

# Trade Reform and Local Labour Markets in Post-Apartheid South Africa

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- Improving the rate at which new job opportunities are created is a central economic challenge facing South African policy makers.
- Unemployment rate is persistently high at 27.7% in Q1, 2017 (Statistics South Africa 2017).
- The labour market dominates household income distribution in South Africa (Leibbrandt et al. 2010).
  - Share of income around 70%
  - Contribution to inequality around 85%
- **Supply side factors:** poor education, skills shortage, regulatory impediments and wage bargaining councils (Bhorat et al. 2009 and Leibbrandt et al. 2010).
- **Demand side factors:** international trade and technological progress (Bhorat et al. 2014; Rodrik 2006 and Tregenna 2009).

# Motivation

- Role of trade and trade policy as well as its potential gender-biased effect on local labour markets in South Africa has not been fully explored.
- Expected impact of trade is not uniform across regions given different endowments, proximity to borders and initial industrial structure.
- The local labour market effects of trade have become of increasing interest in the international empirical literature (Autor et al. 2013 and Gaddis & Pieters 2014).
- Few studies have been done on emerging economies while there are none in South Africa.
- This study analyses the effect of trade on local labour markets using South Africa as a case study.
- An analysis at a disaggregated level is crucial for South Africa given the fact that there is huge spatial inequality.

## **What are the effects of international trade on the local labour market in South Africa in the post-apartheid period?**

- 1 What are the trade effects on local labour market outcomes in South Africa?
  - Employment rate
  - Percentage of unemployed
  - Labour force participation rate
- 2 Do international trade effects on the local labour market vary by gender and skill levels?

Two data sources:

- 1 Tariff and effective rate of protection data from 1988 to 2014 obtained from Edwards (2015).
- 2 1996, 2001 and 2011 Population Census data.
  - Provides data on employment status, industry, gender and education level (proxy for skill level).
  - Unit of analysis: 234 municipalities.

- First we construct the municipality trade protection measure, weighting tariff rates by initial employment shares:

$$TP_{mt} = \sum_{i=1}^i \frac{Emp_{im,initial}}{Emp_{m,initial}} * Tr_{it} \quad (1)$$

- Second we use the panel estimation approach.

$$y_{mt} = \alpha + \beta_1 \ln TP_{mt} + \beta_2 \left( X'_{m,initial} * post1996_t \right) + \delta_m + \gamma_t + \varepsilon_{mt} \quad (2)$$

# Results: Employment, Unemployment & Labour Force

VARIABLES	(1) Employment rate	(2) Employment rate	(3) Employment rate	(4) Percentage of unemployed	(5) Labour Force Participation rate
InTP	0.124 (0.157)	0.611*** (0.152)	0.830*** (0.134)	-0.0427 (0.174)	0.787*** (0.219)
D2001	-0.0371*** (0.00963)	-0.0247*** (0.00694)	-0.0191*** (0.00499)	0.0460*** (0.00845)	0.0269** (0.00876)
D2011	-0.0163 (0.0145)	-0.000226 (0.0104)	0.00700 (0.00776)	-0.0324** (0.0118)	-0.0254 (0.0145)
D2001 x initial skill share		0.196** (0.0694)	-0.0162 (0.0705)	0.0419 (0.0761)	0.0257 (0.0682)
D2011 x initial skill share		0.328** (0.112)	-0.0483 (0.0702)	0.256*** (0.0658)	0.207** (0.0685)
D2001 x initial tradable share			-0.159** (0.0486)	0.0978 (0.0659)	-0.0611 (0.0455)
D2011 x initial tradable share			-0.275*** (0.0540)	0.295*** (0.0575)	0.0196 (0.0769)
Constant	0.332*** (0.0192)	0.286*** (0.0155)	0.266*** (0.0133)	0.181*** (0.0183)	0.447*** (0.0233)
Observations	702	702	702	702	702
R-squared	0.218	0.267	0.329	0.647	0.384
Number of mn_code	234	234	234	234	234
Municipal FE	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Notes: Regressions are weighted by initial municipality population.

Standard errors are clustered by province.

# Results by Gender

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Employment rate	Male Percentage of unemployed	Labour Force Participation rate	Employment rate	Female Percentage of unemployed	Labour Force Participation rate
InTP	0.962*** (0.149)	-0.217 (0.199)	0.745** (0.270)	0.440** (0.149)	0.202 (0.171)	0.642** (0.200)
D2001	-0.0377*** (0.00650)	0.0448*** (0.00810)	0.00712 (0.0100)	-0.00726 (0.00669)	0.0479*** (0.00926)	0.0407*** (0.0110)
D2011	-0.0249** (0.00965)	-0.0373** (0.0142)	-0.0622*** (0.0180)	0.0271** (0.00939)	-0.0267** (0.0115)	0.000400 (0.0139)
D2001 x initial skill share	0.0517 (0.0850)	0.0533 (0.0865)	0.105 (0.119)	-0.0368 (0.0582)	0.0242 (0.0778)	-0.0127 (0.0497)
D2011 x initial skill share	-0.0537 (0.0418)	0.335** (0.108)	0.282** (0.109)	0.00323 (0.103)	0.190*** (0.0561)	0.193 (0.124)
D2001 x initial tradable share	-0.148* (0.0673)	0.141 (0.0782)	-0.00669 (0.0754)	-0.0915** (0.0282)	0.0434 (0.0622)	-0.0481 (0.0426)
D2011 x initial tradable share	-0.334*** (0.0584)	0.397*** (0.0961)	0.0631 (0.123)	-0.129* (0.0571)	0.195*** (0.0403)	0.0656 (0.0672)
Constant	0.346*** (0.0158)	0.186*** (0.0208)	0.532*** (0.0288)	0.216*** (0.0158)	0.171*** (0.0182)	0.387*** (0.0221)
Observations	702	702	702	702	702	702
R-squared	0.459	0.654	0.521	0.208	0.589	0.228
Number of mn_code	234	234	234	234	234	234
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Notes: Regressions are weighted by initial municipality population. Standard errors are clustered by province.

# Results by Skill

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Employment rate	Unskilled Percentage of unemployed	Labour Force Participation rate	Employment rate	Skilled Percentage of unemployed	Labour Force Participation rate
InTP	0.791*** (0.166)	0.0635 (0.192)	0.855*** (0.210)	0.671* (0.344)	-0.181 (0.168)	0.489 (0.453)
D2001	-0.0273*** (0.00641)	0.0419*** (0.00932)	0.0146 (0.00940)	-0.0319 (0.0185)	0.0609*** (0.00589)	0.0291 (0.0192)
D2011	-0.00944 (0.00917)	-0.0305** (0.0130)	-0.0399** (0.0145)	-0.0203 (0.0228)	-0.0260** (0.0105)	-0.0463 (0.0321)
D2001 x initial skill share	0.00379 (0.0608)	0.0387 (0.0641)	0.0425 (0.0649)	0.00772 (0.0669)	0.0735 (0.126)	0.0812 (0.119)
D2011 x initial skill share	0.0317 (0.0881)	0.255*** (0.0695)	0.287*** (0.0758)	0.129 (0.114)	0.638*** (0.122)	0.767*** (0.180)
D2001 x initial tradable share	-0.146** (0.0478)	0.0982 (0.0620)	-0.0482 (0.0414)	-0.0599 (0.0859)	0.0666 (0.0944)	0.00669 (0.102)
D2011 x initial tradable share	-0.218*** (0.0596)	0.313*** (0.0569)	0.0943 (0.0584)	0.0661 (0.120)	0.441*** (0.102)	0.507** (0.193)
Constant	0.235*** (0.0162)	0.176*** (0.0202)	0.411*** (0.0226)	0.464*** (0.0377)	0.195*** (0.0154)	0.659*** (0.0484)
Observations	702	702	702	702	702	702
R-squared	0.382	0.589	0.463	0.235	0.637	0.401
Number of mn_code	234	234	234	234	234	234
Municipal FE	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Notes: Regressions are weighted by initial municipality population. Standard errors are clustered by province.

# Concluding Remarks

- Trade reform has a negative effect on employment and labour force participation.
- Trade reform seems to have stronger negative effect on male employment.
  - Contributing to narrowing gender gap.
- Trade effects fall disproportionately on the unskilled population, widening inequality.

# Thank You