

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

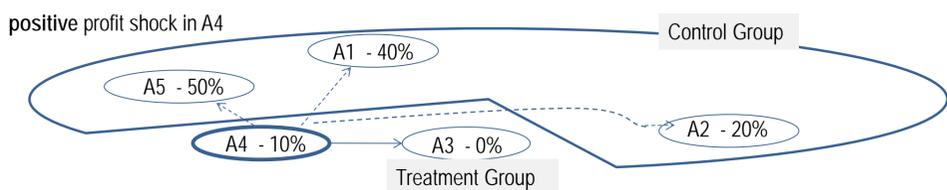
Rising evidence on tax motivated profit-shifting in developed countries *BUT*
Lack of empirical and causal evidence including developing countries with lower fiscal capacity and higher dependence on corporate tax revenue than developed countries

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)

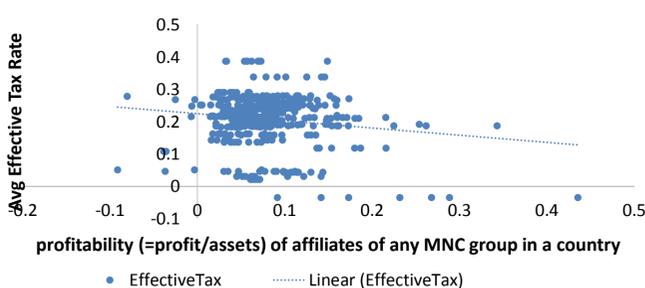
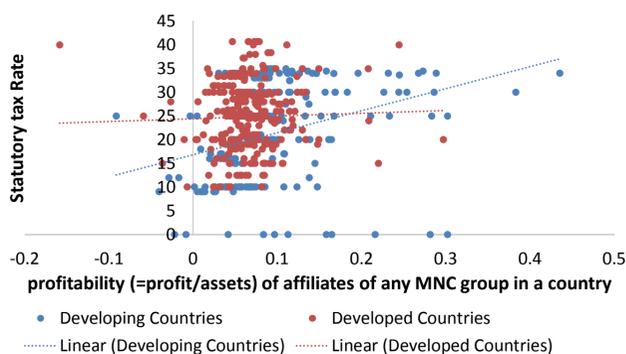
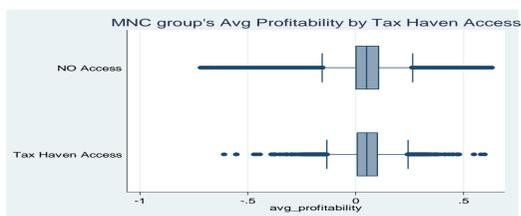
Methodology

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 _{Dest}	(1)	(2)	(3)	(4)	(5)	(6)
$D_LowStatutoryTax_{Dest}^*$	-0.00269*** (0.000339)					
$\log_exp_pre_tax_pre_shifting_profit_{Shift}$						
$D_TaxHaven_{Dest}^* \log_exp_pre_tax_pre_shifting_profit_{Shift}$		-1.28e-08 (2.82e-08)				
$D_DevelopingCountry_{Shift} * D_DevelopedCountry_{Dest}^*$			-0.00816*** (0.00246)			
$\log_exp_pre_tax_pre_shifting_profit_{Shift}$						
$D_LowerAvEffTax_{Dest}^* \log_exp_pre_tax_pre_shifting_profit_{Shift}$				0.00753 (0.00718)	-2.38e-05 (0.00115)	
$D_LowerAvEffTax_{DevelopedBetterRatedParent}^*$						-0.0548 (0.0683)
$\log_exp_pre_tax_pre_shifting_profit_{Subsidiary}$						
$\log_exp_pre_tax_pre_shifting_profit_{Shift}$	0.0116*** (0.000734)	0.0106*** (0.000722)	0.0114*** (0.000757)	0.00428 (0.00541)	-0.00132* (0.000709)	0.0513 (0.0543)
$\log_TotalAssets_{thUSD}_{Dest}$	0.920*** (0.00217)	0.923*** (0.00212)	0.923*** (0.00212)	0.793*** (0.0120)	0.904*** (0.000689)	0.799*** (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 1st subsidiary level & (very) large & medium-sized, active firms with unconsolidated accounts

Tax rates:

- exclude industry, location and company specific tax deals

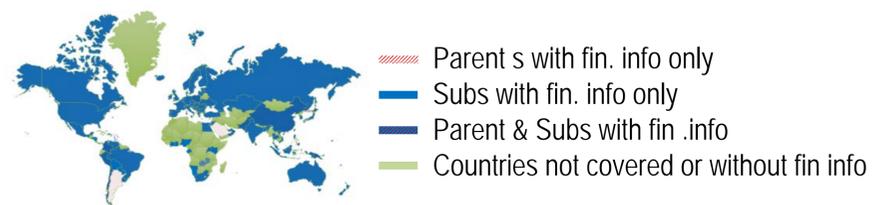
Methodology:

- 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