Tax motivated transfer price manipulation in South Africa

Ludvig Wier
University of Copenhagen

UNIVERSITY OF COPENHAGEN

Please stay awake!

- Today you will see the first *direct* systematic evidence of profit shifting through transfer price manipulation in a developing country
- This is done using highly detailed South African customs data at the transaction-firm level
- In other words: You will see evidence of profit shifting which was thought to be out of reach in a developing country setting
- This type of evidence can be automated and directly applied in the tax enforcement efforts of developing countries

First: What is profit shifting?

- To move taxable profits without moving the corresponding activity in an effort to save taxes
- Example:
  - Corporate tax rate in South Africa is 28%
  - Corporate tax rate in the Cayman Islands is 0%
  - **A multinational enterprise saves 28 cents per dollar of taxable income shifted from South Africa to Cayman Islands**

Why is profit shifting relevant in a developing country setting?

Developing countries:

- Corporate tax revenue constitutes a larger share of total tax revenue (UNCTAD 2015)
- Faces a rapid expansion in the MNE share of economic activity
- **Lack the institutions to monitor and regulate MNE behaviour (OECD 2014)**

Profit shifting in developing countries – the frontier of research is moving fast (1)

- In the last 2 years empirical evidence of profit shifting in developing countries is begining to spread
  - Jansky & Palansky (2017); Schimanski (2017); Johannesen, Tørsløv & Wier (2016); Reynolds & Wier (2017); Crivelli, de Mooij, & Keen (2015); UNCTAD (2015), OECD (2015)
- Truly amazing in understanding the overall size of the issue
  - E.g. supports the notion that MNEs are more aggressive profit shifters in developing countries

Profit shifting in developing countries – the frontier of research is moving fast (2)

- However, all of this research relies on what is known as "indirect evidence"
- That is: Finding patterns in profitability consistent with profit shifting

Indirect evidence – someone ate the profits

Firm A: Doesn't have a connection to tax havens

Firm B: Does have a connection to tax havens

Some issues with indirect evidence

- Are we modelling returns correctly?
- Do we observe profit shifting or actual movement of activity?
- However, main critique is that **we do not see how the profits disappear**

Today we zoom in on direct evidence of transfer mispricing of goods

- The data employed includes transaction level unit prices of all imports
- Allows for direct comparison of transaction prices when transactions are external vs. internal

-> I directly observe transfer mispricing (one form of profit shifting)

- First study using this type of identification strategy outside of France, UK, Denmark and the US

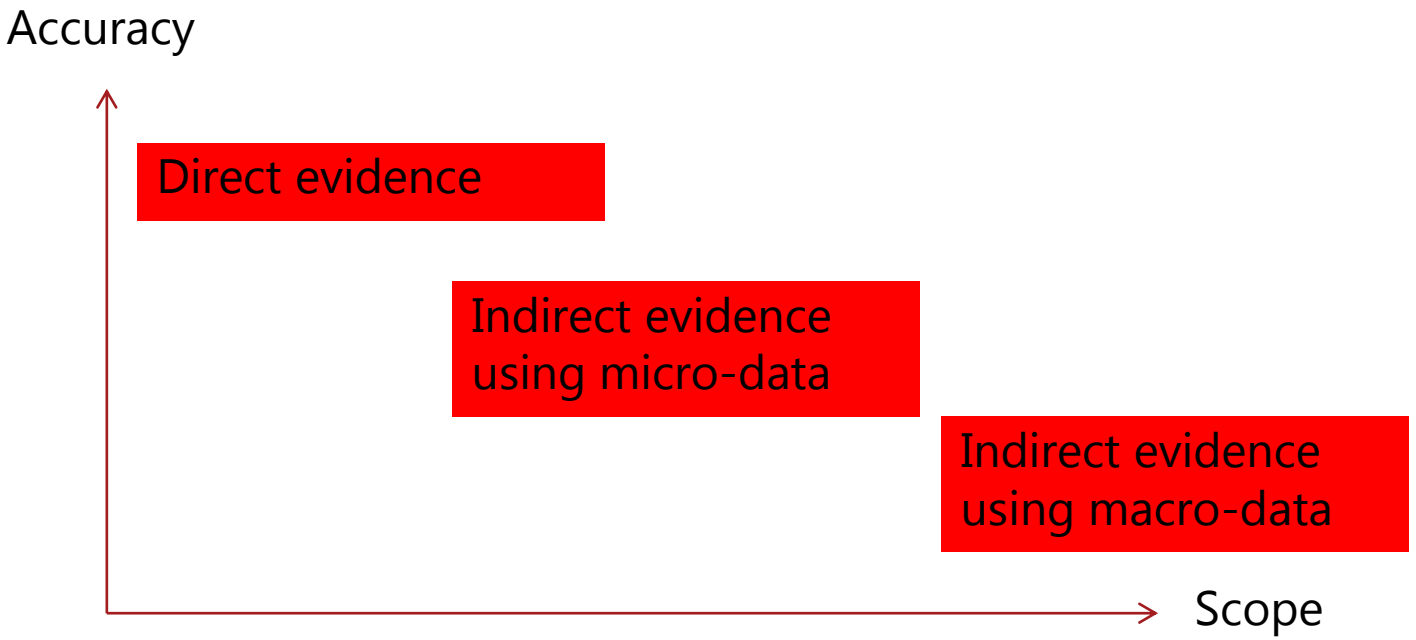
This research is possible due to the amazing work done by UNU-WIDER & the SA treasury

United Nations University
WIDER
World Institute for Development Economics Research

national treasury
Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

DISCLAIMER

- This research cannot stand alone in the understanding of profit shifting -> Transfer mispricing of goods is only a part of the overall issue



The transactions of the multinational firm

- Multinational firms engage in two types of transactions:
  - Internal: i.e. between affiliates (with itself)
  - External: i.e. transactions with unrelated companies

By law the arms-length principle apply…

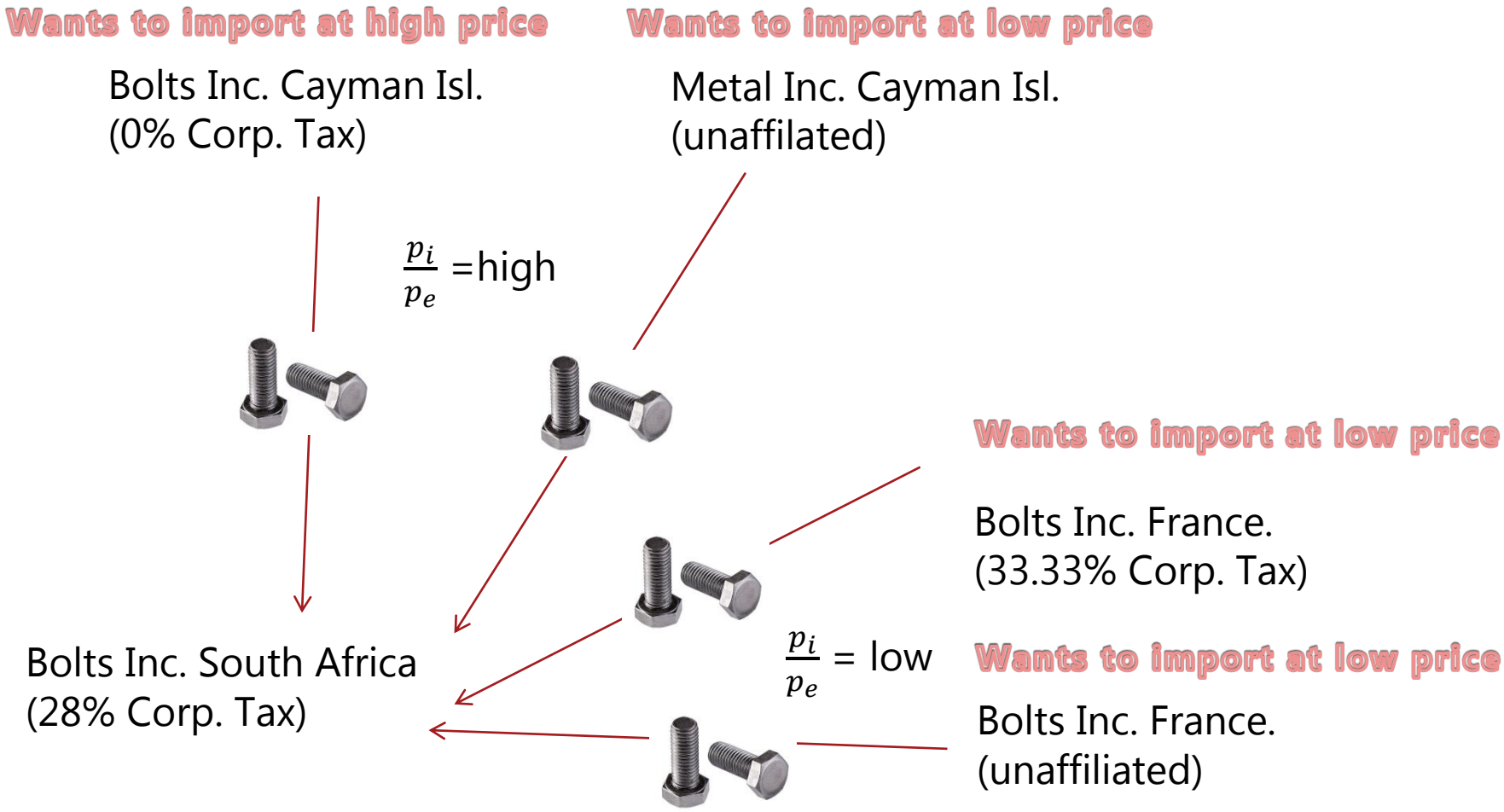
- MNEs are required by law to apply the arms-length principle
- That is, a MNE should e.g. price an internal trade from one affiliate to another "as if" they were trading with an unrelated party.

⋯ but firms have an incentive to deviate

- When trading internally:
  - Multinational firms have an incentive to raise the price on goods flowing from a low tax country to South Africa
- When trading externally:
  - Multinational subsidiaries will want to purchase the good as cheaply as possible (unaffected by the corporate tax rate in the partner country)

Transfer mispricing example (fictional)

- Bolts Incorporated imports bolts from itself (internally) and externally from Metal inc.

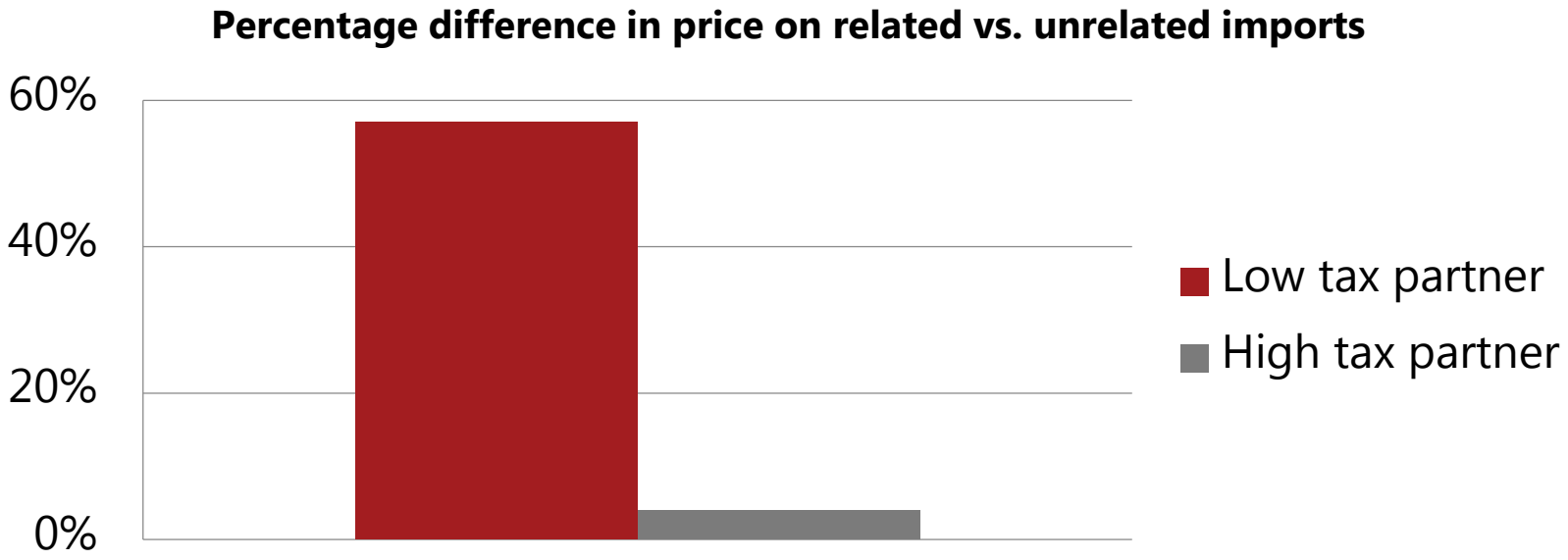


Looking for transfer mispricing in the customs data

1. Calculate the unit prices of imported goods in each transaction
2. Estimate the transfer price deviation from the arms-length price in each transaction
3. Correlate the estimated arms-length deviation with the tax incentive to deviate

- First study in a developing country

Transfer mispricing at first glance



- Suggestive of transfer mispricing
- However, we are literally comparing apples and oranges; bolts and books etc.
- Next step is to compare prices within product groups

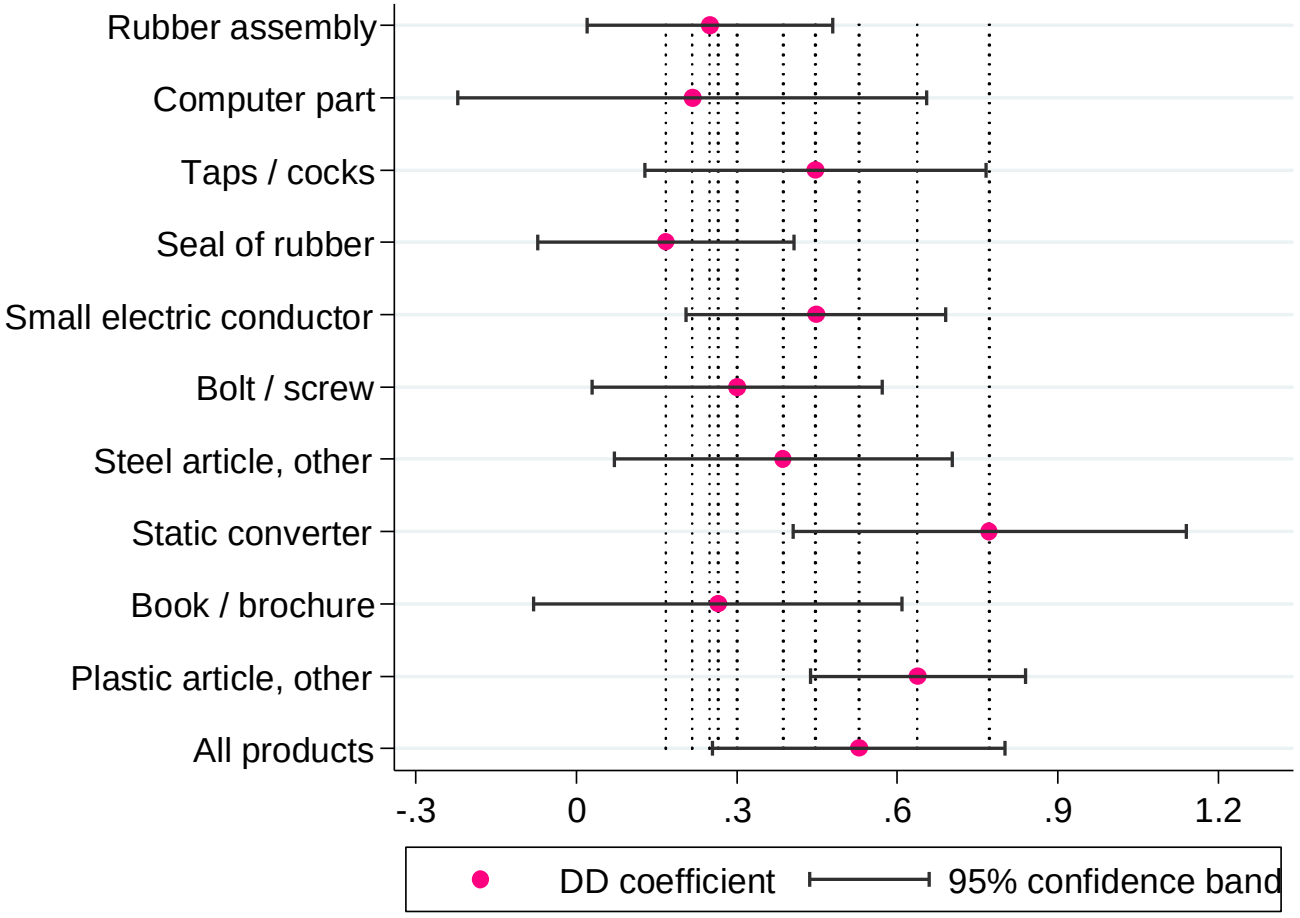
Looking for transfer mispricing in the customs data

- Import micro-data for the period 2011-2015
  - >4 million observations
  - 2013 is incomplete
- Data includes information on
  - Product type (HS 8 digit-code)
  - Customs value and quantity
    - Possible to impute unit price
  - Firm id and firm charachteristics
  - Partner country
  - Related vs. unrelated transaction

Description: Tariff code 40169310

- Patches for puncture repair of self-vulcanizing rubber or a rubber backing

"Overpricing" of related low tax imports within 10 largest product groups



Exploiting the many dimensions of the customs data

- Digging deeper: Within firm-product categories i.e. the same firm importing the same product

$$Log(Unit\ price_{it}) = \beta_1\ \tau_{it}\ + \beta_2\ Related_{it} + \beta_3\ Related \cdot \tau_{it} + \boldsymbol{X'_{it}B} + \epsilon_{it}$$

- In these cases, how does the price differ when the trade is external vs. internal?
  - Preliminary answer: price is roughly 10 percent higher when import is internal and from a low tax country

Baseline results:

Dependent variable: ln(unit price)			
	(1)	(2)	(3)
Related partner × low tax partner	0.0859***		
	(0.0159)		
Related partner × partner tax rate		-0.532***	
		(0.181)	
Related partner × ln(1 - t)			0.325**
			(0.136)
Related party	0.334**	0.347**	0.345*
	(0.150)	(0.172)	(0.177)
Related partner × country controls	Yes	Yes	Yes
Fixed effects			
Product#Year	Yes	Yes	Yes
Firm#Year	Yes	Yes	Yes
Firm#Product	Yes	Yes	Yes
Country#Year	Yes	Yes	Yes
Observations	3,242,606	3,195,872	3,195,872
R-squared	0.825	0.825	0.825

- A 1 pct. pt. higher partner tax rate implies a 0.5 percent lower unit price
  - –This effect is not significantly different from previous findings in developed countries

In conclusion

- I directly test for transfer price manipulation in South Africa
- I find that it occurs
  - But (surprisingly) not significantly more than what is observed in developed countries

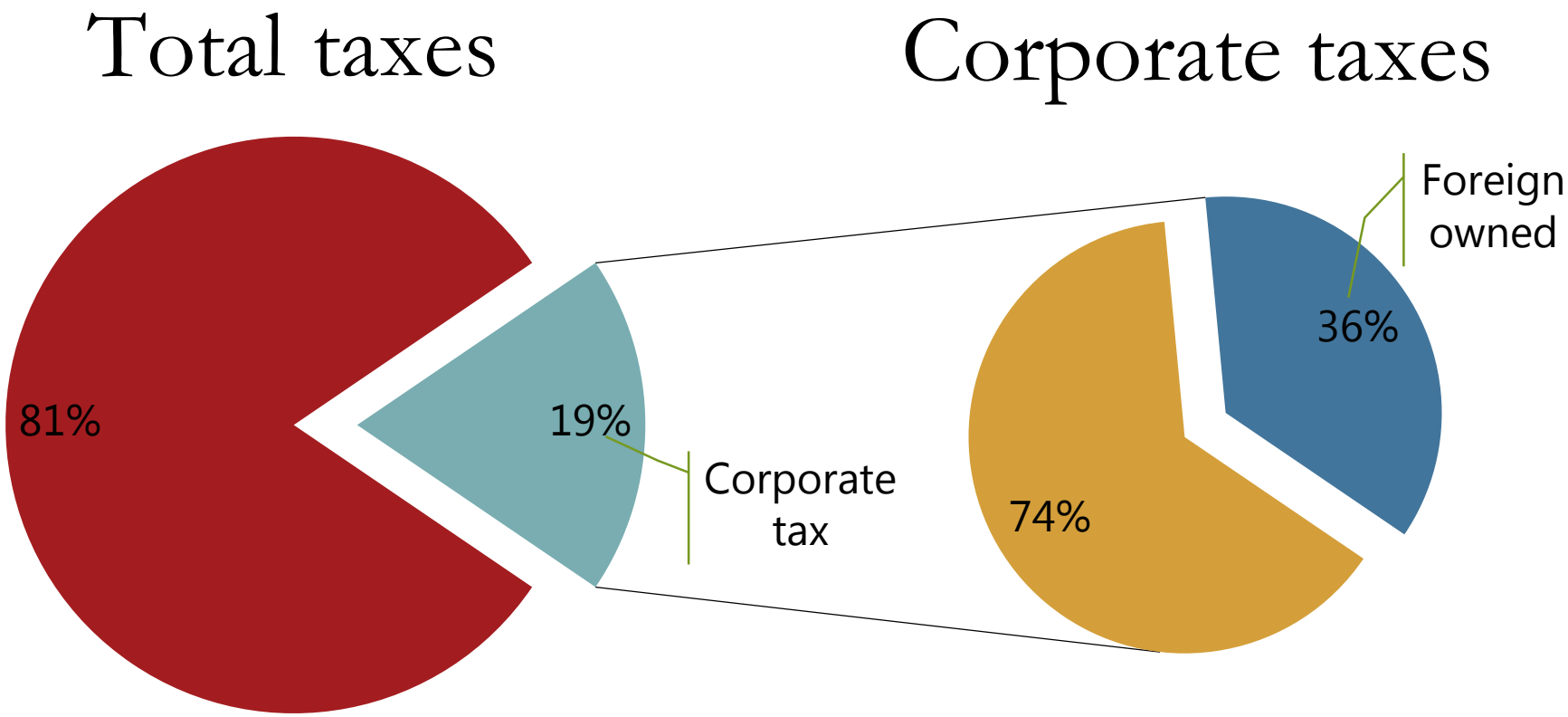
Thank you!

Questions?

Evaluating an OECD recommended reform

- A recent transfer price legislation reform implemented a series of OECD recommendations in South Africa.
- The reform limited transfer price manipulation in the immediate aftermath…
- … But prevalence of transfer price manipulation returned to its original level after three years.

An important question to study



*For the year 2014

Source: SARS and Author calculations

Arms-length-pricing: An attempt to stop transfer mispricing

- To curb transfer mispricing, the law states that MNEs should price their internal trades according to an "arms-length-principle"
- That is, a multinational enterprise should e.g. price an internal trade from one affiliate to another "as if" they were trading with an unrelated party.
  - A South African business would obviously not want to be paying extra for an import from Cayman Islands compared to France, all other things equal
- **Question: Is it working?**

Looking for transfer mispricing in the customs data

- Data on individual goods import transactions allows for a very convincing test of transfer mispricing
- Data includes information on
  - Product type (HS8-code)
  - Customs value and quantity
    - Possible to impute unit price
  - Firm id and firm characteristics
  - Partner country
  - Related vs. Unrelated transaction