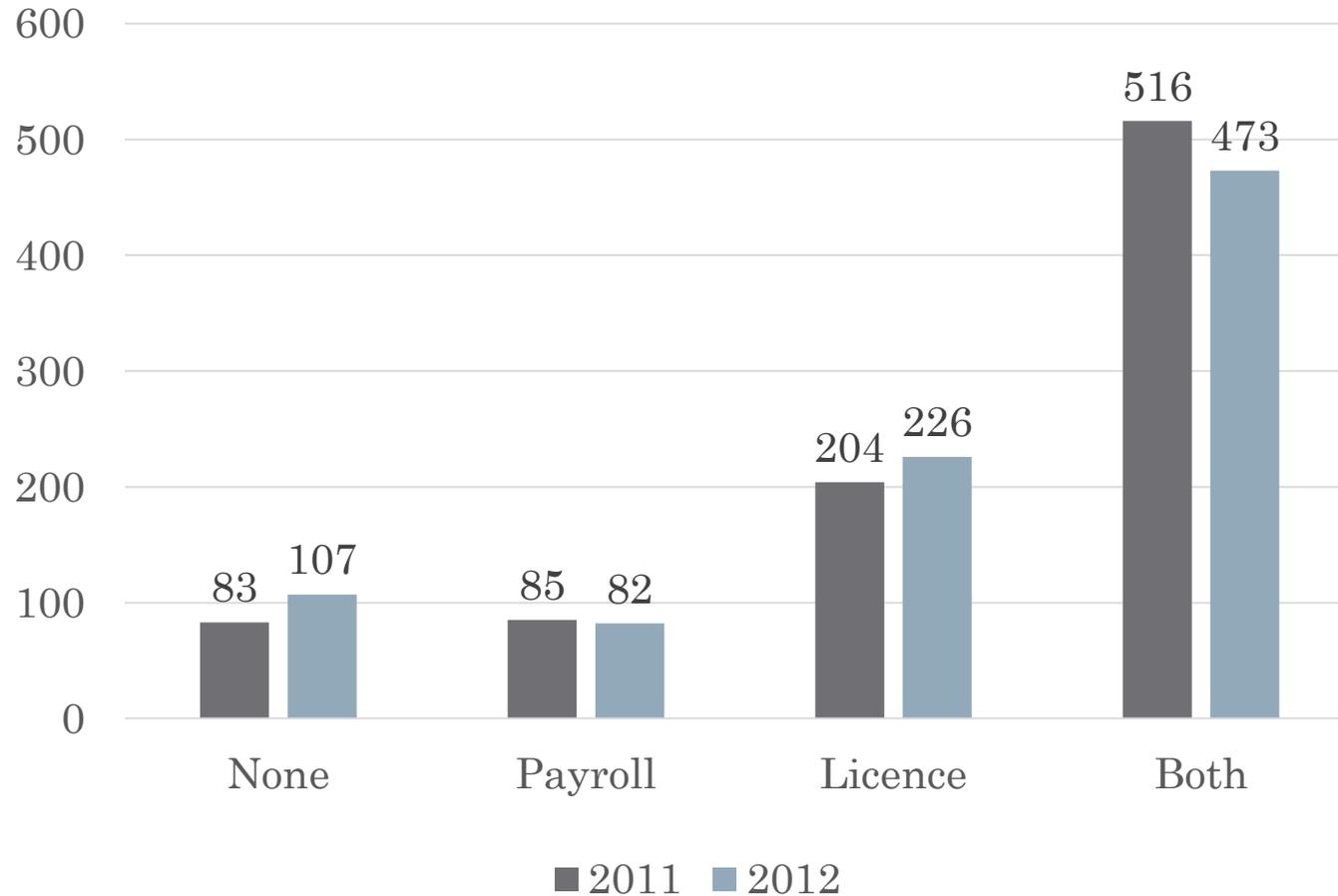
Source: Labor Ministry of Peru.

3. Analysis

Data description

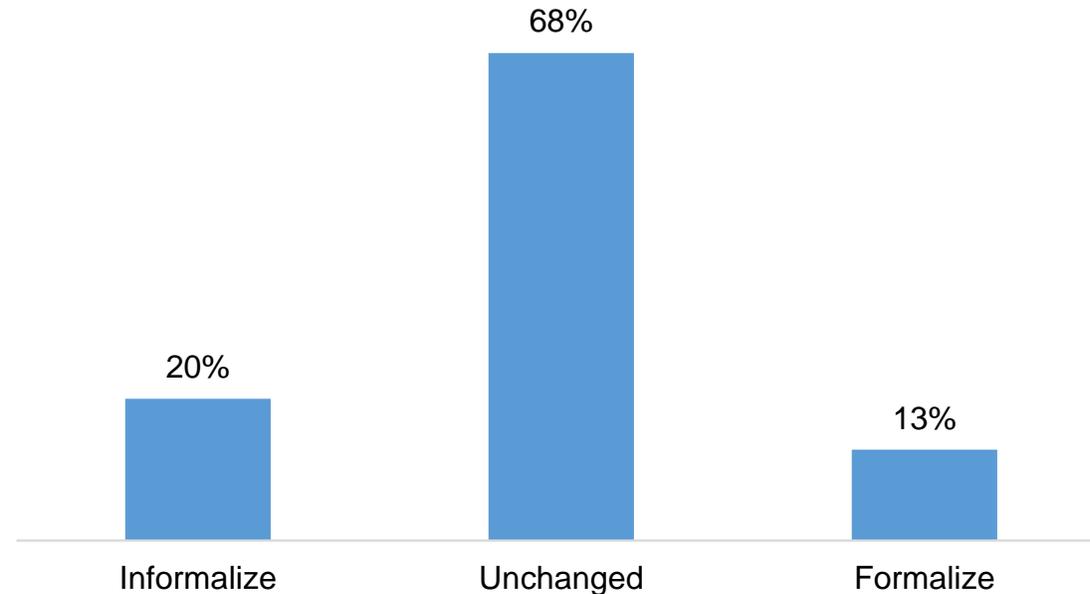
- Peruvian Survey of Micro and Small Enterprises
 - All firms are registered with the Tax authority
 - Data on firm & labor formalization is available for a panel of 888 manufacturing firms in 2011 and 2012
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- ▶ Simultaneity regressions use the 2012 cross-section
 - ▶ Transition analyses use information from both years

Formality status – no apparent dynamics



But there is a lot of churning in and out of formality

Type of transition 2011/2012 both dimensions



The de-formalization of firms in our sample contrasts with the (modest) increase in formalization of the Peruvian Economy

Formalization also happens gradually along both dimensions

		2012			
		None	Licence	Payroll	Both
2011	None	65	19	8	7
	Licence	10	52	5	32
	Payroll	26	11	42	21
	Both	2	18	5	74

Table 2: Business and Labor formality transitions (Percentage of firms given initial status in 2011)

Transition regressions*

	(1)	(2)	(3)	(4)
VARIABLES	OLS	OLS	OLS	OLS
Change t-1 => t	License	License	Payroll	Payroll
	0 => 1	1 => 0	0 => 1	1 => 0
Log distance to SUNAT	0.0135 (0.0575)	0.0438*** (0.0162)		
Firms in E-Payroll / firms in SUNAT			0.0156** (0.008)	-0.0150** (0.006)
Growth in pc electricity consumption 2011/12	-0.191 (0.192)	0.00229 (0.0684)	0.102 (0.149)	-0.000937 (0.102)
Log product per worker	0.0100 (0.0315)	0.00474 (0.0128)	0.0658** (0.0310)	-0.0292* (0.0175)
Log number of workers	0.0677 (0.0497)	-0.0370*** (0.0137)	0.0595 (0.0443)	-0.0276 (0.0200)
Incorporated business	0.208** (0.0914)	-0.0875*** (0.0255)	0.277*** (0.0687)	-0.239*** (0.0401)
Age 1-4	-0.0267 (0.0777)	0.0598** (0.0265)	-0.0912 (0.0653)	-0.0437 (0.0383)
Constant	0.576 (0.579)	0.163 (0.211)	-0.706 (0.581)	1.234*** (0.338)
Observations	168	720	287	601
R-squared	0.086	0.078	0.161	0.105

Standard errors in parentheses. Significance: *** p<0.01, ** p<0.05, * p<0.1

- Legal status increases the probability of formalization and decreases that of informalization
- Firms with more workers are more likely to get formal
- Younger firms are more likely to get informal
- We do not find a significant effect of local level of activity
- We do not find a relationship with output per worker

* Sample size in each column depends on initial (2011) status.

Pathways regressions

VARIABLES	(1) OLS License	(2) 2SLS License	(3) OLS Payroll	(4) 2SLS Payroll
Payroll registry	0.0738** (0.0298)	-0.0964 (0.206)		
License			0.107*** (0.0377)	0.686** (0.331)
Log distance to SUNAT	-0.0751*** (0.0190)	-0.0794*** (0.0198)		
Firms in E-Payroll / firms in SUNAT			0.019*** (0.005)	0.0238*** (0.006)
Log product per worker	0.0304* (0.0157)	0.0383** (0.0185)	0.0491*** (0.0176)	0.0267 (0.0234)
Log number of workers	0.0672*** (0.0167)	0.0835*** (0.0258)	0.0891*** (0.0185)	0.0522* (0.0293)
Incorporated business	0.154*** (0.0316)	0.211*** (0.0755)	0.310*** (0.0344)	0.205*** (0.0711)
Age 5-8	0.0355 (0.0370)	0.0352 (0.0373)	-0.0112 (0.0417)	-0.0326 (0.0480)
Age 9-12	0.112*** (0.0389)	0.120*** (0.0405)	0.0313 (0.0439)	-0.0314 (0.0605)
Age 13-16	0.154*** (0.0429)	0.142*** (0.0457)	-0.0754 (0.0486)	-0.163** (0.0735)
Age 17-+	0.201*** (0.0388)	0.204*** (0.0393)	-0.000107 (0.0443)	-0.120 (0.0839)
Constant	0.302 (0.267)	0.253 (0.275)	-0.736** (0.315)	-0.936** (0.370)
Observations	888	888	888	888
R-squared	0.188	0.157	0.267	0.068
Weak identification test		19.00		14.24

Standard errors in parentheses. Significance: *** p<0.01, ** p<0.05, * p<0.1

Stock-Yogo weak ID test critical values: 16.38 (10% maximal IV size); 8.96 (15% maximal IV size)

6. Conclusions and implications

Conclusions

- **The process of formalization can go in both directions**
 - Firms learn about their productivity and can decide to go back to informality
 - Younger firms, the smallest and the ones without legal status have higher probabilities of returning to informality
- **Labor formalization may be a step that many low productivity firms may not be willing to take** even if various SME specific regime exist both along the labor and tax dimensions (although not connected)
- **Enforcement appears to be one of the drivers of formality status** and formalization among SMEs
 - Some studies (circa 2000) showed a tax detection probability around 60% while a labor detection probability around 4%

Implications

- **Incentives/enforcement can play a key role in the decision making of the type of SMEs analyzed in this paper**
 - The incentives to formalize depend on benefits and costs, regulations, and expected enforcement levels
 - In a country like Peru, where special labor and tax regimes exist, stronger enforcement may be needed
- **Articulated efforts are required to promote an effective path towards formalization**
 - Formality regulations depend on different national and local government agencies that do not coordinate to promote formalization
 - A path towards formalization needs to allow firms taking small steps and learning about their productivity in each step

Thanks