INCLUSIVE GROWTH AND WAGE INEQUALITY: THE CASE OF SOUTH AFRICAN MANUFACTURING EXPORTERS

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Introduction

- Link between a vibrant export sector and strong economic growth
- 2030 Agenda for Sustainable Development identifies exports as an engine for inclusive growth
  - springboard for poverty alleviation, job creation and more sustainable societies
- However, exporting also poses a challenge to the achievement of such inclusive growth
  - discernible wage inequality between exporting and non-exporting firms
- Exporting firms pay a wage premium relative to non-exporting firms
  - wage gaps have widened over the years in line with expanding global trade

The case of South Africa

- South Africa's economy
  - trade liberalization since 1990s, export sector is ripe for expansion and diversification
  - one of the most unequal societies in terms of wage distribution
- The correct policies are therefore required
  - to stimulate a more robust, job-enriched export sector while also minimising the risk of negative reactions from non-exporting businesses
- Aim: to investigate how South Africa's export participation affects the wage distribution within the manufacturing sector
  - manufacturing exporters employ more people and pay higher wages than non-exporters
  - limited work has been done:
    - how these higher wages are distributed within manufacturing exporting firms relative to non-exporting firms (e.g. do all employees earn a wage premium or only some of them?)
    - how this wage differential contributes to wage inequality

Multi-party initiative

- Multi-party initiative was launched to provide an informed base for policy makers on South Africa's labour market
  - policy makers from
    - South Africa's National Treasury,
    - the South African Revenue Service (SARS),
    - UNU-WIDER and
    - academics from North-West University and Stellenbosch University (among others)
- Unique to this initiative was the use of newly available South African firm-level data
  - a panel dataset from 2010–2014 was created by linking company income tax data (CIT), employee data (IRP5) and customs data
  - detailed longitudinal tax administrative data allowed for a precise evaluation of the link between a firm's export status, its within-firm wage distribution and wage inequality

Remainder of presentation

- Brief literature review
- Empirical analysis
  - Data and descriptive analysis
  - Estimation strategies
  - Results
- Conclusion and policy recommendations

Literature overview

- Wage differential between exporting and non-exporting firms
  - one of the sources of the increase in wage inequality within countries (Krugman, 2008)
  - gap widens as global trade expands (Klein et al., 2013)
- The link between (the rising) wage dispersion and trade has been examined in numerous countries
  - e.g. Germany (Baumgarten, 2013; Klein et al., 2013), the United States (Bernard & Jensen, 1997), Mexico (Verhoogen, 2008; Frias et al., 2009) China (Fu & Wu, 2013) and France (Bernini et al., 2015)

- Exporters demand certain types of jobs (Bas, 2012)
  - blue collar versus white collar jobs (skills premium)
- Not only wage differentials in terms of average wage, but also at different quantiles / percentiles of wage distribution
  - e.g. Frias et al. (2009), Bernini et al. (2015), Fu & Wu (2013)
- Heterogeneous nature of exporters (Brambilla & Porto, 2016)

Data and descriptive statistics

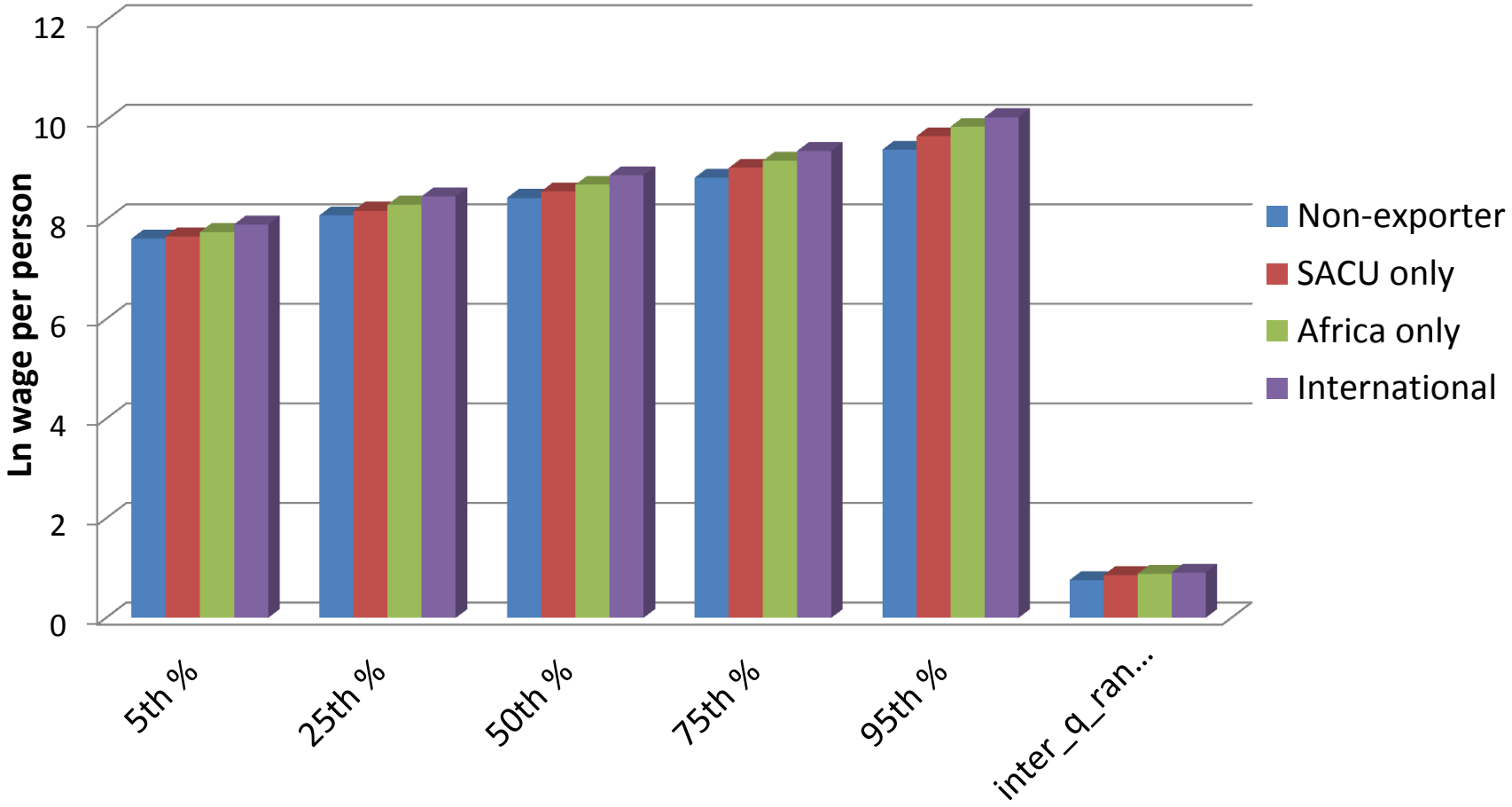
Characteristics of different firms (serving domestic, African and non-African countries)

	Number of firms	Number of employees	Capital per worker (ZAR)	Output per worker (ZAR)
Non-exporters	**25 127**	**7**	**22 677**	**545 235**
International exporters	**2 836**	**22**	**47 379**	**995 415**
Continue	2 228	32	55 492	1 185 082
Enter	817	22	48 397	1 050 613
Exit	170	11	38 249	750 550
African exporters	**2 377**	**15**	**30 585**	**880 713**
Continue	2 834	19	32 426	962 327
Enter	1 468	14	32 072	920 840
Exit	383	12	27 257	758 971

Note: These are the median figures for these six groups for 2010–14.
Source: Authors' own calculations

Descriptive statistics

Wage distribution: non-exporters versus exporters (serving African and non-African countries) average from 2010–2014



Source: Authors' own calculations

Estimation strategy:

Within-firm wage distribution and inequality

$$\ln(X)_{it} = \alpha + \beta_1 Export_{it} + \beta_2 No.dest_{it} + \beta_3 No.prod_{it} + \beta_4 lkl_{it} + \beta_5 Industry_{it} + \beta_6 year_i + u_{it} \quad \textbf{(1)}$$

$$\ln(X)_{it} = \alpha + \beta_1 Export_{it} + \beta_2 No.dest_{it} + \beta_3 No.prod_{it} + \beta_4 lkl_{it} + \beta_5 ll_{it} + \beta_6 lyl_{it} + \beta_7 Industry_{it} + \beta_8 year_{it} + u_{it} \quad \textbf{(2)}$$

Where:

X_{it} – ln monthly wages earned by workers at each percentile of the firm's wage distribution (5th %, 25th %, 75th % and 95th %)

$Exporter_{it}$– dummy variable of export status (SACU, Africa, International) or (enter, exit or continue)

$No.dest_{it}$– control dummy (number of destinations exported to by firm)

$No.prod_{it}$– control dummy (number of products exported by firm)

lkl_{it}– ln capital per worker

ll_{it}– ln number of employees which measures firm size

lyl_{it}–ln output per worker which serves as a measure of labour productivity

$Industry_{it}$– control dummy (4 digit ISIC classification) to account for heterogeneity

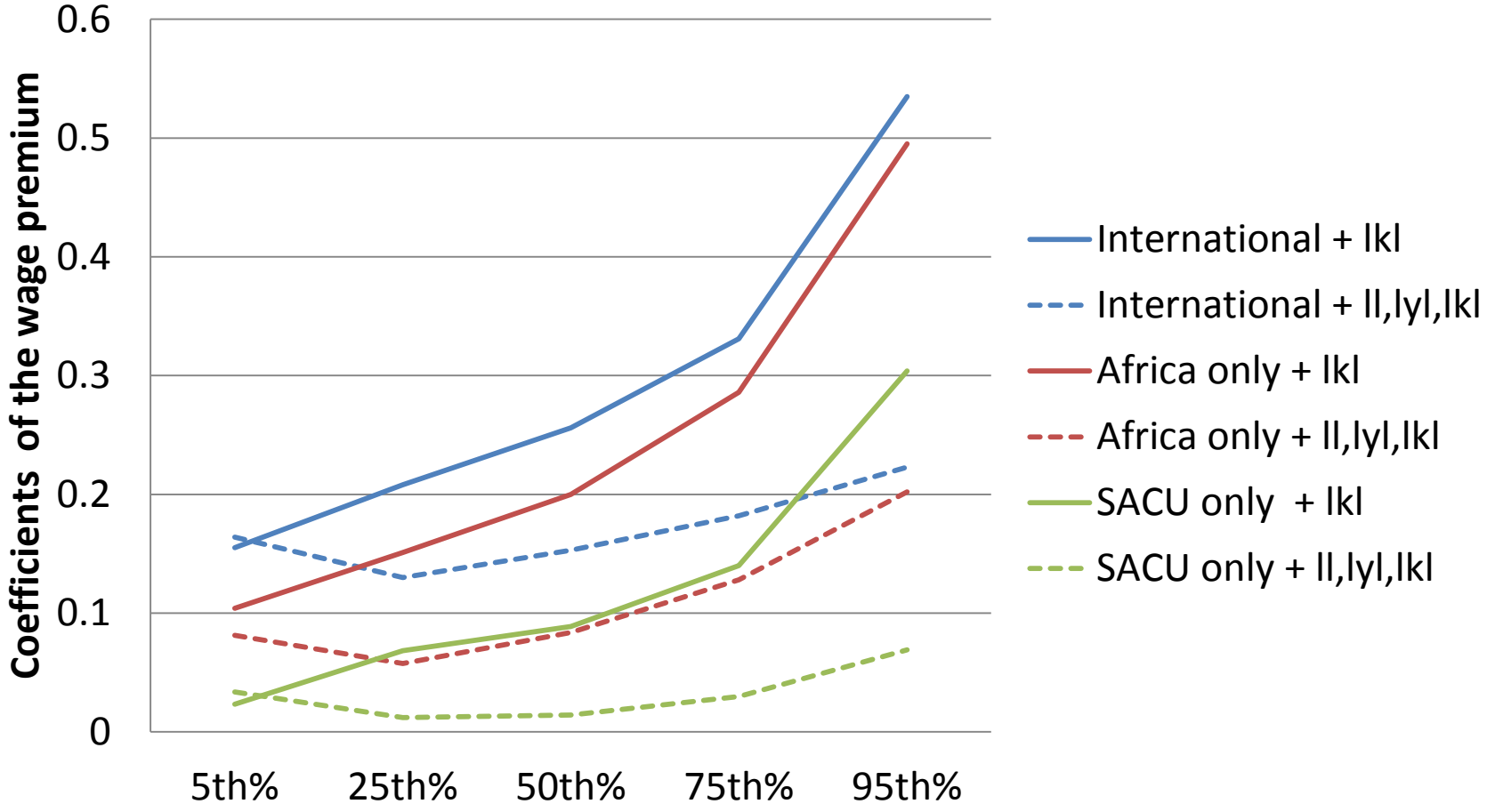
$year_{it}$– control dummy for the years 2010 to 2014

β_i – export premia

μ_{it}- Error term

Results

Distribution of the coefficients of the wage premium: firms serving domestic, African and non-African countries, with different controls

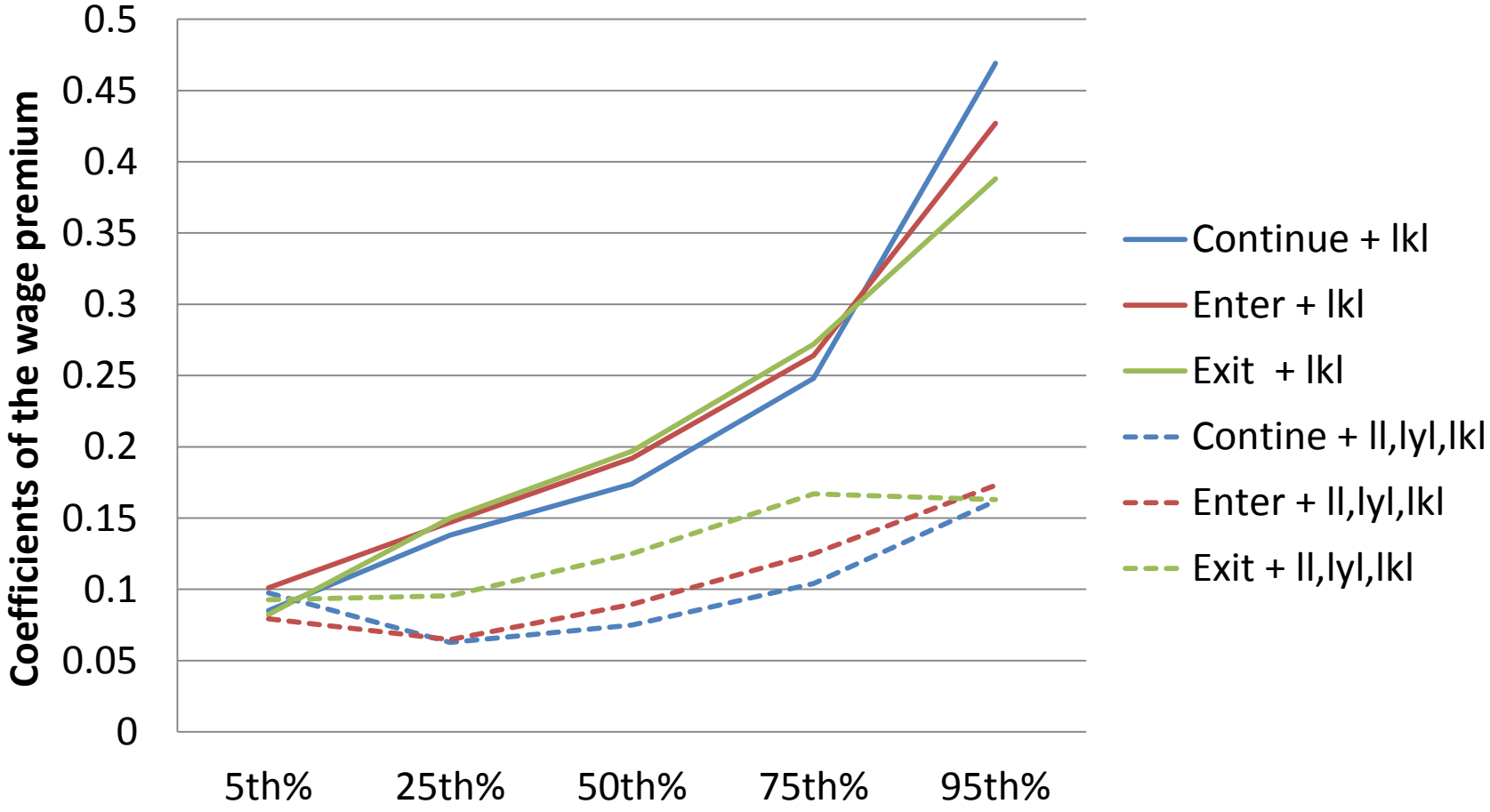


Note: Premium relative to non-exporters

Source: Authors' own calculations

Results

Distribution of the coefficients of the wage premium: exporter dynamics (enter, exit and continue), with different controls

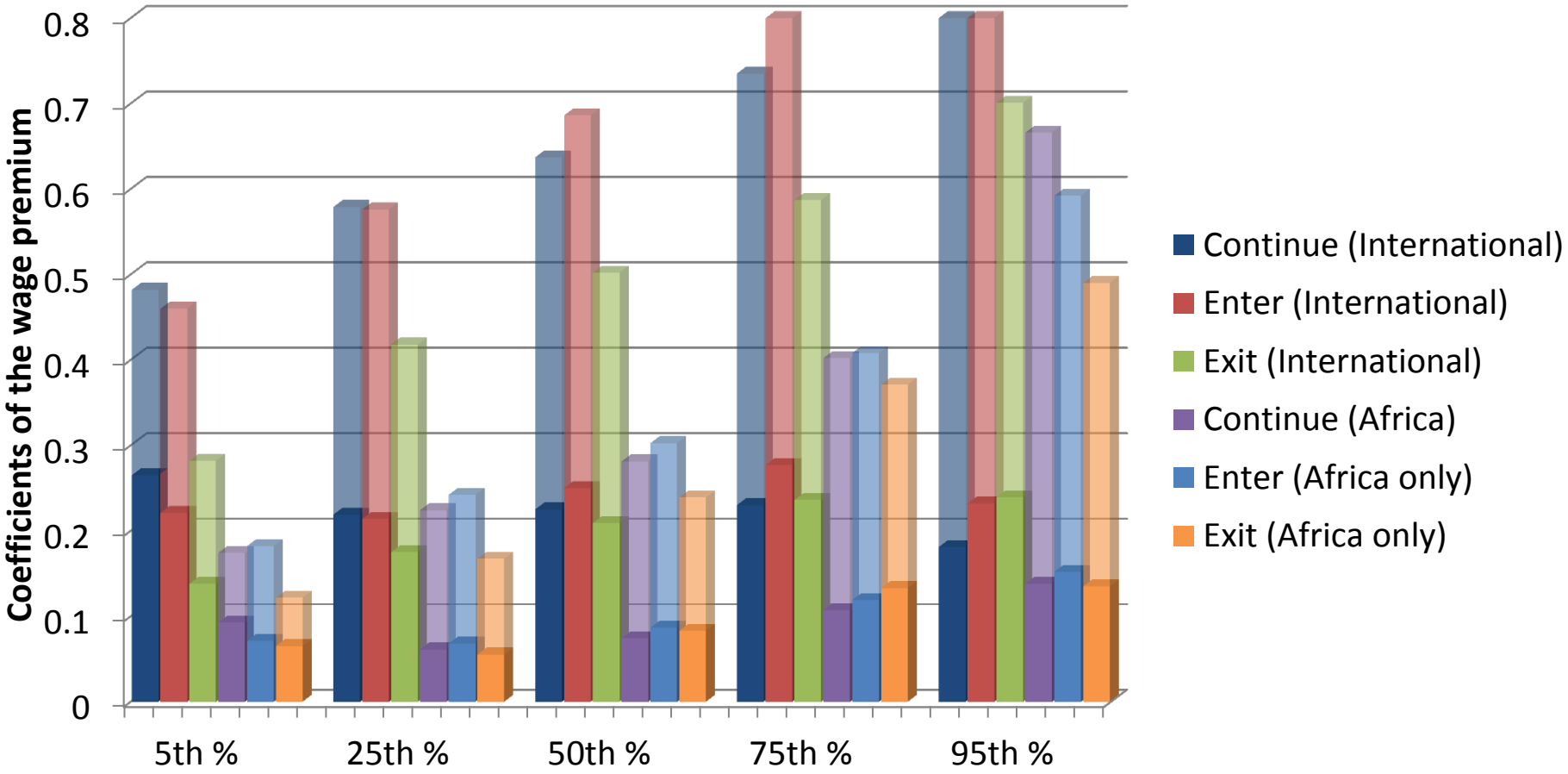


Note: Premium relative to non-exporters

Source: Authors' own calculations

Results

Distribution of the coefficients of the wage premium: exporter dynamics (to African and non-African countries)



Note: Premium relative to non-exporters

Source: Authors' own calculations

Estimation strategy:

Possible sources of wage inequality

$$\ln(X)_{ijk,t} = \alpha + \beta_1 Exporter_{ijk,t} + \beta_2\, No.dest_{ijk,t} + \beta_3 No.prod_{ijk,t} + \beta_4 Industry_{ijk,t} + \beta_5 firm_{jk,t} + \beta_6 year_{ijk} + u_{ijk,t} \quad \textbf{(3)}$$

$$\ln(X)_{ijk,t} = \alpha + \beta_1 Exporter_{ijk,t} + \beta_2\, No.dest_{ijk,t} + \beta_3 No.prod_{ijk,t} + \beta_4 Industry_{ijk,t} + \beta_5 firm_{jk,t} + \beta_6 year_{ijk} + \beta_7 price_{ik,t} + u_{ijk,t} \quad \textbf{(4)}$$

$$\ln(X)_{ijk,t} = \alpha + \beta_1 Exporter_{ijk,t} + \beta_2\, No.dest_{ijk,t} + \beta_3 No.prod_{ijk,t} + \beta_4 Industry_{ijk,t} + \beta_5 firm_{jk,t} + \beta_6 year_{ijk} + \beta_7 GDP_{ij,t} + u_{ijk,t} \quad \textbf{(5)}$$

$$\ln(X)_{ijk,t} = \alpha + \beta_1 Exporter_{ijk,t} + \beta_2\, No.dest_{ijk,t} + \beta_3 No.prod_{ijk,t} + \beta_4 Industry_{ijk,t} + \beta_5 firm_{jk,t} + \beta_6 year_{ijk} + \beta_7 price_{ik,t} + \beta_8 GDP_{ij,t} + prod\,fe + u_{ijk,t} \quad \textbf{(6)}$$

Where:

$X_{ijk,t}$ – within-firm distribution of monthly wages (measured at the 5th, 25th, 50th, 75th and 95th percentiles)

$Exporter_{ijk,t}$ – dummy variable of export status (SACU, Africa, international, enter, continue)

$No.dest_{ijk,t}$ – control dummy (number of destinations exported to by firm)

$No.prod_{ijk,t}$ – control dummy (number of products exported by firm)

$Industry_{ijk,t}$ – control dummy (4-digit ISIC classification) to account for heterogeneity

$firm_{jk,t}$ – control for firm characteristics (ln capital per worker, ln number of employees, ln output per worker)

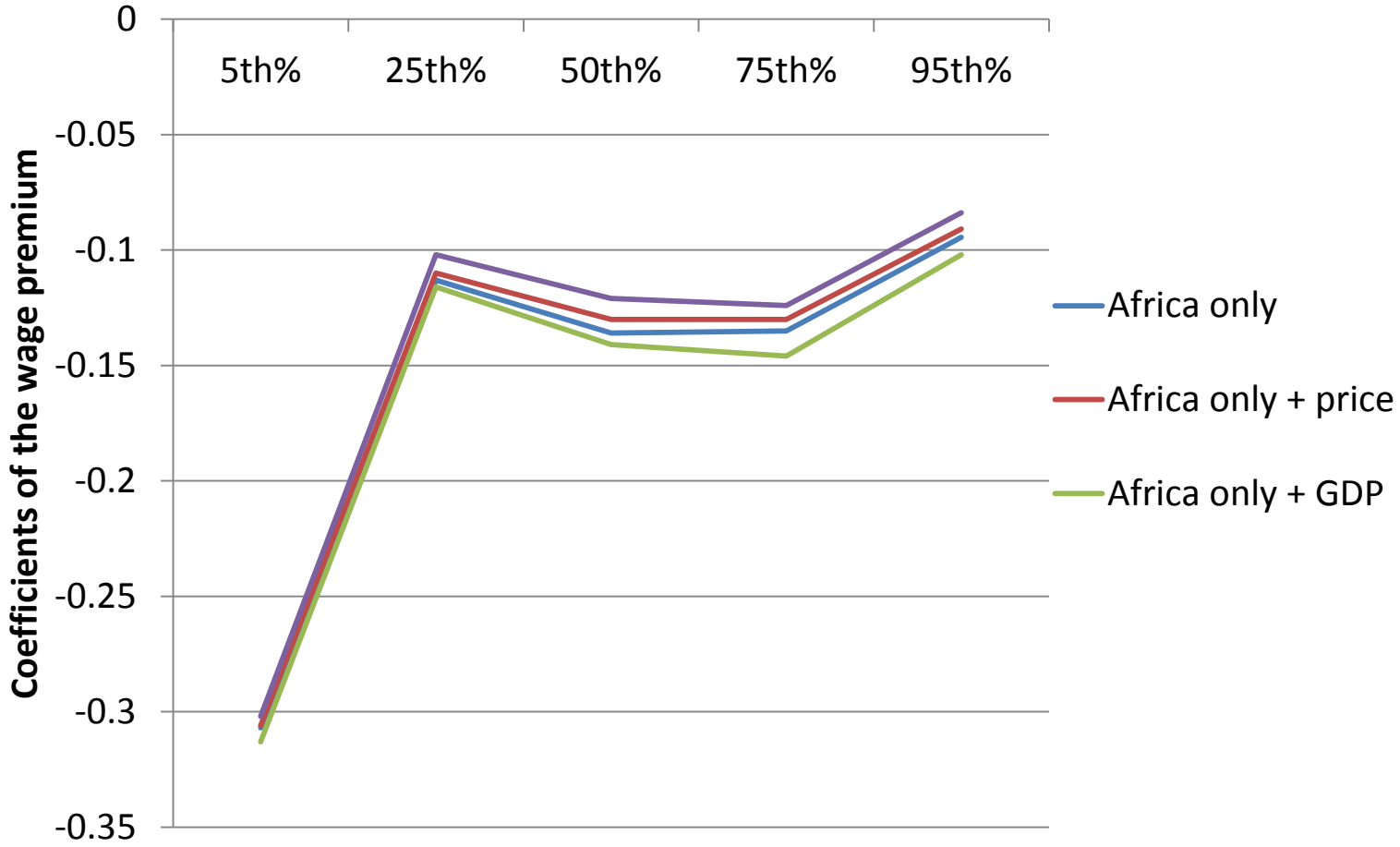
$year_{ijk}$ – control dummy for the years 2010–2014

$price_{ik,t}$– control dummy for the price (deviation from the average price per product)

$GDP_{ij,t}$– control dummy for the price (deviation from the average price per product)

Results

Distribution of the coefficients of the wage premium (inequality): firms exporting to African and non-African countries

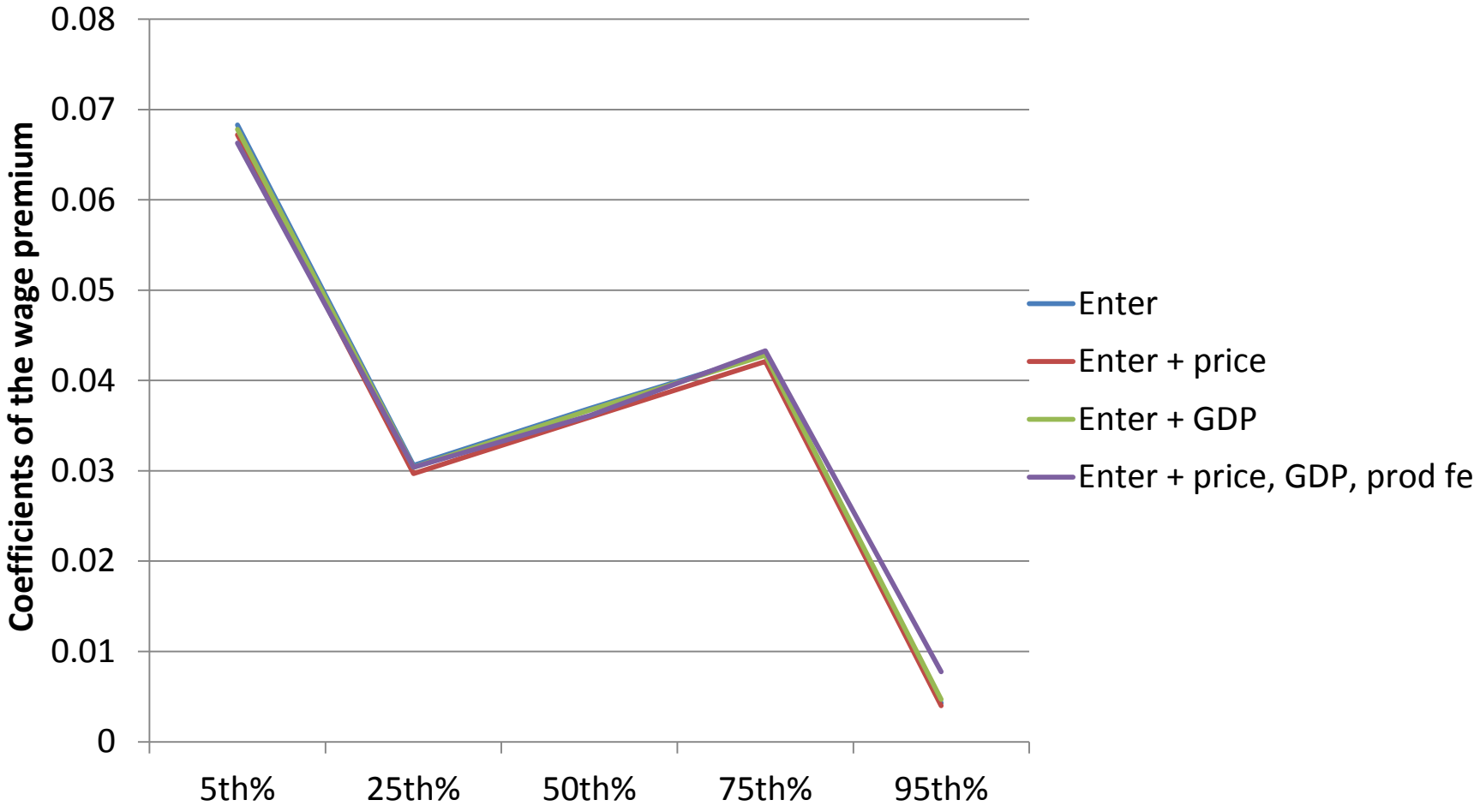


Note: Relative to international firms

Source: Authors' own calculations

Results

Distribution of the coefficients of the wage premium (inequality): exporter dynamics



Note: Relative to continuing firms

Source: Authors' own calculations

Conclusion

- Policies to support specific types of exporting firms (as opposed to all exporters) to achieve inclusive growth
  - Specific interventions might include:
    - providing financial support and market information
    - targeting investment in sectors with strong export growth potential
    - adapting trade and investment policy to allow cost-effective sourcing from abroad
    - encouraging more competition in the local market
- Policies to improve education and skills development
  - Specific interventions to increase the supply side of skilled workers (reducing premium paid to skilled workers):
    - building capacity and accountability in schools and other education/training institutions
    - reducing government red tape in the education and training sectors
    - providing greater incentive to firms to engage in staff training and development.
    - open up the education/training sector to more foreign participation
    - ensuring that low-skilled individuals participate in life-long learning opportunities
- Scope for further research

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