

SPATIAL INEQUALITY, POVERTY AND INFORMALITY IN THE DEMOCRATIC REPUBLIC OF THE CONGO

Douglas Amuli Ibale^a, Frédéric Docquier^b and Zainab Iftikhar^c

^a IRES, Université catholique de Louvain (Belgium) ^b LISER, Luxembourg Institute of
Socio-Economic Research (Luxembourg) ^c University of Bonn, CEPR

EEA 2023

28.08.2023

Introduction

- Africa lags behind in per capita income growth and economic convergence.
- More than half of global poor live in Africa.
- Central Africa is struggling to improve its Sustainable Development Goals (SDG) indicators.
- Inequality in Central Africa has increased.
- Researchers intrigued by situation in Africa.

Research Questions

- Relative contribution of drivers of economic growth (**public infrastructure, human capital, production technology (TFP)**) to explaining income disparities in DRC?
- Contribution of interactions between these drivers of economic growth in explaining variation in per capita income?
- Response of informal sector to changes in formal sector and vice-a-versa?

Literature

Literature

- **Human capital** (Lucas, 1988; Romer, 1990; Mankiw, Romer, and Weil, 1992; Bloom et al., 2004; Hanushek, 2013).

Literature

- **Human capital** (Lucas, 1988; Romer, 1990; Mankiw, Romer, and Weil, 1992; Bloom et al., 2004; Hanushek, 2013).
- **Productivity** (Klenow and Rodriguez-Clare, 1997; Hall and Jones, 1999; Acemoglu and Dell, 2010, Acemoglu and Robinson, 2010, 2012).

Literature

- **Human capital** (Lucas, 1988; Romer, 1990; Mankiw, Romer, and Weil, 1992; Bloom et al., 2004; Hanushek, 2013).
- **Productivity** (Klenow and Rodriguez-Clare, 1997; Hall and Jones, 1999; Acemoglu and Dell, 2010, Acemoglu and Robinson, 2010, 2012).
- **Public infrastructure** (Calderon and Serven, 2010, 2014; Duflo and Pande, 2007; Irmen and Kuehnel, 2009; Wang and Wu, 2015).

Literature

- **Human capital** (Lucas, 1988; Romer, 1990; Mankiw, Romer, and Weil, 1992; Bloom et al., 2004; Hanushek, 2013).
- **Productivity** (Klenow and Rodriguez-Clare, 1997; Hall and Jones, 1999; Acemoglu and Dell, 2010, Acemoglu and Robinson, 2010, 2012).
- **Public infrastructure** (Calderon and Serven, 2010, 2014; Duflo and Pande, 2007; Irmen and Kuehnel, 2009; Wang and Wu, 2015).
- **Informality** Untaxed and unmonitored part of the economy (Lewis, 1954; Harris and Todaro., 1970; Rauch, 1991; De Soto, 1989, 2000; McKinesy, 2004; La Porta and Shleifer, 2014).

What we do?

- 1 Analysis similar to development accounting.

What we do?

- 1 Analysis similar to development accounting.
- 2 Richest province (Kinshasa in terms of per capita income) as benchmark, comparison with other provinces to assess the role of the factors discussed.

What we do?

- 1 Analysis similar to development accounting.
- 2 Richest province (Kinshasa in terms of per capita income) as benchmark, comparison with other provinces to assess the role of the factors discussed.
- 3 Structural approach to quantify the relative contribution of (public infrastructure, human capital, production technology, labour market frictions) to per capita income and explaining spatial inequality.

Contributions

Contributions

- 1 Quantitative assessment of interactions between drivers of per capita income growth.

Contributions

- 1 Quantitative assessment of interactions between drivers of per capita income growth.
- 2 Incorporate the informal sector.

Contributions

- 1 Quantitative assessment of interactions between drivers of per capita income growth.
- 2 Incorporate the informal sector.
- 3 Implications of labour market frictions for inequality and poverty.

1.2.3 Database

- A survey conducted between 2005 and 2012 by the DRC's National Institute of Statistics in partnership with different actors.
- Data were collected in three phases.
- Provides detailed information on employment, wage, and individual socio-demographic characteristics.

Stylized Facts

- Similarities across provinces:
 - 1 Informal sector (not regulated by government) is huge and absorbs both low and high skilled workers (at 12 years of schooling).
 - 2 Skill ratio is highest in the formal sector.
 - 3 Skill premium is highest in the informal sector.
 - 4 Wage is higher in the formal sector for both groups.
- Heterogeneity across provinces:
 - 1 Wage differentials (Kinshasa is the richest).
 - 2 Human capital differentials (Kinshasa has the highest share of high skilled workers).
 - 3 Public infrastructure (Kinshasa has the highest level of public capital).
 - 4 Informal sector smallest in Kinshasa (62.5% of workforce). SF

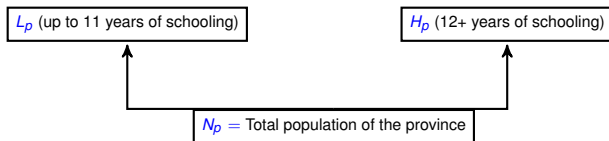
Economy

One final good produced formally and informally.

$$N_p = \text{Total population of the province}$$

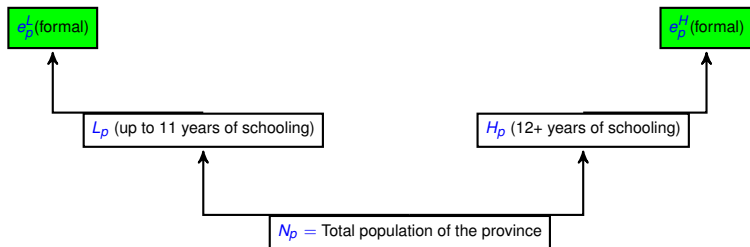
Economy

One final good produced formally and informally.



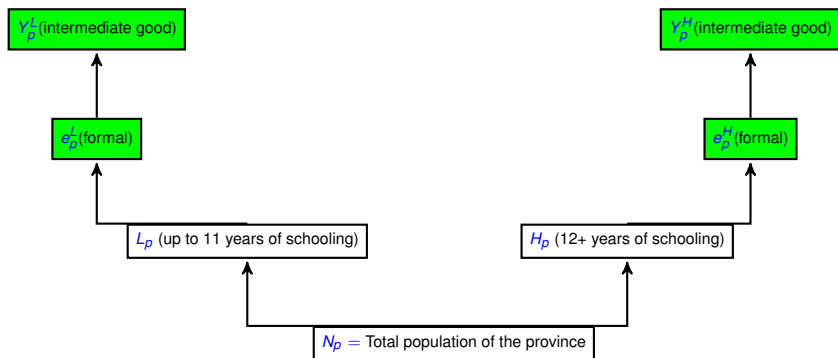
Economy

One final good produced formally and informally.



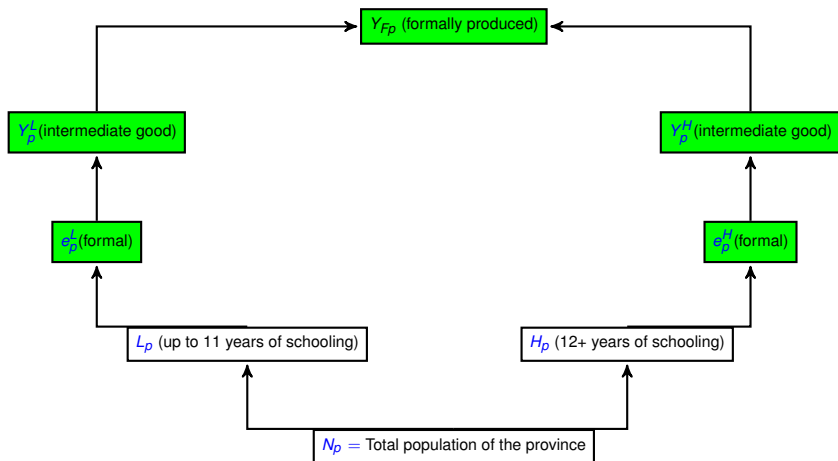
Economy

One final good produced formally and informally.



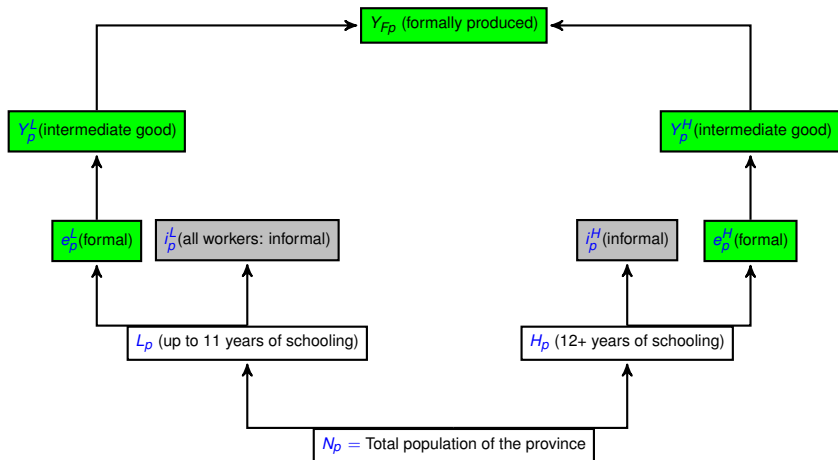
Economy

One final good produced formally and informally.



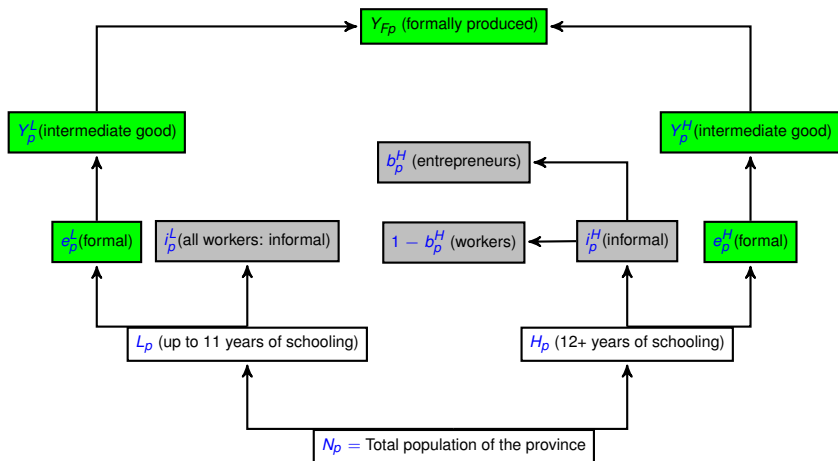
Economy

One final good produced formally and informally.



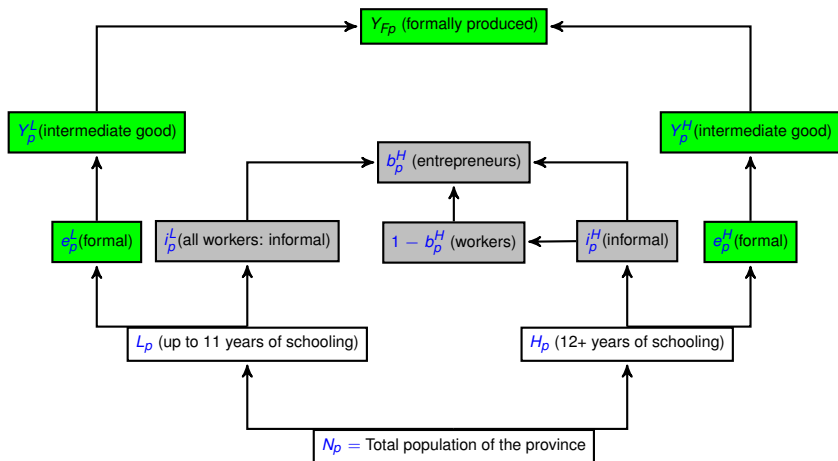
Economy

One final good produced formally and informally.



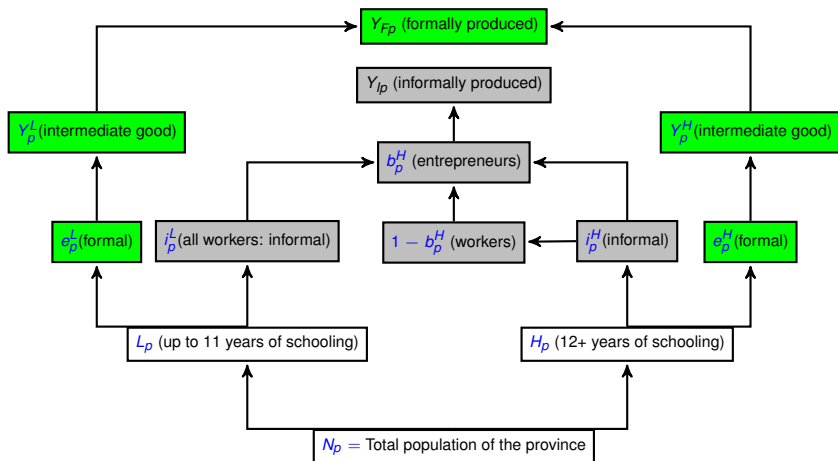
Economy

One final good produced formally and informally.



Economy

One final good produced formally and informally.



Technology–Formal Sector

$$Y_p = A_p \left[\alpha_p Y_p^L \frac{\sigma-1}{\sigma} + (1 - \alpha_p) Y_p^H \frac{\sigma-1}{\sigma} \right]^{\frac{\sigma}{\sigma-1}},$$

- A_p, α, σ TFP, income share of low skilled workers and elasticity of substitution between intermediate goods respectively.

$$A_p = \bar{A}_p z_p^\eta g_p^\varphi$$

- z_p, g_p skill ratio of intermediate goods, public infrastructure respectively.
- η, φ elasticity parameters. [details](#)

Informal Sector: Perfect Competition

The production function of each entrepreneur is given by:

$$\hat{y}_p = B_p h_p^{\psi_p} \ell_p^{\chi_p}$$

- \hat{y}_p outputs per entrepreneur.
- B_p, h_p, ℓ_p TFP, high skilled and low skilled workers per entrepreneur.
- ψ_p, χ_p elasticity parameters.

$$B_p = \rho_p \bar{A}_p g_p^\phi,$$

- ϕ elasticity parameter. [details](#)

Formal Labour Market

- Standard random search model.
- Exogenous job separation rates.
- Wage determined via Nash bargaining.
- Value of formal employment higher than the value of informal employment. [details](#)

Definition

The set of province-specific parameters $X_p \equiv \{X_p^Z, X_p^G, X_p^F, X_p^I, X_p^L\}$ consists of five subsets of parameters,

- 1 the human capital structure, $X_p^Z = \{Z_p\}$,
- 2 the state of public infrastructure, $X_p^G = \{g_p\}$,
- 3 the technological characteristics of the formal sector, $X_p^F = \{\bar{A}_p, \alpha_p\}$,
- 4 the technological characteristic of the informal sector, $X_p^I = \{\rho_p, \varrho_p, \kappa_p\}$,
- 5 the labor market characteristics, $X_p^L = \{\epsilon_p^L, \epsilon_p^H, c_p^L, c_p^H\}$.

Parametrization–Summary

Prm.	Definition	Target	Mean	CV
Province-specific				
\bar{A}_p	TFP scale factor in F	Wages in the formal sector	193.2	0.380
α_p	Income share parameter in F	Wages in the formal sector	0.313	0.141
ρ_p	Relative TFP scale factor in I	Wages in the informal sector	0.589	0.292
ϱ_p	Sum of ψ_p and χ_p	Wages in the informal sector	0.852	0.242
κ_p	Scale factor in $\frac{\psi_p}{\chi_p}$ function	Wages in the informal sector	0.886	0.194
ϵ_p^L	Scale factor in LS matching fct.	Informality rate low-skilled workers	0.014	0.342
ϵ_p^H	Scale factor in HS matching fct.	Informality rate high-skilled workers	0.054	0.369
C_p^L	Cost of posting a LS vacancy	Equal to 0.4 times w_p^L	35.2	0.383
C_p^H	Cost of posting a HS vacancy	Equal to 0.4 times w_p^H	54.1	0.368

Notes: CV = coefficient of variation of province-specific parameters, defined as the ratio of standard deviation to the mean value.

common

Quantitative Experiments

- Kinshasa (indexed by kin) as a benchmark, simulate the counterfactual general equilibrium $\bar{\Gamma}_p = f(X_{kin})$ and compare it with the observed equilibrium, $\Gamma_p = f(X_p)$.
- Mechanisms
 - 1 factor complementarity
 - 2 job creation
 - 3 reallocation of labour
- Effect on
 - 1 $\bar{w}_p^L = (1 - i_p^L)w_p^L + i_p^L\omega_p^L$
 - 2 $\bar{w}_p^H = (1 - i_p^H)w_p^H + i_p^H\omega_p^H$
 - 3 $\bar{w}_p = (H_p\bar{w}_p^H + L_p\bar{w}_p^L)/(H_p + L_p)$

One-at-a-time policy changes

- Education policies (Z): they lead to a counterfactual equilibrium obtained after replacing X_p^Z by the level observed in Kinshasa, X_{kin}^Z . This gives

$$\bar{\Gamma}_p^Z = f(X_{kin}^Z, X_p^G, X_p^F, X_p^I, X_p^L);$$

- Infrastructure policies (G): they lead to a counterfactual equilibrium obtained after replacing X_p^G by X_{kin}^G . This gives

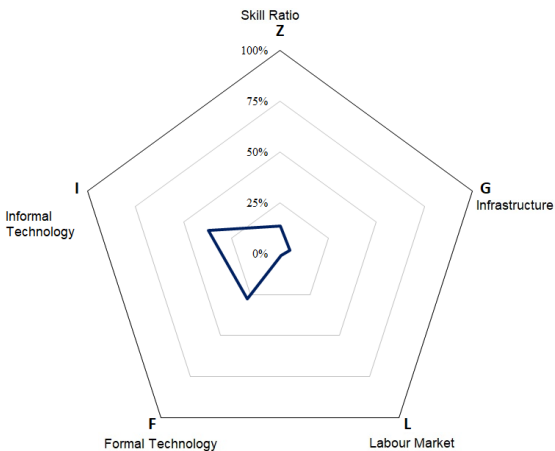
$$\bar{\Gamma}_p^G = f(X_p^Z, X_{kin}^G, X_p^F, X_p^I, X_p^L);$$

- Policies influencing the technology of the formal sector (F): they lead to a counterfactual equilibrium defined as $\bar{\Gamma}_p^F = f(X_p^Z, X_p^G, X_{kin}^F, X_p^I, X_p^L)$;

- Policies influencing the technology of the informal sector (I): they lead to a counterfactual equilibrium defined as $\bar{\Gamma}_p^I = f(X_p^Z, X_p^G, X_p^F, X_{kin}^I, X_p^L)$;

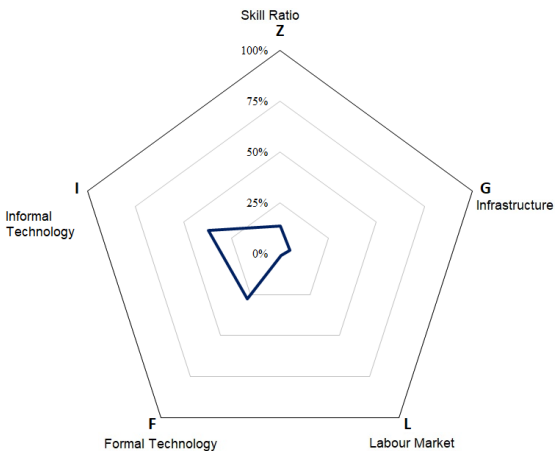
- Policies influencing labor market frictions (L): they lead to a counterfactual equilibrium defined as $\bar{\Gamma}_p^L = f(X_p^Z, X_p^G, X_p^F, X_p^I, X_{kin}^L)$.

Average income gap with Kinshasa: One at a time policy change



Notes: The effect is expressed as a percentage of the gap in the average income with Kinshasa.

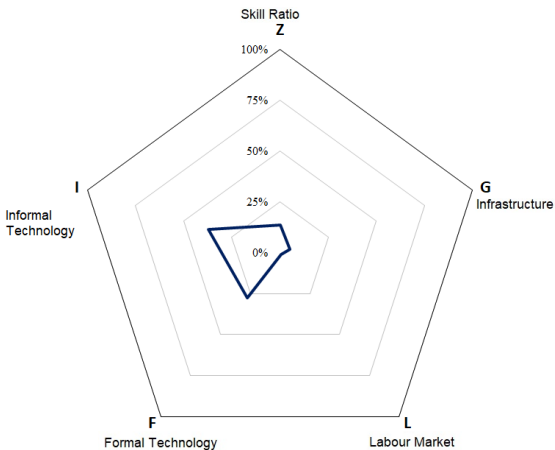
Average income gap with Kinshasa: One at a time policy change



- Key messages

Notes: The effect is expressed as a percentage of the gap in the average income with Kinshasa.

Average income gap with Kinshasa: One at a time policy change

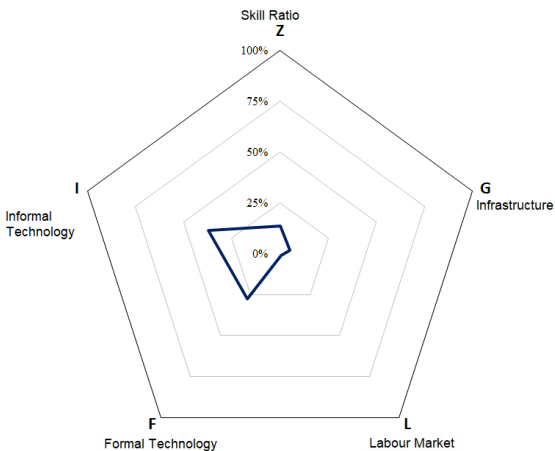


Key messages

- 1 $(X_p^F$ and $X_p^I)$ are the key determinants of spatial inequalities.

Notes: The effect is expressed as a percentage of the gap in the average income with Kinshasa.

Average income gap with Kinshasa: One at a time policy change

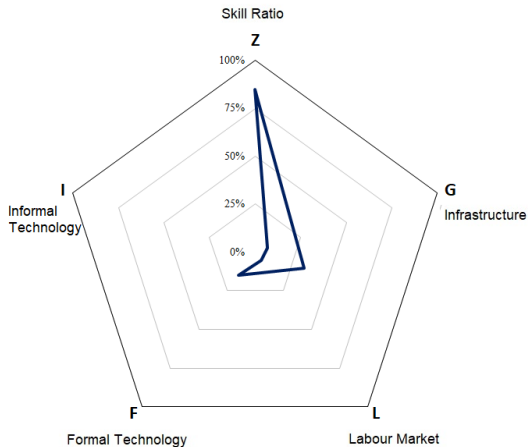


Notes: The effect is expressed as a percentage of the gap in the average income with Kinshasa.

Key messages

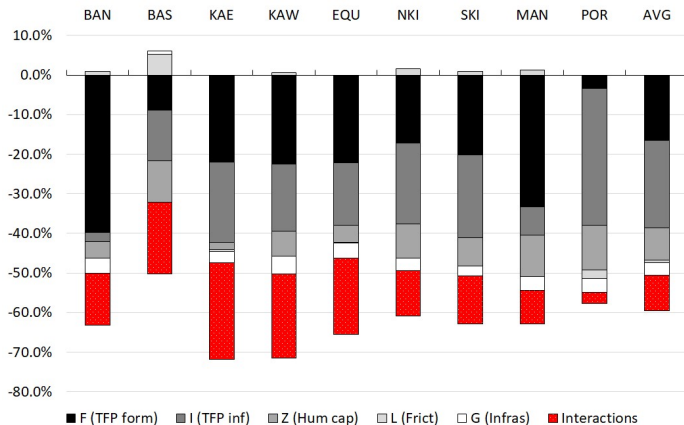
- 1 $(X_p^F$ and $X_p^I)$ are the key determinants of spatial inequalities.
- 2 Effectiveness of each policy taken in isolation is relatively small.

[Next](#)
[details](#)

Average informality gap (\bar{i}_p) with Kinshasa: One-at-a-time change

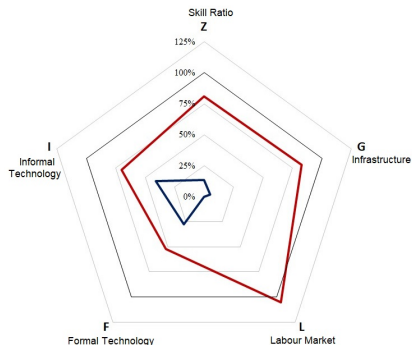
Notes: The effect is expressed as a fraction of the gap in the average informality rate with Kinshasa.

The isolated policies and interactions between them (\bar{w}_p)

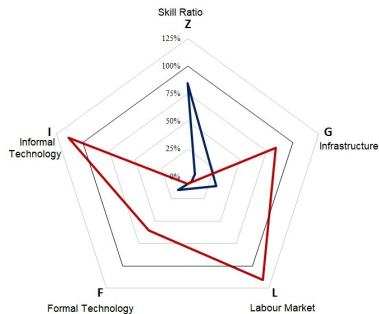


$$\text{income gap} = \bar{\Gamma}_p^Z + \bar{\Gamma}_p^G + \bar{\Gamma}_p^F + \bar{\Gamma}_p^I + \bar{\Gamma}_p^L + \text{residual}$$

Average income gap with Kinshasa: One-at-a-time and quadruple policy change



Notes: The effect is expressed as a fraction of the gap in the average informality rate with Kinshasa.

Effect of one-at-a-time and quadruple policy changes on informality (\bar{i}_p)

Notes: The effect is expressed as a fraction of the gap in the average informality rate with Kinshasa.

Conclusions/Contributions

Conclusions

- Growth miracles require a combination of favourable and mutually reinforcing factors.
- Income disparities mostly determined by technological characteristics.

Contributions

- Quantitative assessment of interactions between drivers of economic growth.
- Incorporate the informal sector, reducing the size of informality may not induce income growth.

Thank You

Stylized Facts: Population and per capita income

Province	Population(x 1,000)	Monthly wage
Kinshasa	10,558	127,432
Bandundu	8,954	46,078
Bas-Congo	5,215	72,407
Katanga	12,240	93,735
Kasai Oriental	7,190	37,147
Kasai Occidental	5,757	37,151
Equateur	8,121	43,572
Nord-Kivu	6,240	54,681
Sud-Kivu	5,411	56,732
Maniema	2,187	40,672
Province Orientale	8,589	45,137
Unweighted mean	7,315	59,522
Coef. of variation	0.363	0.452

Notes: Population data are from INS country's statistical report (2015). Incomes are computed from 1.2.3 database.

Stylized Facts: Informality and human capital

Province	Informal job (as %)	Human capital (Workers with secondary + education as %)
Kinshasa	62.5	59.9
Bandundu	87.6	28.9
Bas-Congo	82.9	29.4
Katanga	87.1	26.3
Kasai Oriental	93.5	16.8
Kasai Occidental	89.3	21.2
Equateur	91.5	16.7
Nord-Kivu	85.8	23.1
Sud-Kivu	88.9	16.5
Maniema	88.9	19.5
Province Orientale	91.3	15.0
Unweighted mean	86.3	24.8
Coef. of variation	0.093	0.487

Notes: Authors' computation. Share of informal job and share of Secondary+ are computed from 1.2.3 database.

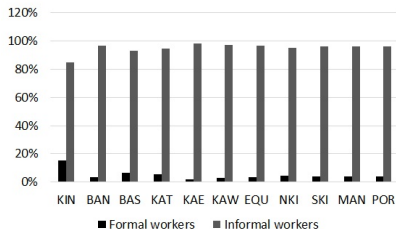
Stylized Facts: Public infrastructure

Province	Capital spending per worker	Acc. Electricity as % of HH	Acc. water as % of HH	Paved as % of road	Intern. airport	Pub. cap. index
Kinshasa	958.8	74.0	89.0	90.1	Yes	84.4
Bandundu	217.2	2.2	5.6	5.2	No	4.3
Bas-Congo	1243.0	16.1	20.9	20.1	No	19.0
Katanga	1669.1	13.0	20.6	5.5	Yes	13.0
Kasai Oriental	240.3	0.5	8.8	3.1	No	4.1
Kasai Occidental	160.6	0.4	3.1	0.8	No	1.4
Equateur	413.0	7.0	2.3	0.6	No	3.3
Nord-Kivu	655.0	5.2	8.3	20.5	Yes	11.3
Sud-Kivu	703.2	10.8	19.8	7.9	No	12.8
Maniema	1182.2	8.8	3.1	6.3	No	6.1
Province Orientale	379.3	9.0	11.5	2.3	Yes	7.6
Unweighted mean	711.1	13.4	17.5	14.8	0.272	15.2
Coef. of variation	0.664	1.479	1.345	1.674	1.633	1.474

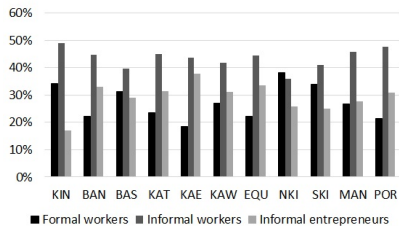
Notes: Authors' computation based on INS statistical report (2015). The allocation of capital expenditure across Provinces is provided by the capital expenditure plan of the Ministry of Budget. The Pub. cap. index in the last column is the unweighted mean of Cols. (2), (3) and (4).

Stylized Facts DRC: Labor market characteristics by sector and by skill group

- Majority of the workforce employed in the informal sector



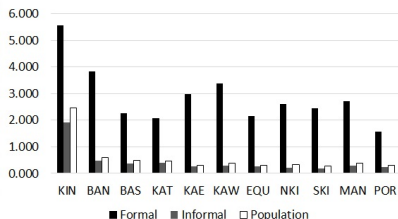
(a) Labor allocation of the low-skilled



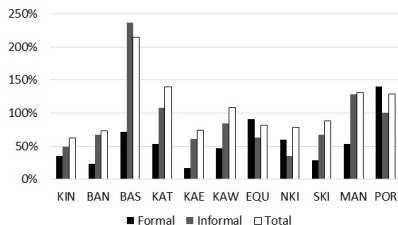
(b) Labor allocation of the high skilled
(at least 12 years of schooling)

Stylized Facts DRC: Labor market characteristics by sector and by skill group

- Formal sector skill intensive
- Skill premium higher in the informal sector



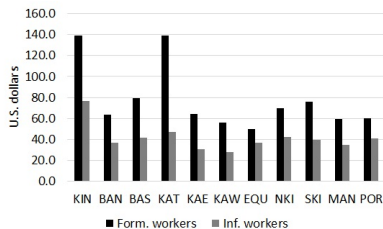
(c) Skill ratio by sector



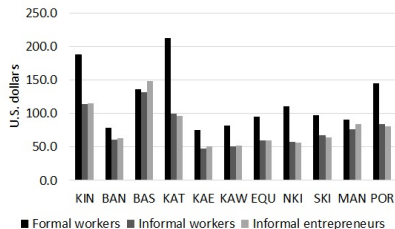
(d) Skill premium by sector

Stylized Facts: Labor market characteristics by sector and by skill group

- Formal sector pays higher wage
- High skilled workers and entrepreneurs in the informal sector earn similar income



(e) Monthly earnings of the low-skilled



(f) Monthly earnings of the well-educated

back

Formal Sector

Intermediate inputs are produced by low-skilled and high-skilled workers using a linear technology:

$$Y_p^H = e_p^H H_p$$

$$Y_p^L = e_p^L L_p,$$

$$y_p^L = \bar{A}_p z_p^\eta g_p^\varphi \alpha_p \left[\alpha_p + (1 - \alpha_p) z_p^{\frac{\sigma-1}{\sigma}} \right]^{\frac{1}{\sigma-1}}, \quad (1)$$

$$y_p^H = \bar{A}_p z_p^\eta g_p^\varphi (1 - \alpha_p) z_p^{\frac{-1}{\sigma}} \left[\alpha_p + (1 - \alpha_p) z_p^{\frac{\sigma-1}{\sigma}} \right]^{\frac{1}{\sigma-1}}. \quad (2)$$

back

We have

$$\psi_p + \chi_p = \varrho_p$$

$$\frac{\psi_p}{\chi_p} = \kappa_p Z_p^\mu \quad \Rightarrow \quad \psi_p = \frac{\varrho_p \kappa_p Z_p^\mu}{1 + \kappa_p Z_p^\mu}, \quad \chi_p = \frac{\varrho_p}{1 + \kappa_p Z_p^\mu},$$

back

Informal Sector

$$\pi_p^H = B_p h_p^{\psi_p} \ell_p^{\chi_p} - \omega_p^L \ell_p - \omega_p^H h_p.$$

The profit maximization conditions imply:

$$\omega_p^H = B_p \psi_p h_p^{\psi_p - 1} \ell_p^{\chi_p}, \quad \omega_p^L = B_p \chi_p h_p^{\psi_p} \ell_p^{\chi_p - 1},$$

$$\pi_p^H = B_p (1 - \psi_p - \chi_p) h_p^{\psi_p} \ell_p^{\chi_p}.$$

In equilibrium $\omega_p^H = \pi_p^H$, This implies:

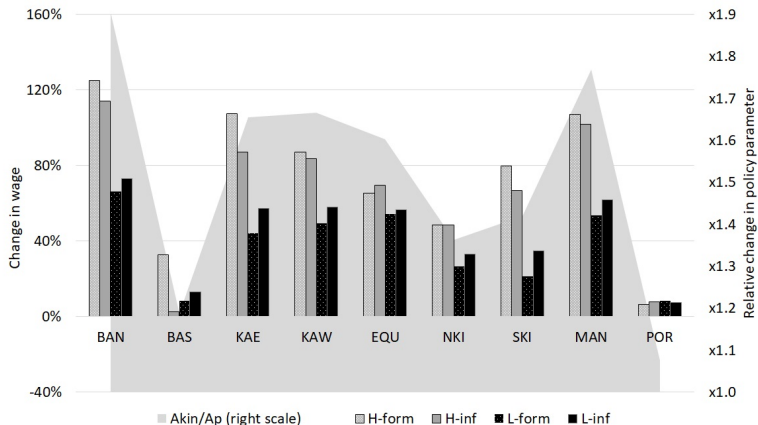
$$h_p^* = \frac{\psi_p}{1 - \psi_p - \chi_p},$$

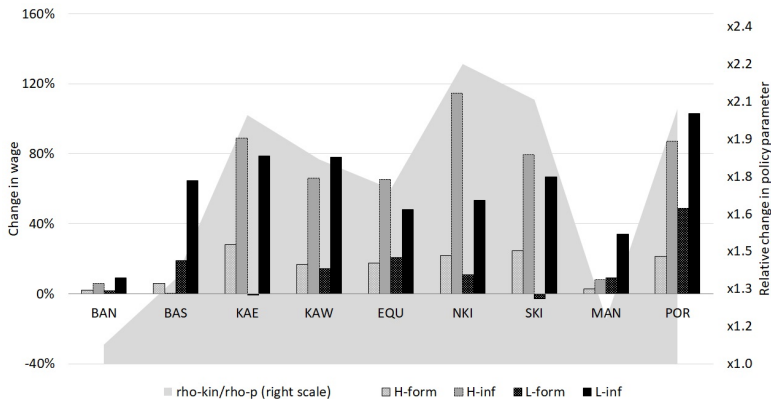
$$b_p^H = \frac{1}{1 + h_p^*}$$

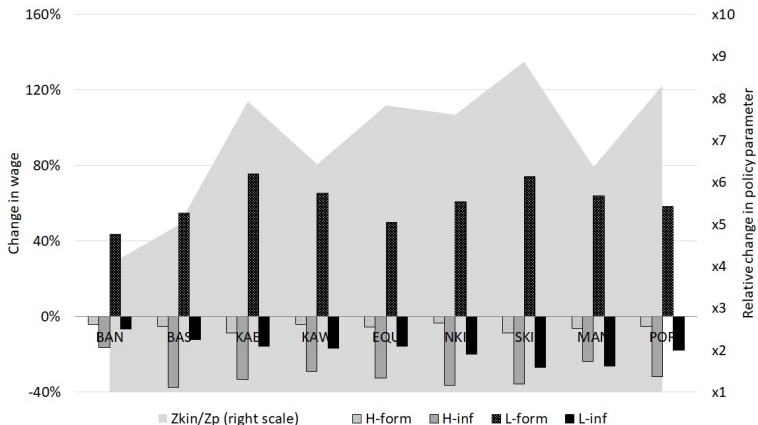
Common Parameters

Prm.	Definition	Source	Mean	CV
Common to all provinces				
σ	Elast. of subst. btw intermediates	Ottaviano and Peri (2012)	2.000	-
η	Elast. of TFP to human capital in F	Caselli and Ciccone (2013)	0.100	-
φ	Elast. of TFP to infrastructure in F	Calderon and Serven (2014)	0.050	-
ϕ	Elast. of TFP to infrastructure in I	Calderon and Serven (2014)	0.025	-
μ	Elast. of $\frac{\psi_p}{\chi_p}$ to z_p	Calibration outcome	2.000	-
τ	Income tax rate in F	Direction Generale des Impots (RDC)	0.132	-
r	Monthly interest rate	Satchi and Temple (2009)	0.003	-
δ^S	Monthly job destruction rate	Satchi and Temple (2009)	0.060	-
β^S	Bargaining power	Petrongolo and Pissarides (2001)	0.500	-

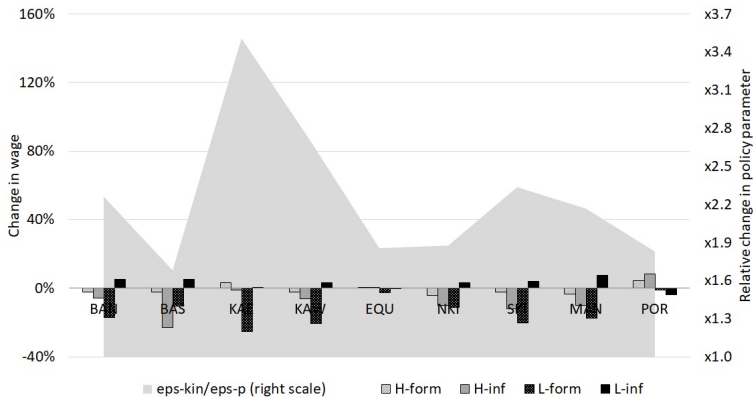
[back](#)

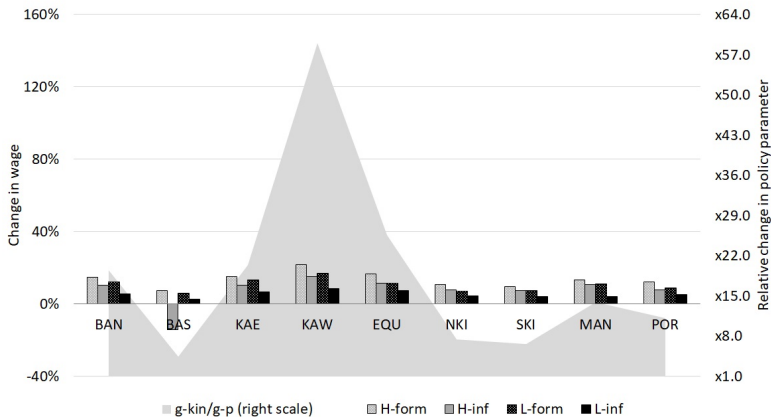
Technology in the formal sector (X_p^F): Impact on wages

Technology in the informal sector (X_p^I): Impact on wages

Skill ratio in the population (X_p^Z): Impact on wages

Labor market frictions (X_p^L): Impact on wages



Public infrastructure (X_p^G): Impact on wages
[back](#)

Parameters – Validation

Correlate	\bar{A}_p	α_p	ρ_p	ψ_p	χ_p	ϱ_p	ϵ_p^L	ϵ_p^H
Population density	0.343	-0.400	0.471	0.882*	-0.791*	-0.331	0.890*	0.063
Value added in Manufacturing	0.630*	-0.450	0.284	0.859*	-0.781*	-0.362	0.846*	-0.143
Workers in Manufacturing	0.943*	-0.258	-0.043	0.658*	-0.630*	-0.398	0.571	-0.278
Good roads (as %)	0.458	-0.292	0.168	0.680*	-0.557	-0.052	0.788*	0.018
Nb. business projects	0.594	-0.154	0.317	0.828*	-0.754*	-0.351	0.827*	0.189
Nb. vacancies to be filled	0.520	-0.193	0.209	0.687*	-0.613*	-0.245	0.789*	0.166
Urban population share	0.490	-0.276	0.267	0.832*	-0.768*	-0.395	0.790*	-0.156
People displaced	0.345	0.038	-0.623*	-0.382	0.462	-0.257	0.157	-0.273
Infrastructure per capita	0.447	-0.343	0.457	0.900*	-0.819*	-0.382	0.911*	0.140
Skill ratio in population	0.367	-0.371	0.575	0.947*	-0.886*	-0.492	0.874*	0.069

Notes: Data are obtained from the INS country's statistical report (INS, 2017). Population density is the average number of inhabitants in a given area per square kilometer in the year 2013. Share of the manufacturing sector in formal output and formal employment in the year 2013, respectively. Good roads (%) represents the share of paved road (2016). Nb. business projects and Nb. vacancies to be filled are an annual mean value from 2012-2015 and represent the number of business projects and vacancies to be filled. Urban population share represents the percentage of population living in urban areas. People displaced represents the number of internal displacements due to conflicts and instability (2014). * means significant at the 5% level.

[back](#)

Formal Labour Market

The lifetime value of a vacancy (V_p^S) and of a filled job (J_p^S) that require a skill type S are given as follows:

$$rV_p^S = -c_p^S + q(\theta_p^S)(J_p^S - V_p^S),$$

$$rJ_p^S = y_p^S - w_p^S - \delta(J_p^S - V_p^S).$$

The lifetime value of employment and informal employment for type- S workers are given as follows:

$$rW_p^S = w_p^S(1 - \tau) - \delta(W_p^S - U_p^S),$$

$$rU_p^S = \omega_p^S + \lambda(\theta_p^S)(W_p^S - U_p^S).$$

Transition Rates

$$i_p^L = \frac{\delta}{\delta + \lambda(\theta_p^L)},$$

$$i_p^H = \frac{\delta}{\delta + \lambda(\theta_p^H)},$$

$$\frac{H_p i_p^H \ell_p^*}{1 + h_p^*} = L_p i_p^L,$$

Wage in the Formal Sector: Nash Bargaining

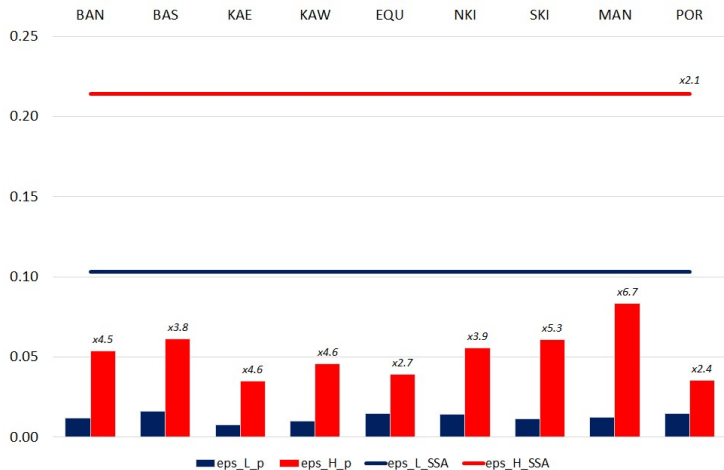
$$w_p^L = \frac{y_p^L \beta (r + \delta + \lambda(\theta_p^L)) + (1 - \beta) \frac{\omega_p^L (r + \delta)}{(1 - \tau)}}{r + \delta_p^L + \beta \lambda(\theta_p^L)},$$

$$w_p^H = \frac{y_p^H \beta (r + \delta + \lambda(\theta_p^H)) + (1 - \beta) \frac{\omega_p^H (r + \delta)}{(1 - \tau)}}{r + \delta + \beta \lambda(\theta_p^H)}.$$

- β bargaining power of worker.
- r, δ exogenous discount rate, job separation rate respectively.
- $\lambda(\theta^S)$ endogenous job finding rate, where $S \in [L, H]$.
- y^S, w^S, ω^S marginal product, formal wage, informal wage respectively.

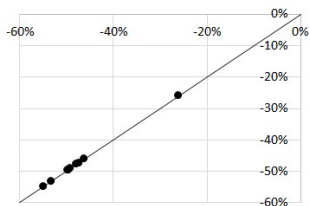
back

Effect of a dramatic decrease in labor market frictions

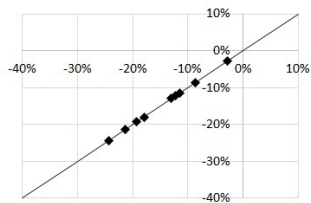

[back](#)

Robustness checks

Figure: Robustness checks - Sum of isolated effects and residual interaction term



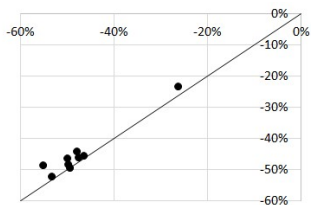
(a) Sum of isolated effects ($\delta = 0.04$)



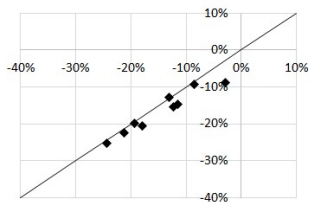
(b) Interaction term ($\delta = 0.04$)

Robustness Checks

Figure: Robustness checks - Sum of isolated effects and residual interaction term



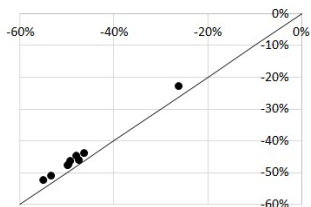
(a) Sum of isolated effects ($\eta = 0$)



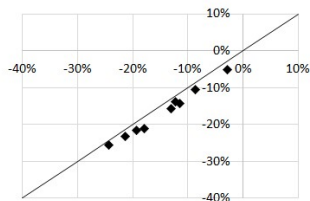
(b) Interaction term ($\eta = 0$)

Robustness Checks

Figure: Robustness checks - Sum of isolated effects and residual interaction term



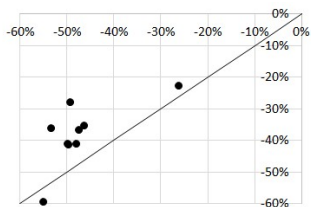
(a) Sum of isolated effects ($\sigma = 3.0$)



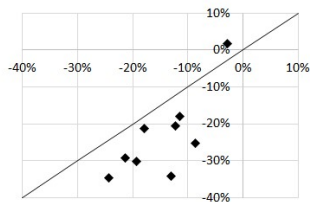
(b) Interaction term ($\sigma = 3.0$)

Robustness Checks

Figure: Robustness checks - Sum of isolated effects and residual interaction term



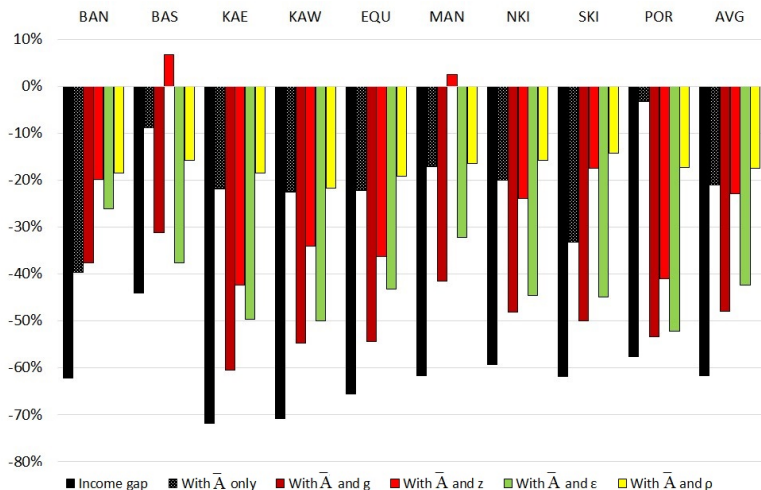
(a) Sum of isolated effects ($\phi = 0.1$)



(b) Interaction term ($\phi = 0.1$)

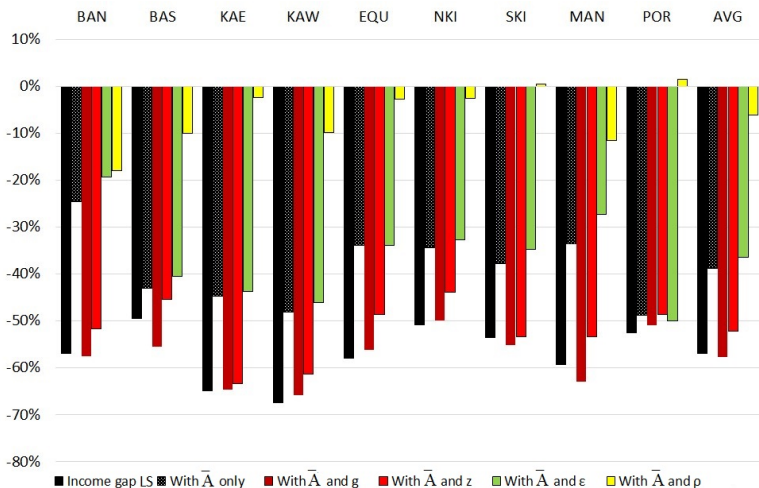
The Most Effective Policy Pairs

Figure: Effect on income per capita

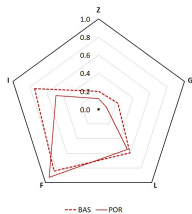
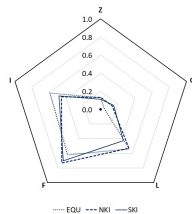
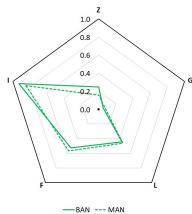
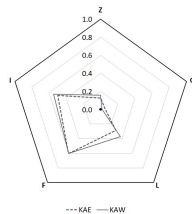


The Most Effective Policy Pairs

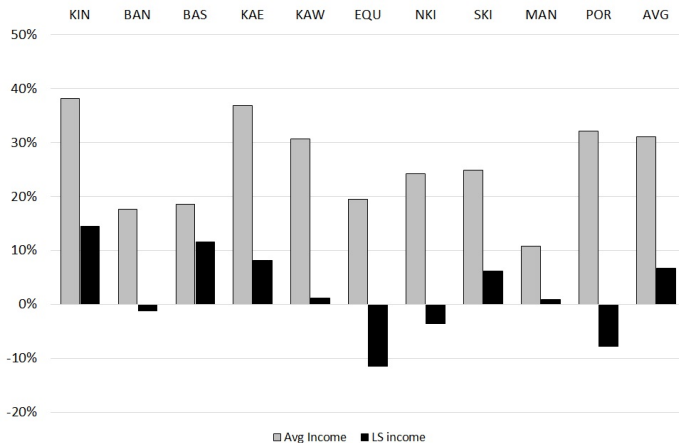
Figure: Average effect on unskilled workers



Broad Classification of Provinces

(a) High \bar{A}_p (b) Medium \bar{A}_p and ρ_p (c) Low \bar{A}_p and high ρ_p (d) Low \bar{A}_p and low ρ_p

Dramatic decrease in labor market frictions: Average effect on unskilled workers


[details](#)

Dramatic decrease in labor market frictions: Effect on wages

