

DO ICTs REDUCE INFORMAL ECONOMY ? EVIDENCE FROM SOME DEVELOPING COUNTRIES

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Outline of the presentation

- ✓ Motivation
- ✓ Literature review
- ✓ Objectives
- ✓ Methodology
- ✓ Results
- ✓ Recommendations

Motivation 1/5

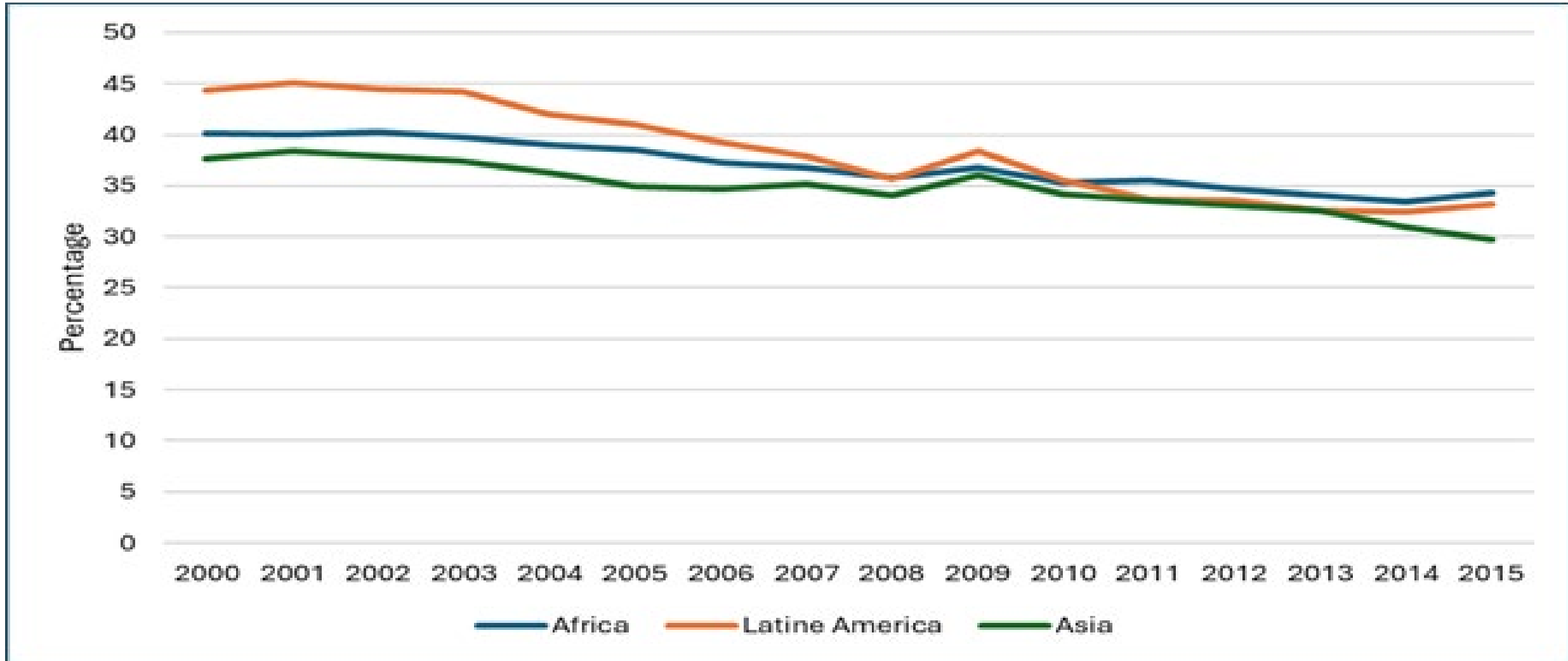
- Informality remains a key concern for many countries and international organization, as the informality rate is part of the indicators selected to measure progress towards the Sustainable Development Goals (ILO, 2024).
- Informal economy continues to constitute a considerable part of economic activity in most developing countries.
- Informal sector is a concept that is not unanimous, as there are a multiplicity of definitions (Gërxxhani 2004; Chen, 2012; Andrews et al. 2011).

Motivation 2/5

- Nahid Sultana et al., (2022), the informal economy includes all businesses, all employees and all activities operating outside the legal and regulatory structure as well as their products; the informal sector focuses on businesses; while informal employment concerns jobs.
- The informal sector concentrates all economic activities related to the production of legal goods and services but which remain hidden to the authorities for several reasons, including financial, regulatory and institutional reasons (Ohnsorge and Yu, 2021; Medina and Schneider, 2019; Schneider and Buehn, 2017).
- The informal economy is estimated to employ between 75-95% of the labour force in Africa (Jutting & Lalgilesta 2009), with the exception of South Africa, where the rate is 50%.

Motivation 3/5

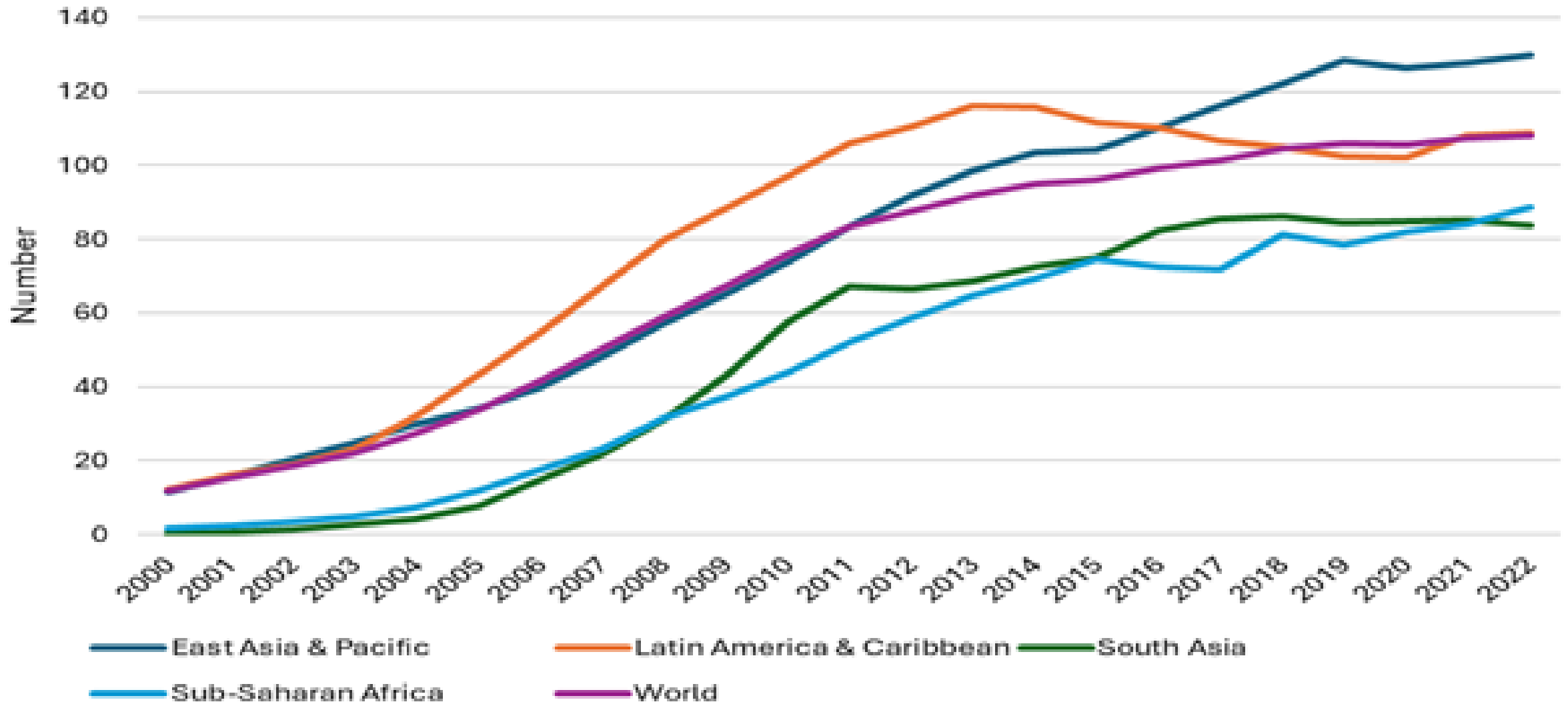
Figure 1: Informal economy in some developing regions (% of GDP)



Source: The authors using data from Medina and Schneider (2018)

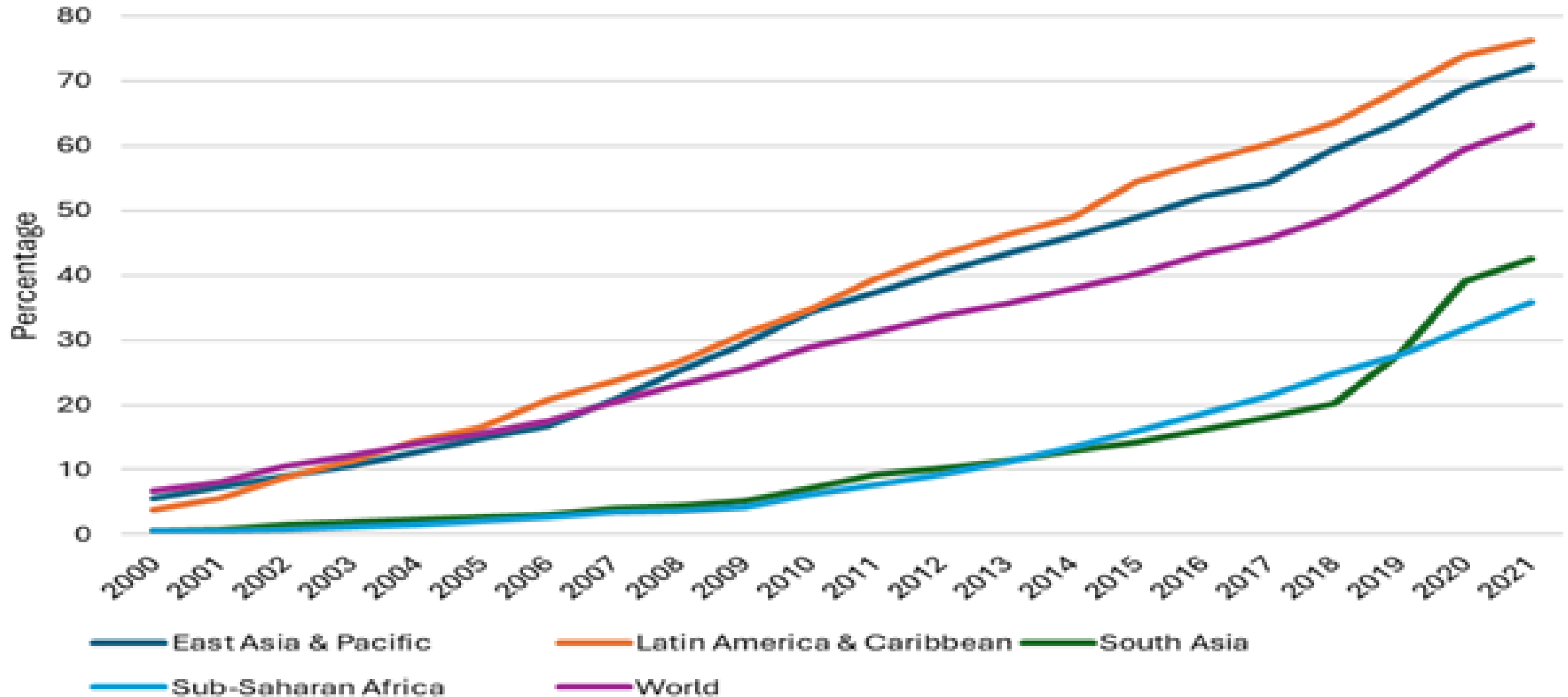
Motivation 4/5

Figure 2: Mobile phone use in some developing regions



Motivation 5/5

Figure 3: Internet use in some developing regions



Literature review

There is no consensus on ICT's effect on the informal economy (Shahnazi et al., 2024)

✓ **Negative effects of ICTs on informal economy**

- Remeikienė et al (2022) ; Garcia-Murillo and Velez-Ospina, (2017): ICTs access reduce transaction costs and increase growth of informal companies
- Ndoya et al. (2023): the use of ICTs specially mobile phone and internet decreases the spread of the informal economy in Africa, and that informal economy is mediated by financial development, human capital and control of **corruption**.

✓ **Thresholds effect of ICTs on informal economy**

Kartiasih et al (2023): enhancing ICT beyond certain thresholds is necessary for ICT to modulate informal sector to reduce income inequality in Indonesia districts and cities.

✓ **Positive effects of ICT on the informal economy**

Chacaltana et al., (2018); Garcia-Murillo and Velez-Ospina, (2017); Chandra (2017); Esselaar et al., (2006).

Objectives

The main objective is to analyze the effects of ICTs on the informal economy in some developing countries.

Methodology 1/2

Stamp (1990), who analyzed the contribution of ICTs to the modernization of informal activities.

Ndoya et al. (2023), who assessed the effects of ICTs on the informal economy in Africa.

- **Model specification:**

$$Informeco_{it} = \alpha_i + \lambda_t + \alpha_1 Informeco_{it-1} + \alpha_2 Cred_{it} + \alpha_3 ICT_{it} + \alpha_4 GOV_{it} + \alpha_5 HK_{it} + \alpha_6 Unempl_{it} + \alpha_7 Gapg_{it} + \varepsilon_{it}$$

- **Data**

- informal economy data come from Medina and Schneider (2018),
- the remaining variables come from the World Bank World Development Indicators (WDI 2024).

The study covers 50 countries from Africa, Latine America and Asia, on the period 2000 to 2015.

Methodology 2/2

✓ **Estimation method**

System generalized method of moments (GMM) estimator by Blundell and Bond (1998)

✓ **Post estimation tests**

☐ **Overidentification**

- Sargan
- Hansen

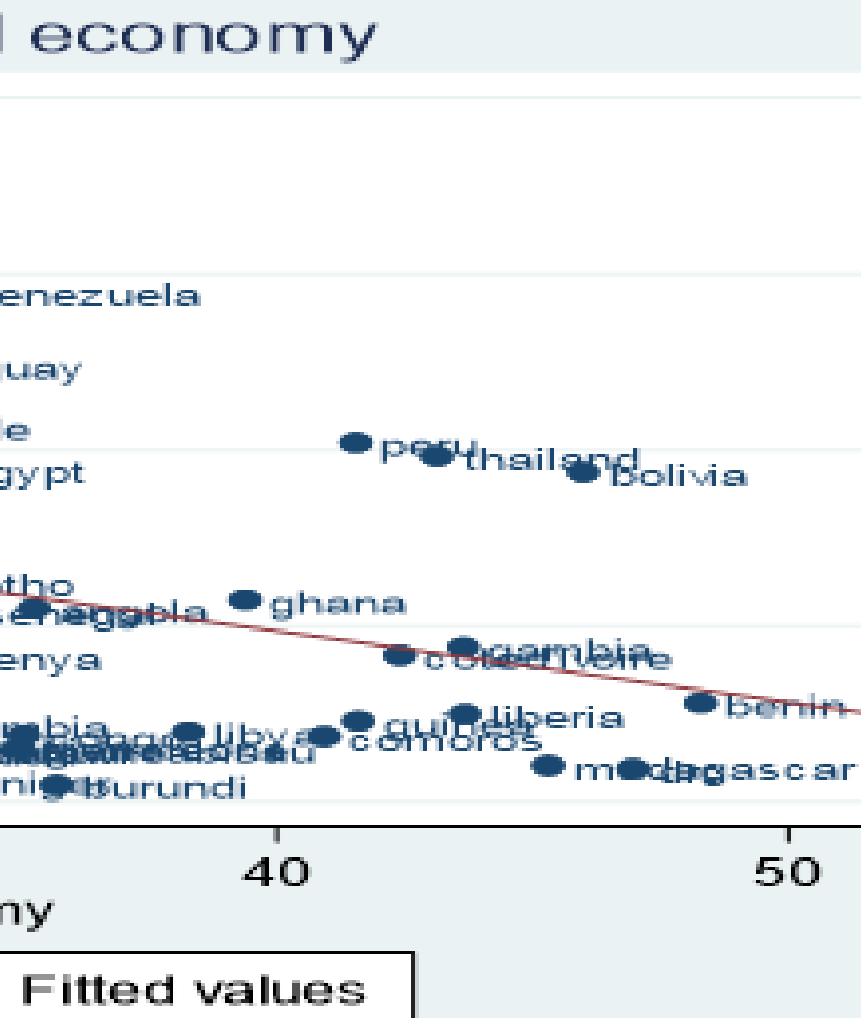
☐ **Serial correlation**

Second order auto correlation

☐ **Number of instruments**

113

informal economy



Results 2/3

Figure 5: Correlation between mobile cellular subscription and informal economy

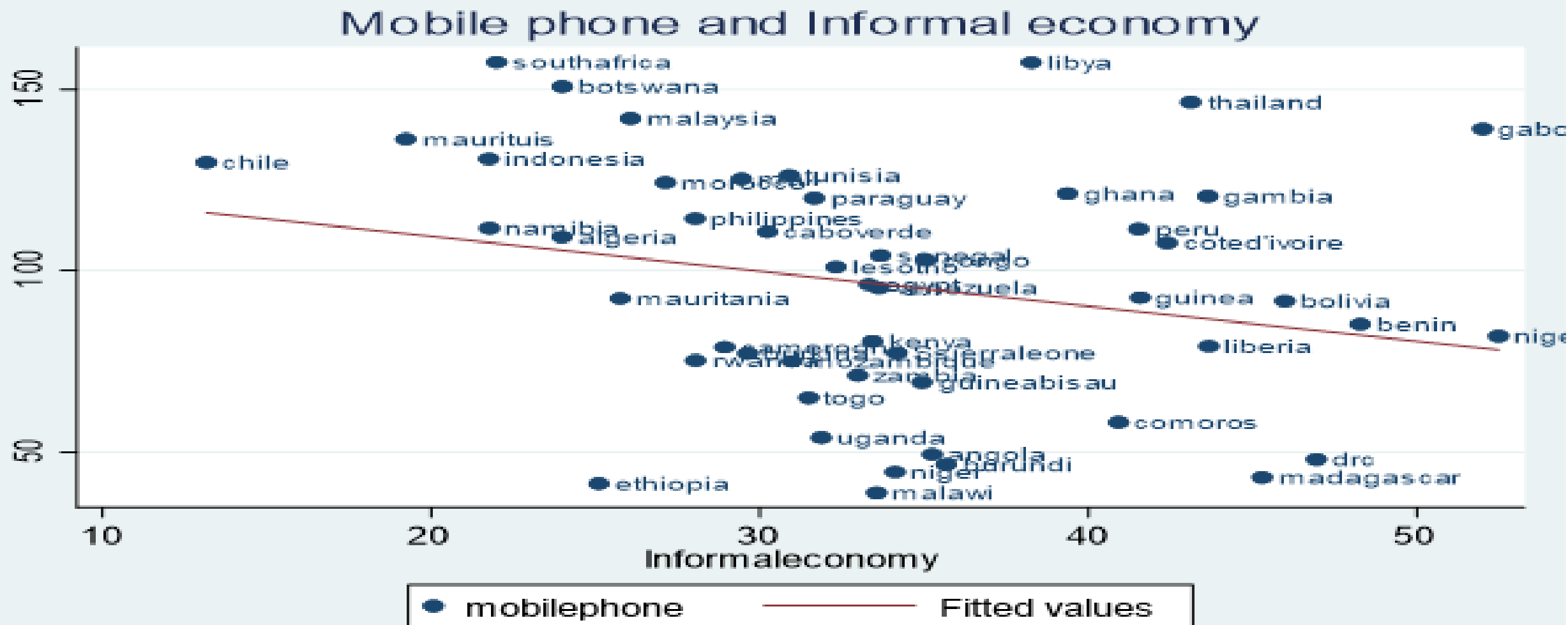


Table 1: Estimation of the effects of ICTs on the informal economy

VARIABLES	(1) Corrup mobile	(2) Corrup internet	(3) Regul internet	(4) Regul mobile
L.informal economy	0.686*** (0.0896)	0.811*** (0.0541)	0.798*** (0.0566)	0.706*** (0.0847)
Mobile phone	-0.0139*** (0.00482)			-0.0109*** (0.00413)
Corruption	-1.685*** (0.452)	-1.007*** (0.278)		
Credit to private sector	-0.00241 (0.0116)	0.00248 (0.0125)	0.00847 (0.0156)	0.000308 (0.0149)
GDP growth rate	-0.160*** (0.0114)	-0.166*** (0.0114)	-0.165*** (0.0113)	-0.162*** (0.0112)
Life expectancy	-0.0261** (0.0119)	-0.0296** (0.0119)	-0.0327*** (0.0121)	-0.0314** (0.0123)
Interest rate	0.0533*** (0.0121)	0.0381*** (0.00908)	0.0459*** (0.0101)	0.0580*** (0.0124)
Unemployment rate	-0.0668* (0.0365)	-0.0449 (0.0324)	-0.0584 (0.0366)	-0.0856** (0.0429)
Trade openness	0.00594 (0.0157)	-0.000187 (0.0156)	-0.00462 (0.0153)	0.000940 (0.0151)
Internet		-0.0151* (0.00824)	-0.0178** (0.00842)	
Regulatory quality			-0.968*** (0.275)	-1.229*** (0.280)
Constant	13.05*** (3.090)	8.775*** (2.103)	9.792*** (2.265)	13.24*** (2.084)

Post estimation tests

Constant	13.05*** (3.009)	8.775*** (2.103)	9.792*** (2.265)	13.24*** (3.084)
Observations	749	749	749	749
Number of code	50	50	50	50
AR (2) probability	0.832	0.848	0.855	0.860
AR (1) probability	0	0	0	0
Sargan prob	0.199	0.272	0.402	0.374
Number of instruments	23	23	23	23

Recommendations

- ✓ Invest more in order to move to innovative technologies such as 5G.
- ✓ Improve the quality of regulation
- ✓ Reduce corruption
- ✓ Develop human capital
- ✓ Put in place strategies to reduce interest rate



THANK YOU FOR YOUR KIND ATTENTION