Firm-Level Determinants of Earnings in the Formal Sector of the South African Labour Market

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Objectives

• We examine the relative contribution of demand and supply side characteristics to wage formation in SA, advancing the literature by adding a developing country case.

•We examine the role of various firm characteristics in explaining wage levels and differentials across workers.

•We focus on the relationship between firm size and wages.

Data & methodology

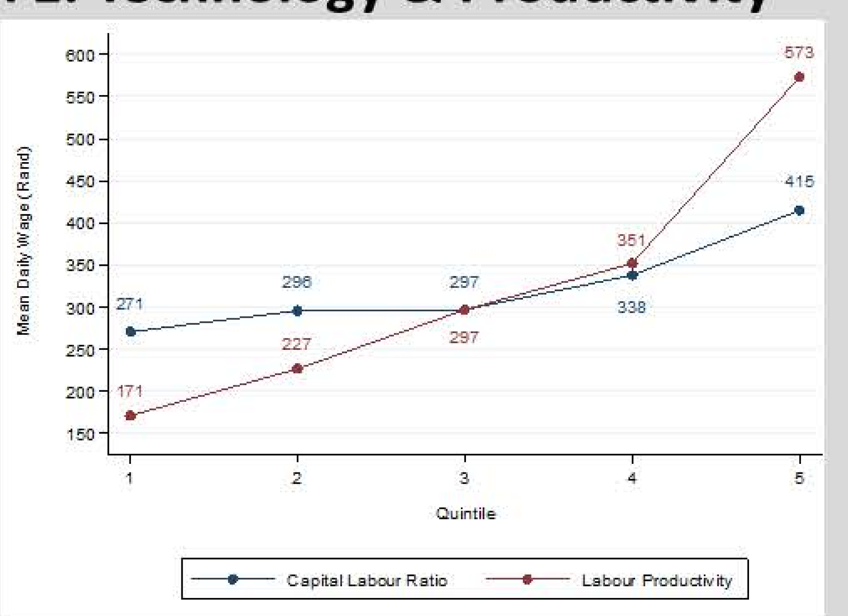
•Anonomised matched corporate (CIT) and individual (IRP5) level tax data, available by collaboration between SARS and National Treasury.

•Unit of analysis: Individual level wages, unique identifier is "jobs".

•Drawing on Abowd et al. (1999; 2002): FEiLSDVi method (Cornelissen, 2008) allows for decomposition of firm and individual component of wage differentials.

Results

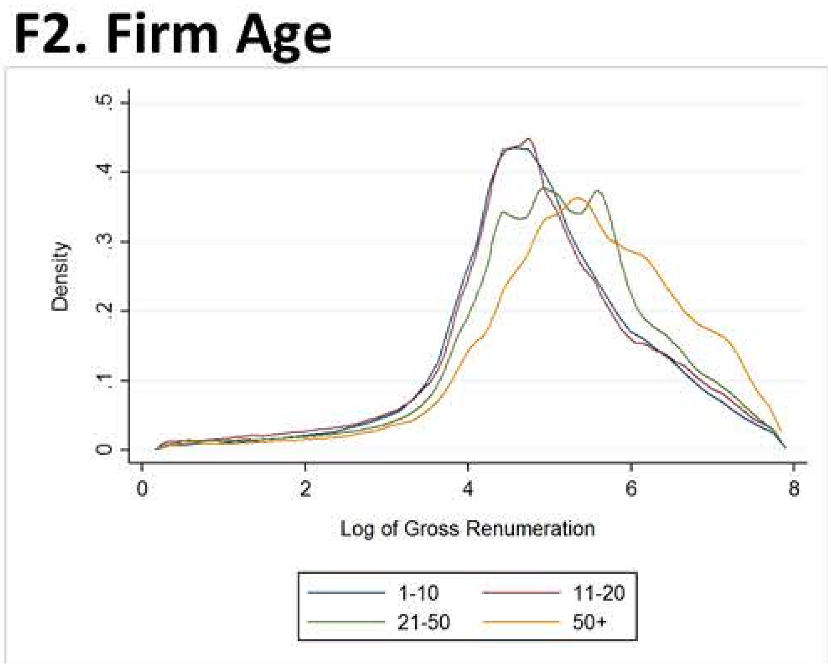
F1. Technology & Productivity



Regression results:

- Workers in firms which are 1% more productive earn 11% higher wages.
- Workers in firms which are 1% more capital intensive earn 2% higher wages.

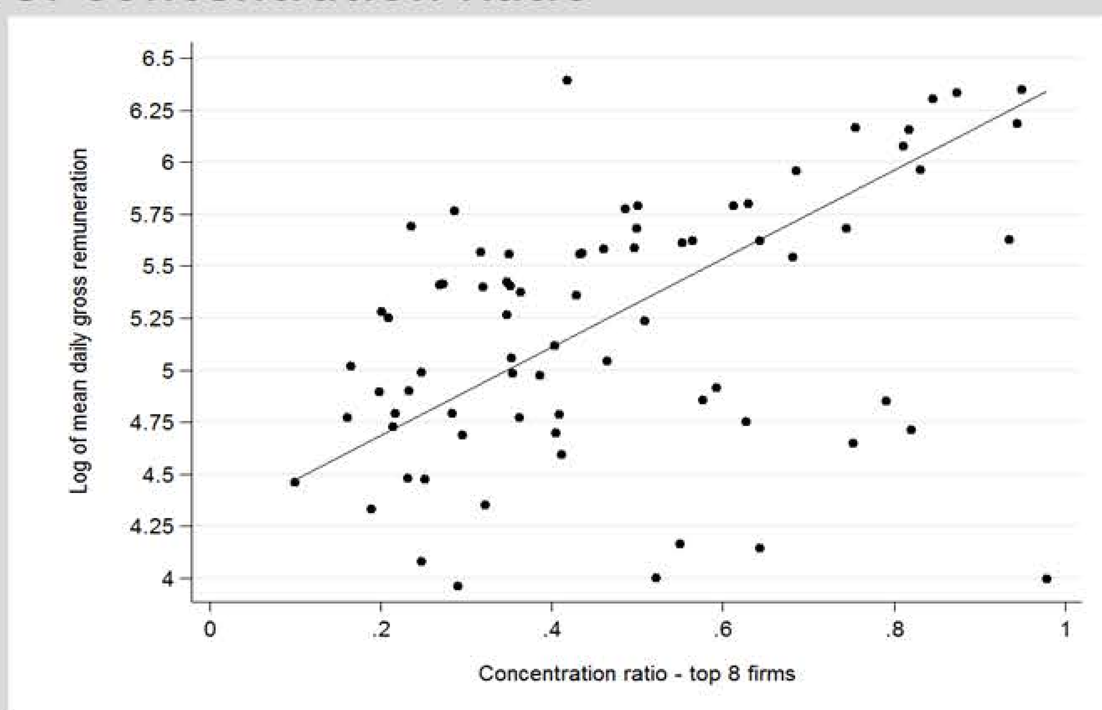
F2. Firm Age



Regression results:

- U-shape relationship between wages and firm age.
- Workers in firms age 50+ earn 7-10% higher average wages than those in firms age 1-10 years.

F3. Concentration Ratio



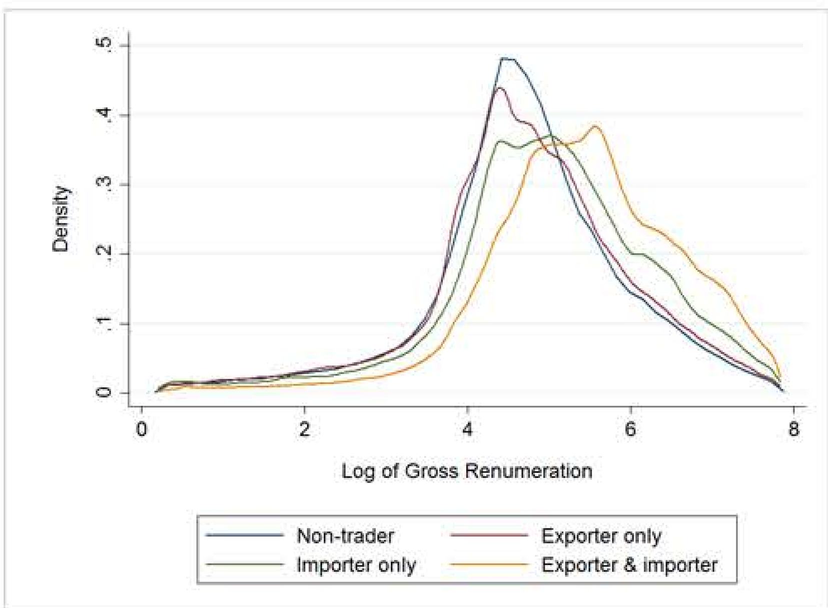
Descriptives:

- Wages increase with industry concentration.
- Market power may be segmenting the labour market by reinforcing high wages in firms with substantial market power.

Regression results:

- FeiLSDVj fixed effects: Negative relationship between concentration ratio and wages.
- Quantile regressions indicate heterogeneity: concentration ratio is negatively related to wages at 10th & 50th percentile, positively related at 90th percentile.

F4. Trade Status



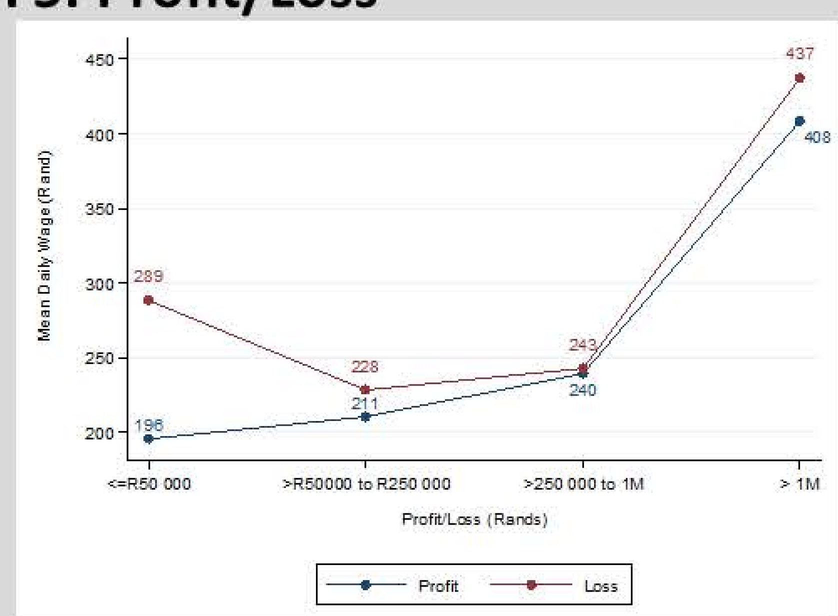
Descriptives:

- Non-trading firms pay the lowest average wages, two-way traders the highest.

Regression results:

- Importing firms pay lower wages than non-traders.

F5. Profit/Loss



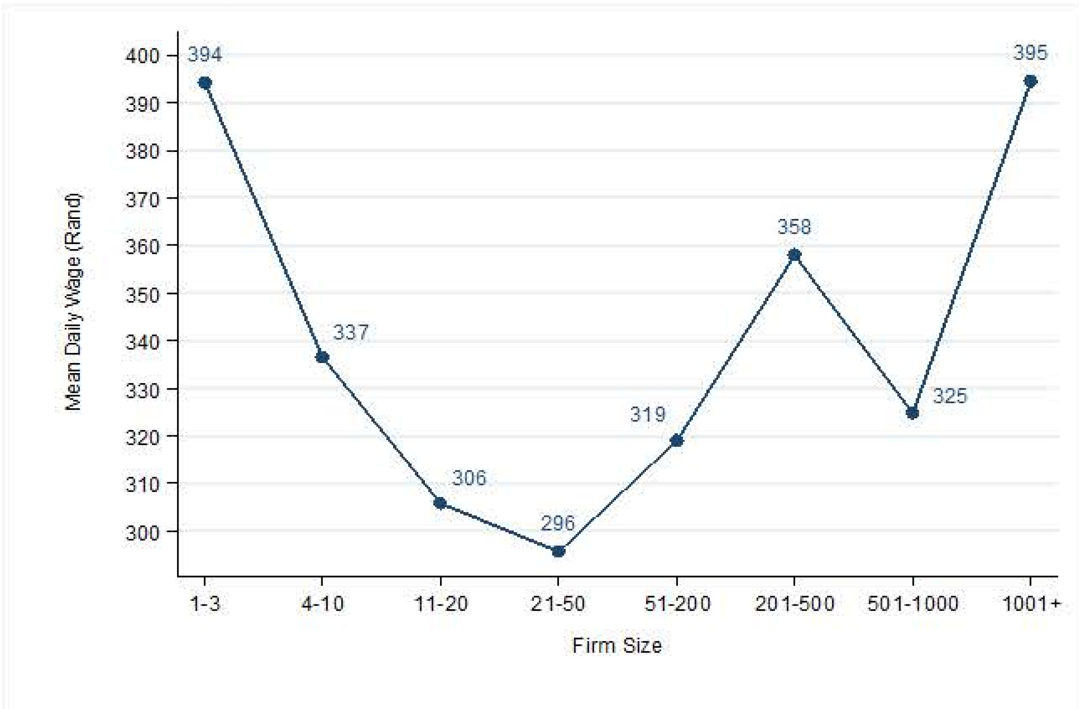
Descriptives:

- Large profit and loss associated with higher average wages.

Regression results:

- Firms making profits over previous 3 years pay higher wages.

F6. Firm Size



Descriptives:

- U-shaped relationship between firm size and wages.
- High small-firm wage premium in financial sector.
- High large-firm wage premium in mining, utilities.

Regression results:

- FeiLSDVj fixed effects: Negative relationship between firm size and wages. Firms with 1000+ employees pay wages which are 8-10% lower than firms with 1-3 employees, on average.
- Quantile regressions indicate heterogeneity: firm size effect is negative for those earning at 10th percentile, positive for those earning at 90th percentile.

T1. Variance Decomposition using FEiLSDVj fixed effects method

- Gives relative importance of firm and individual characteristics in explaining wage formation.
- Main driver of variation in formal sector worker wages is unobserved person effects, or individual supply-side characteristics (61%), e.g. education.
- 13% of variation is from observed time varying characteristics (majority of which are demand-side).
- 13% of wage variance due to unobserved firm effects, e.g. managerial quality.

	South Africa			Austria
	Min	Max	Mean	
Observed time varying characteristics	-0.14	0.21	0.13	0.09
Person effects	0.53	0.88	0.61	0.60
Firm effects	0.13	0.13	0.13	0.27
Residual	0.13	0.13	0.13	0.05

Notes: 1. The estimates for Austria are taken from Gruetter & Lallive (2009).

Conclusions

- Individual characteristics are more important for explaining wage variation than firm characteristics.
- Firms that are profitable, more capital intensive, more productive and involved in international trade pay higher wages, on average.
- Interesting relationship between firm size and wages, contrary to existing literature.

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