

# Do Multinationals Shift Profits out of Developing Countries? - New Evidence -

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## Research Objective

Provide causal evidence on existence and extent of worldwide tax and/or else incentivized profit-shifting i.e. out of developing countries

## Motivation

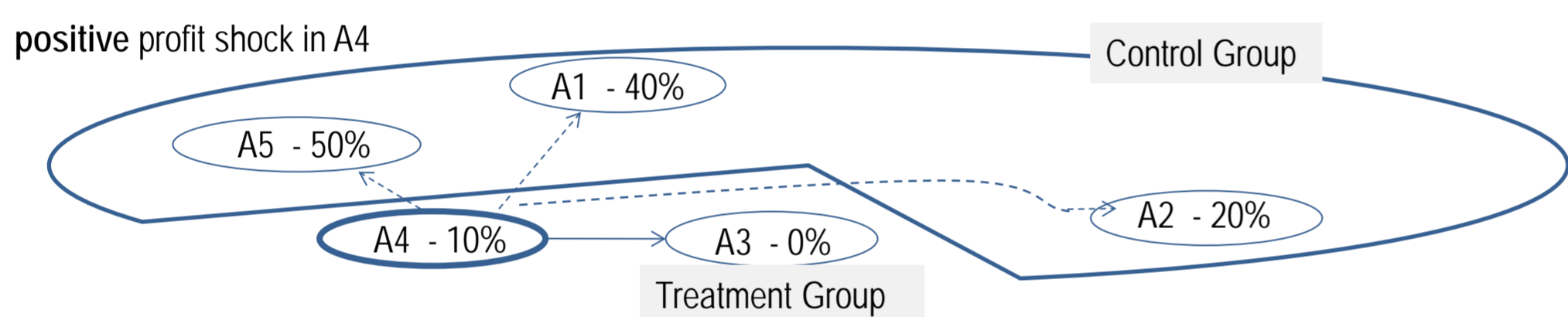
Rising evidence on tax motivated profit-shifting in developed countries *BUT*  
Lack of empirical and causal evidence including developing countries with lower fiscal capacity and higher dependence on corporate tax revenue than developed countries

## Contribution

- Multi-directional shifting in global sample
- Lower effective/statutory tax rates combined with other shifting incentives: more developed, better credit rated (fear of inflation), less corrupt (fear of expropriation), parent firm destination

## Identification Strategy

- Firms maximize worldwide profits & minimize worldwide tax burden (assuming taxes to be paid are collected)
- + earnings shocks forwarded to lower, but not to higher tax affiliates



**Earnings Shocks - Reported pre-tax profit is post-shifting profit**  
Shifting firm's profit proxied by weighted profitability of comparable firms (>=10 firms in same economic region and/or industry)

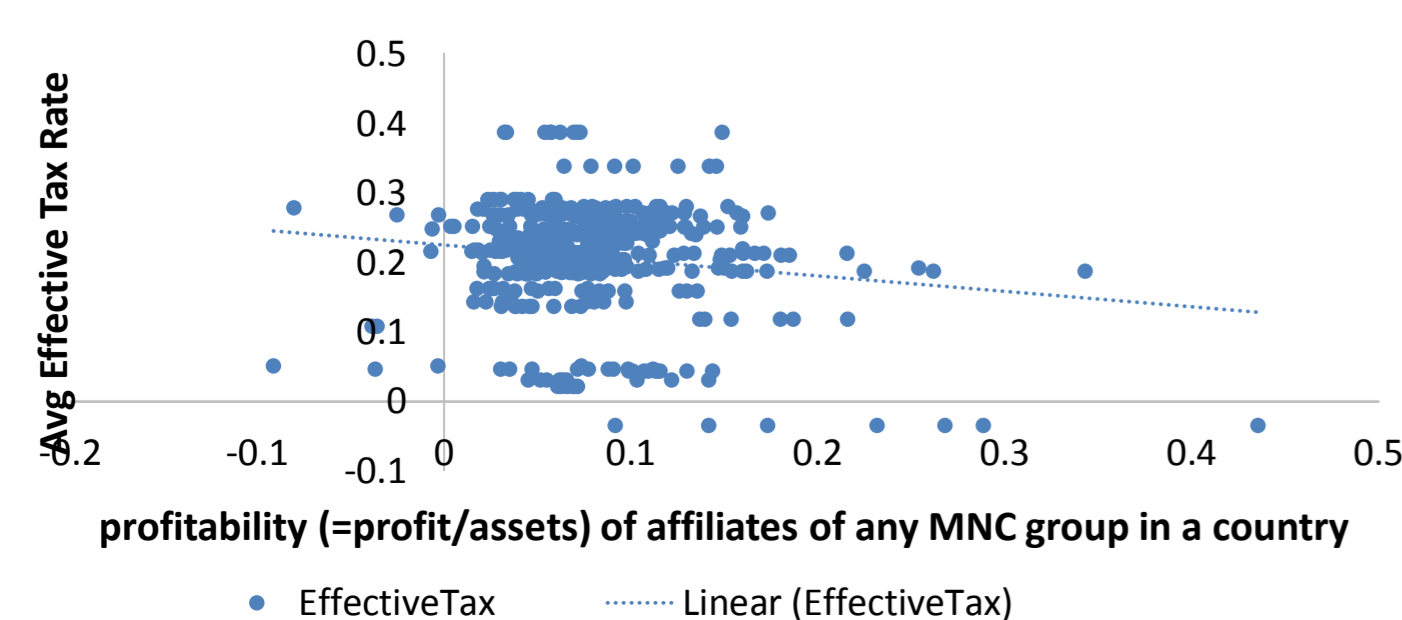
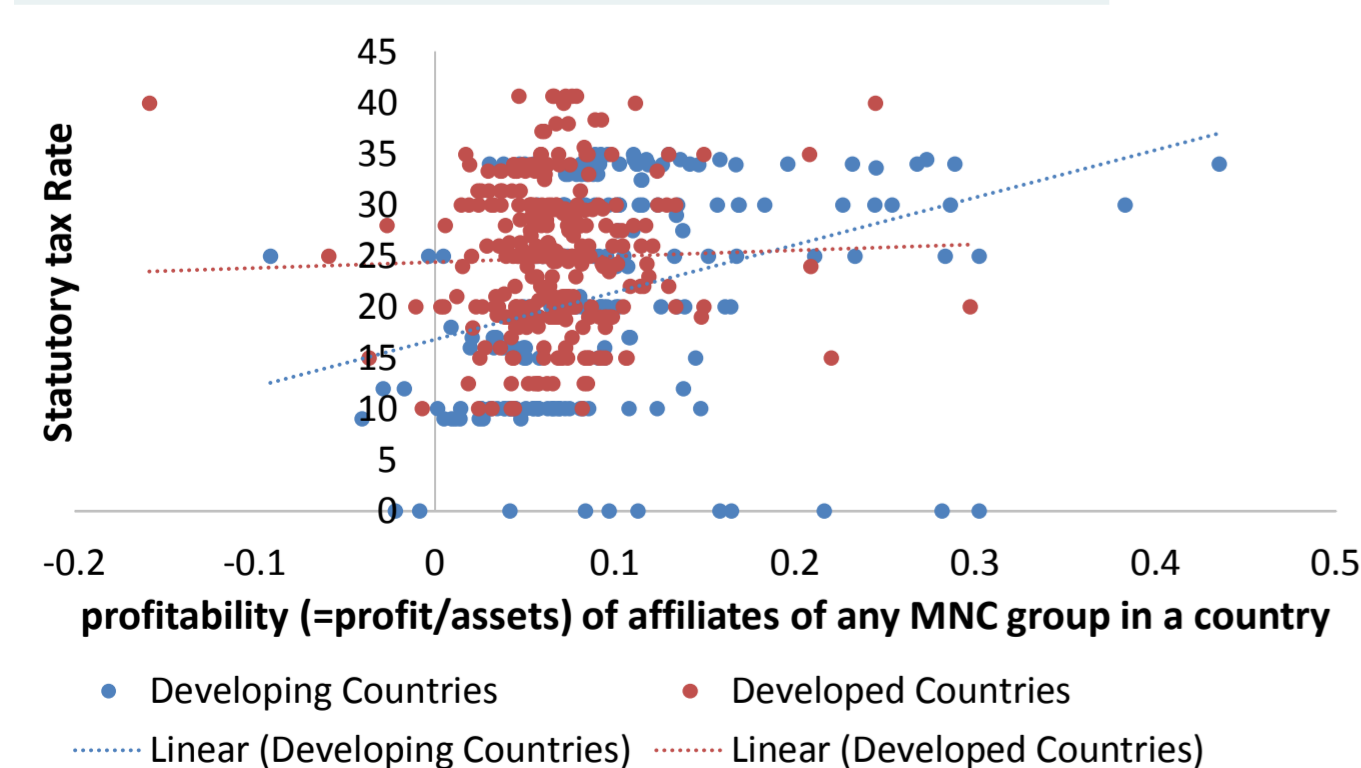
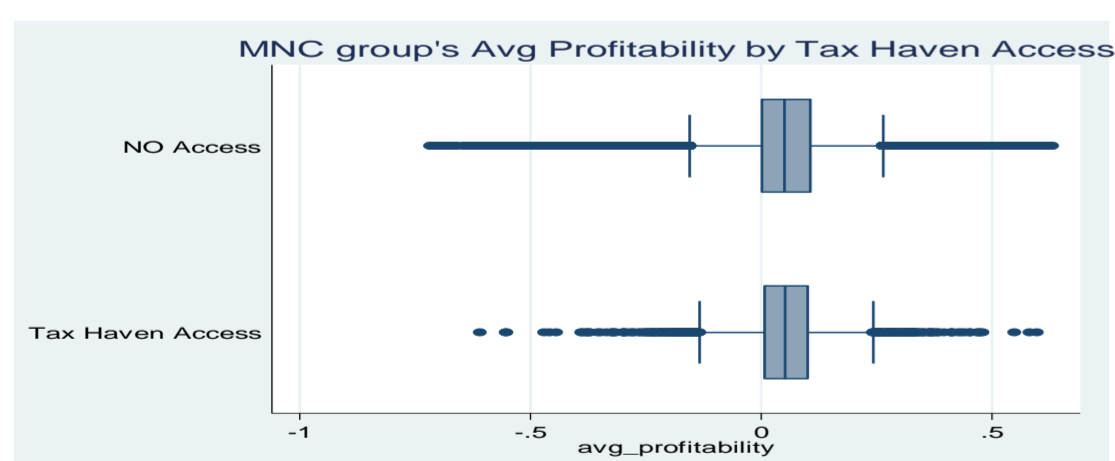
## Methodology

Fixed Effects Panel Data Difference in Difference Model:  $\log \pi_a = \alpha_0 + \alpha_1 \log a_{at} + \alpha_2 \log \tilde{\pi}_{st} + \alpha_3 (D_{\text{tax } a} * \log \tilde{\pi}_{st}) + \alpha_4 x_{at} + \rho_t$

Main shifting directions tested:

- Any Affiliate → Lower Taxed Country, tax haven, better credit rated, less corrupt, parent firms county
- Developing, higher tax, worse rated affiliate → developed, lower tax, better rated affiliate

## Results



Dependent Variable: $\log\_pre\_tax\_profit$ in thUSD <sub>Dest</sub>	(1)	(2)	(3)	(4)	(5)	(6)
D_LowStatutoryTaxDest*	-0.00269***					
log_exp_pre_tax_pre_shifting_profit_Shift	(0.000339)					
D_TaxHavenDest* log_exp_pre_tax_pre_shifting_profit_Shift		-1.28e-08				
		(2.82e-08)				
D_DevelopingCountry_Shift * D_DevelopedCountry_Dest*			-0.00816***			
log_exp_pre_tax_pre_shifting_profit_Shift			(0.00246)			
D_LowerAvEffTaxDest* log_exp_pre_tax_pre_shifting_pofit_Shift				0.00753	-2.38e-05	
				(0.00718)	(0.00115)	
D_LowerAvEffTaxDevelopedBetterRatedParent*						-0.0548
log_exp_pre_tax_pre_shifting_profit_Subsidary						(0.0683)
log_exp_pre_tax_pre_shifting_profit_Shift	0.0116***	0.0106***	0.0114***	0.00428	-0.00132*	0.0513
	(0.000734)	(0.000722)	(0.000757)	(0.00541)	(0.000709)	(0.0543)
log_TotalAssetsthUSD_Dest	0.920***	0.923***	0.923***	0.793***	0.904***	0.799***
	(0.00217)	(0.00212)	(0.00212)	(0.0120)	(0.000689)	(0.136)
Destination Country- year FE	x		x	x		
Country-pair-year FE					x	
Observations	5,486,775	5,486,775	5,486,775	199,661	4,509,215	3,629
R-squared	0.212	0.204	0.204	0.162	0.721	0.102
Number of combinationID	1,139,462	1,139,462	1,139,462	55,810	922,795	990

Robust standard errors in parentheses (clustered at subsidiary level) \*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
Model (4) restricted to developing country and (5) to developed country affiliates. All models include year FE, destination 2-digit NACE industry-year FE and combinationID FE (Model (6) used subsidiary FE instead).

## Conclusion

NO robust causal evidence on tax or else motivated profit-shifting  
*UNEXPECTED - BUT* does not mean non-existence of profit shifting

## Potential Explanations

**Orbis Data:**

- Neither complete nor representative BUT best data available
- Only last year's ownership structure known
- Current results restricted to( only 1<sup>st</sup> subsidiary level & (very) large & medium-sized, active firms with unconsolidated accounts

**Tax rates:**

- exclude industry, location and company specific tax deals

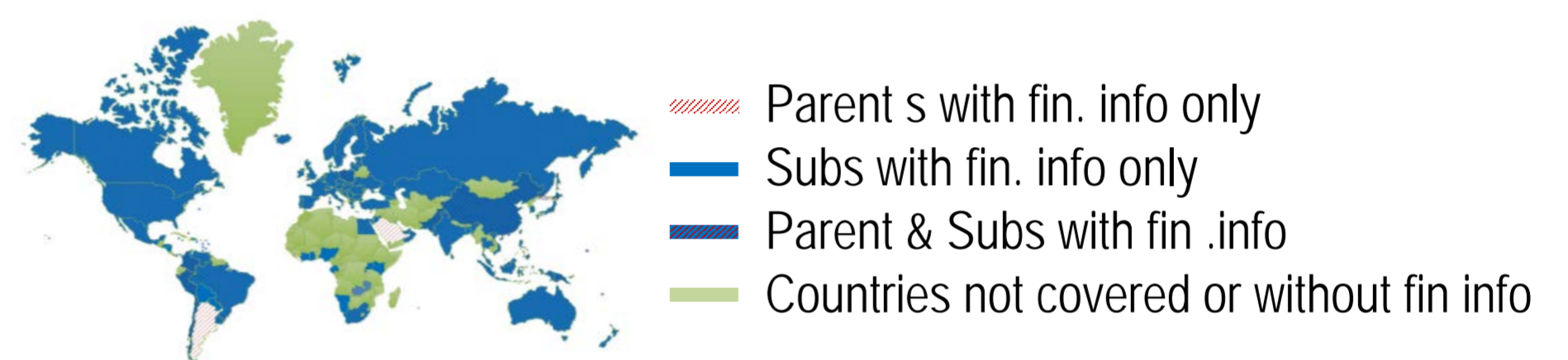
**Methodology:**

- No or too few comparable firms for unique firms
- Shifting among affiliates in same industry excluded

## Data

**Firm-Level Data - Orbis Database (Bureau van Dijk)**

Yearly unconsolidated data 2006-2015 (unbalanced panel)



**Sample**

26,551 parents, 83,264 foreign subsidiaries, 2,382,103 comparable firms

**Tax rates**

Big 4 accounting firms, local authorities