Estimating the scale of corporate profit shifting: An FDI approach

Miroslav Palanský, Petr Janský

Institute of Economic Studies, Charles University, Prague

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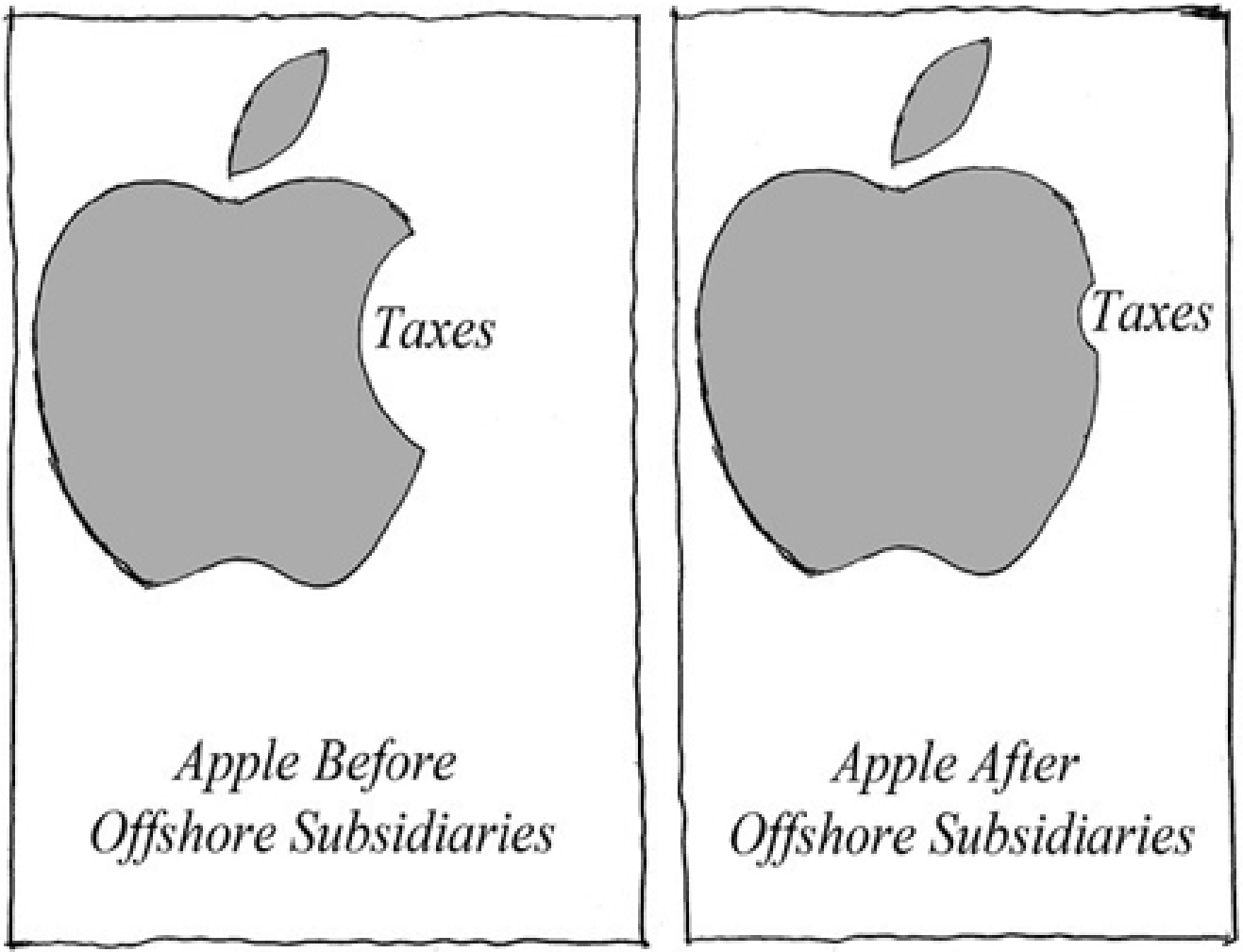

Source: http://www.taxjusticeblog.org/archive/2014/10/irelands_soft_pedaling_tax_avo.php#.WVp1GoiGPhg

What is corporate profit shifting?

Illegal movement of money from a higher-tax jurisdiction to a lower-tax jurisdiction
$\rightarrow$ **lower total tax paid** by a multinational corporation

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- Ways to do so:
  - trade mispricing
  - debt financing
  - sale of intangibles or services
  - etc.

How it works

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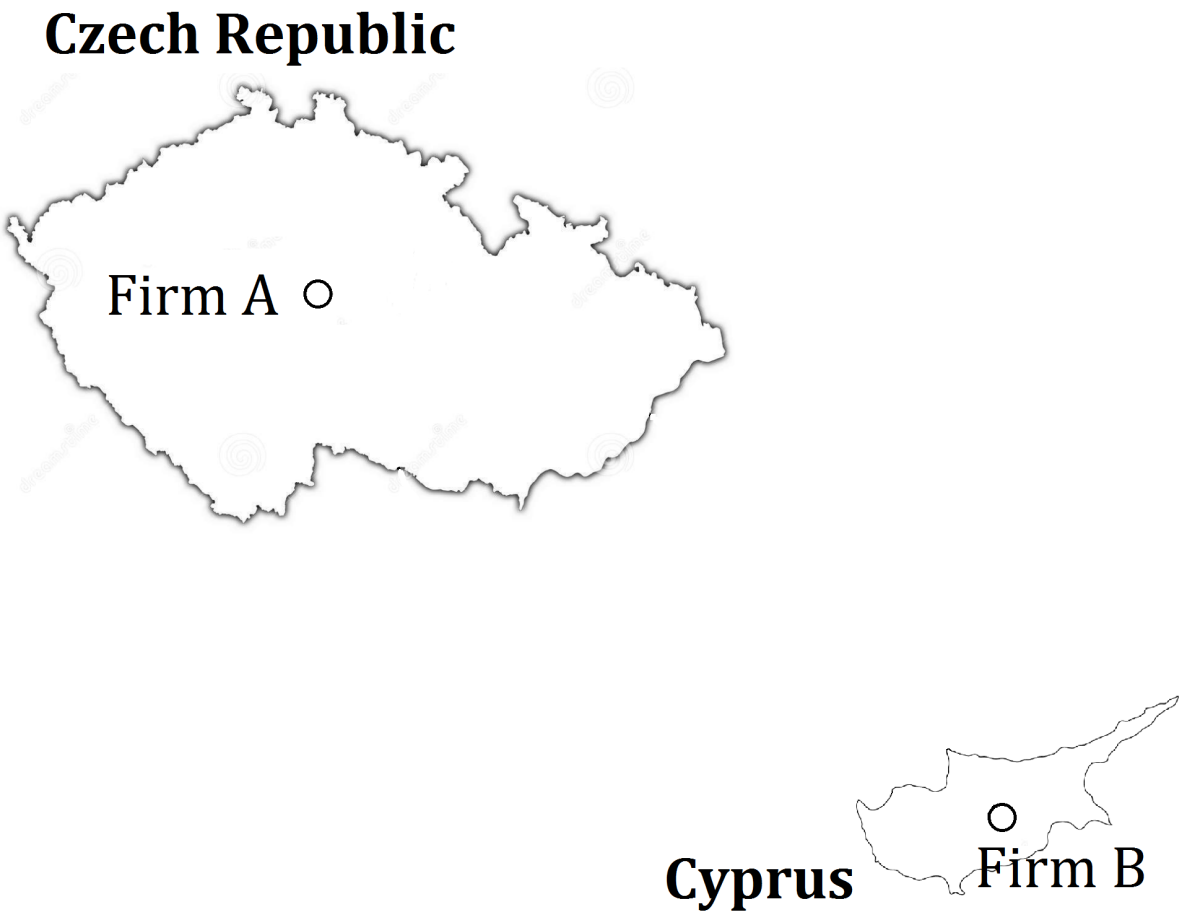

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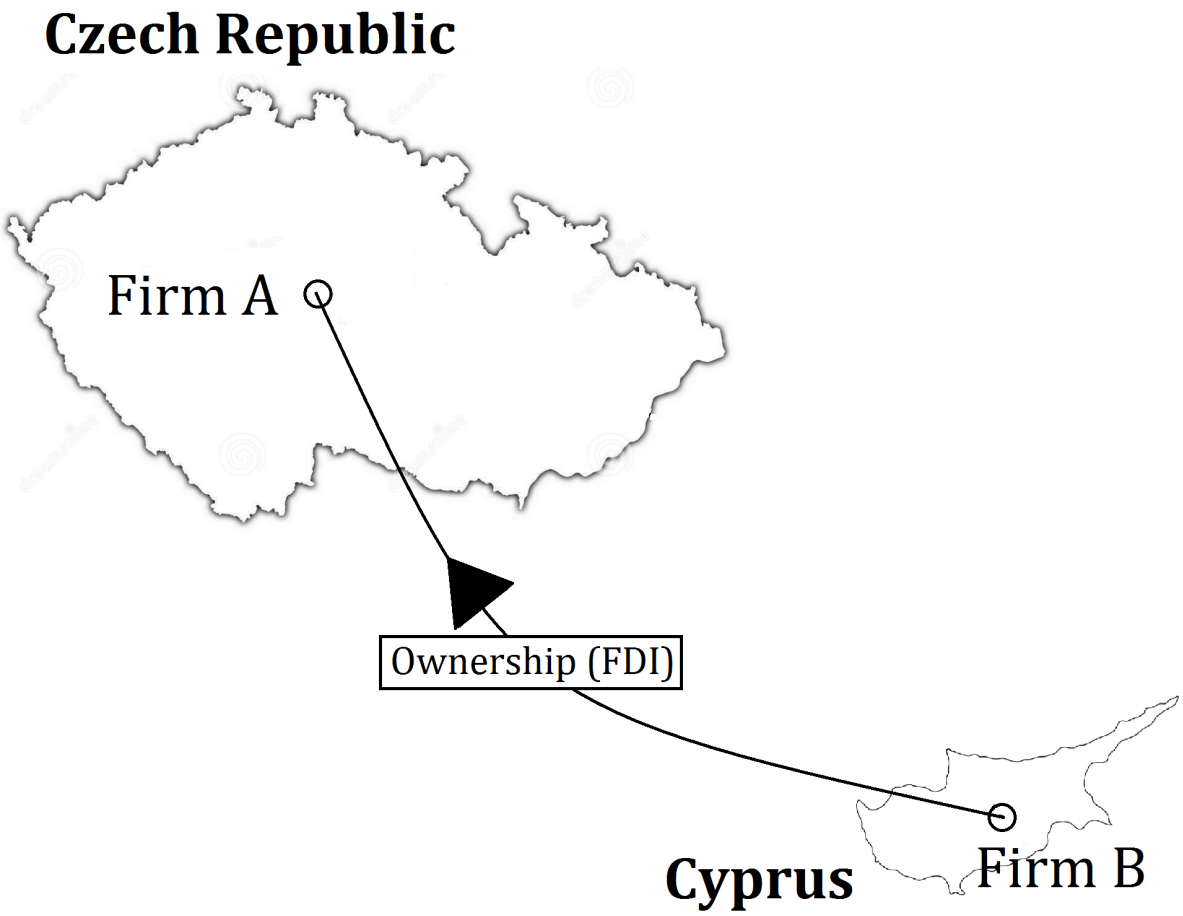

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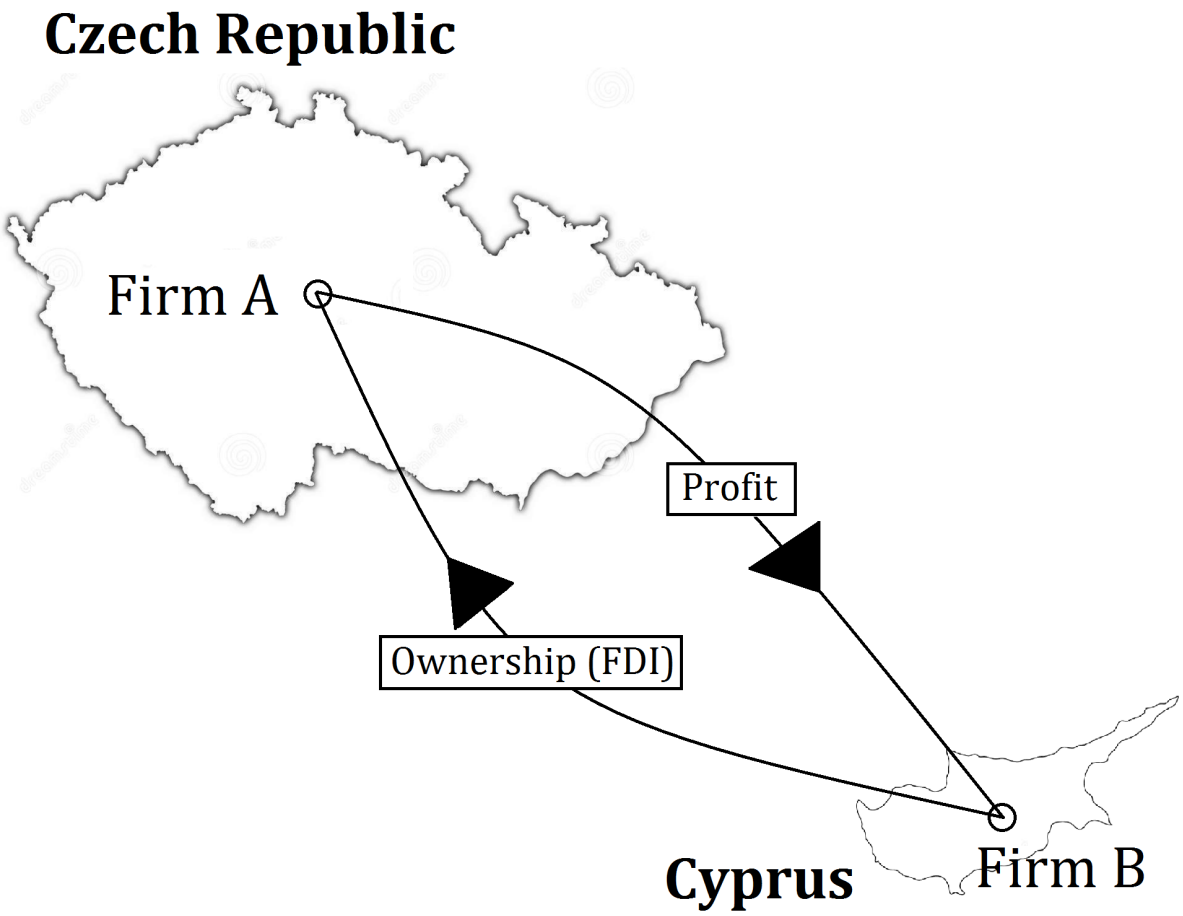

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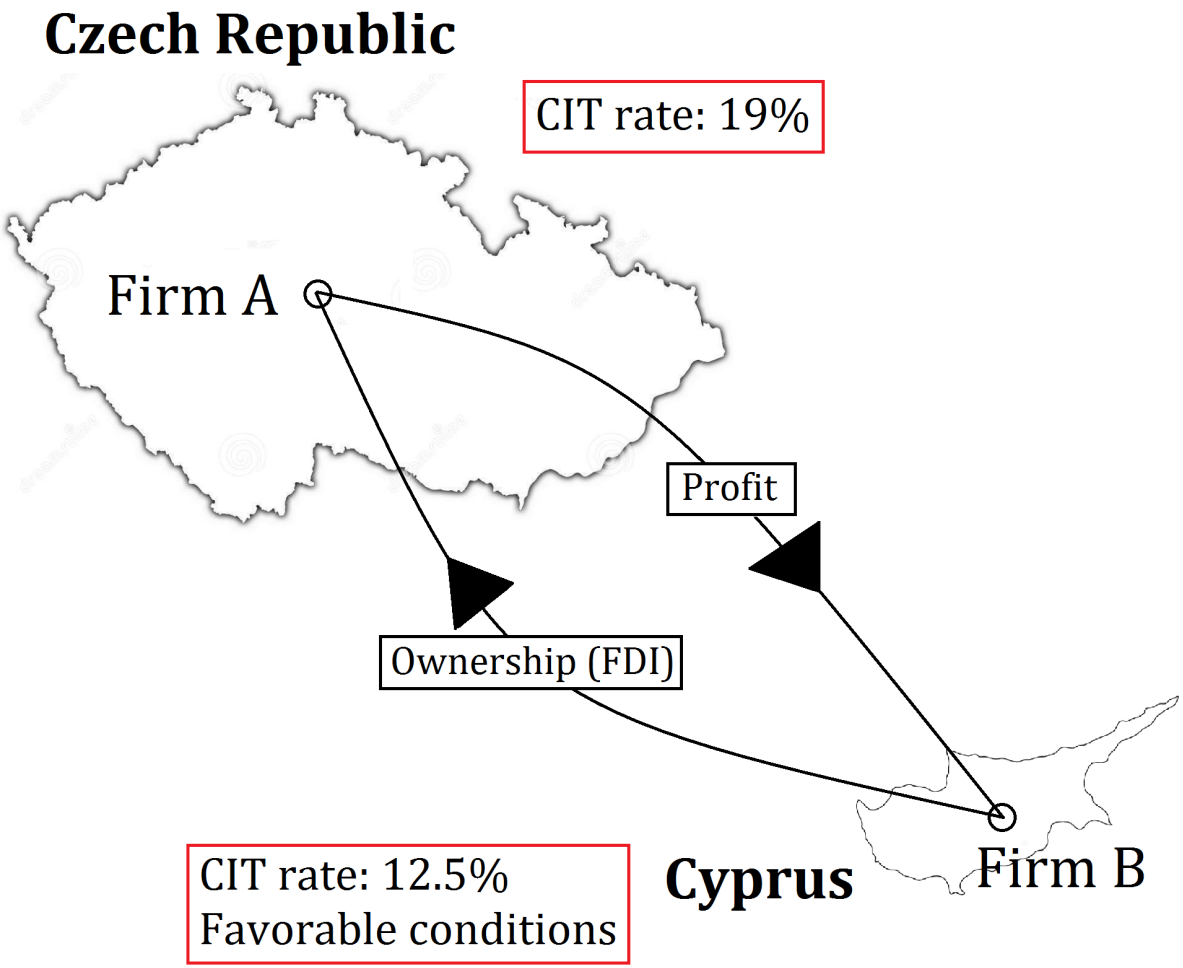
Czech Republic
CIT rate: 19%
Firm A
Profit
Ownership (FDI)
CIT rate: 12.5%
Favorable conditions
Cyprus
Firm B

Motivation

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1. Is there corporate profit shifting?

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2. How much corporate profit is shifted and from which countries?

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3. How much do these countries lose on tax revenue as a result?

1. Is there corporate profit shifting?

The FDI approach

- Building on UNCTAD's World Investment Report (UNCTAD, 2015)

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The basic idea:

If there is profit shifting from high-tax jurisdictions to tax havens, this will show in data as deflated reported profits in high-tax jurisdictions

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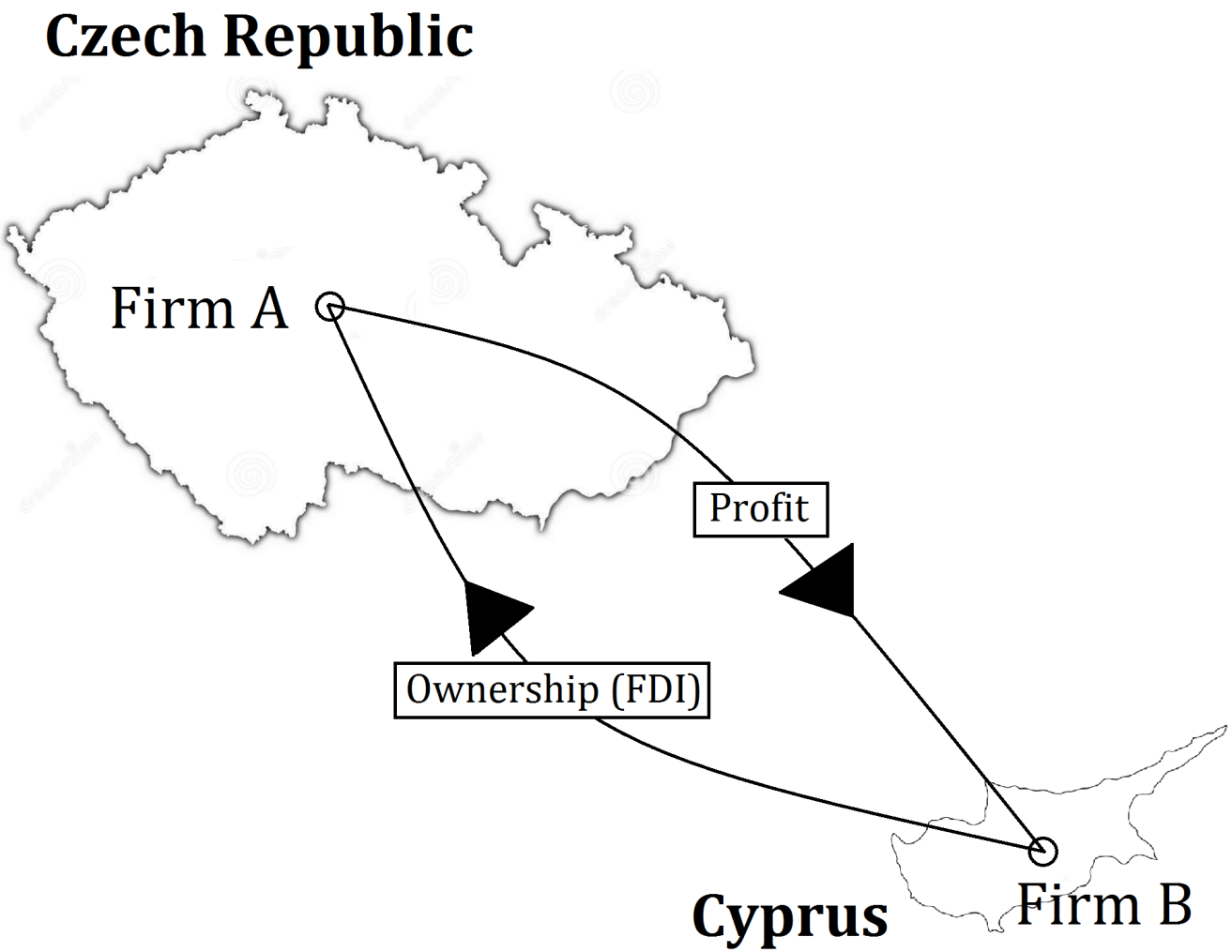
$\rightarrow$ More FDI from tax havens is associated with lower reported profits

How it works



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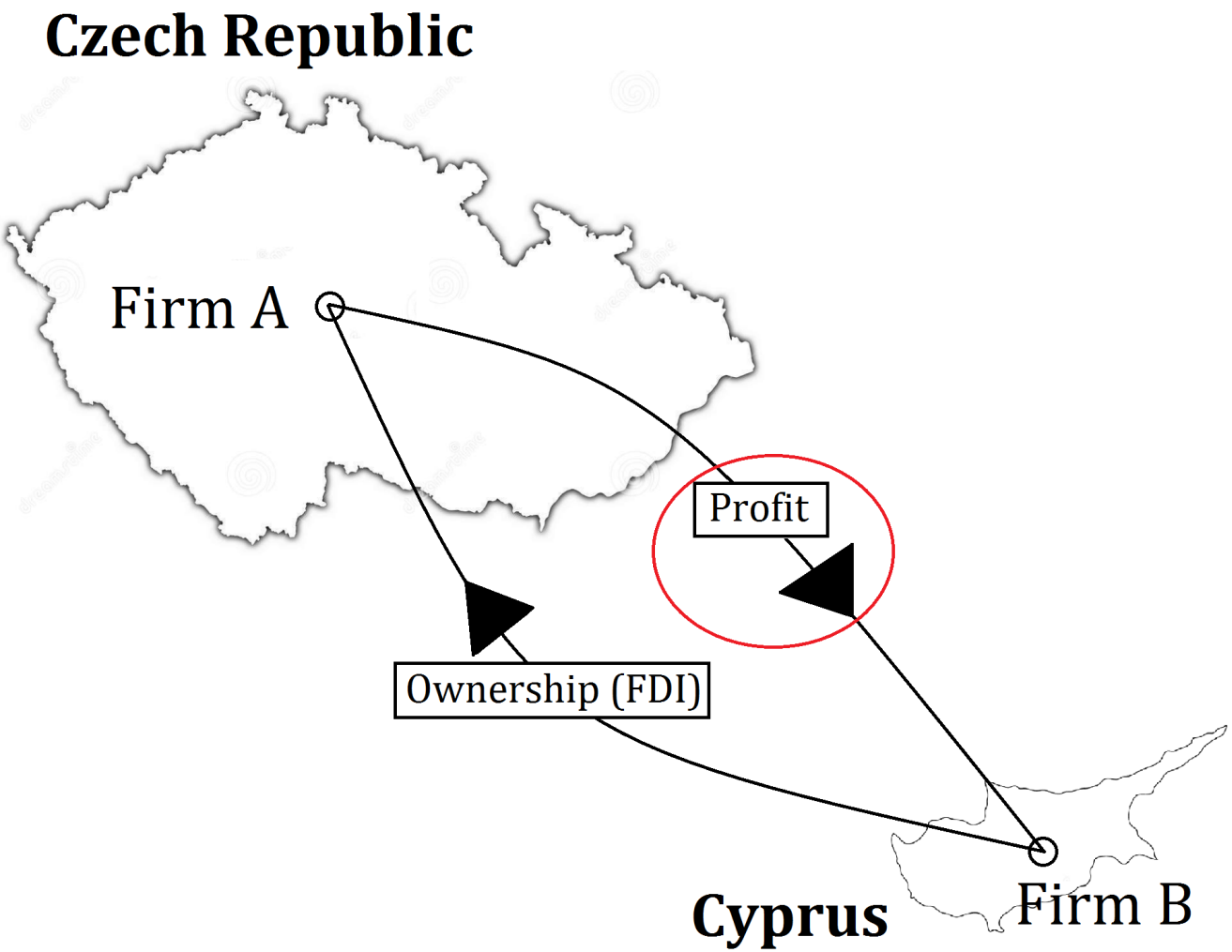

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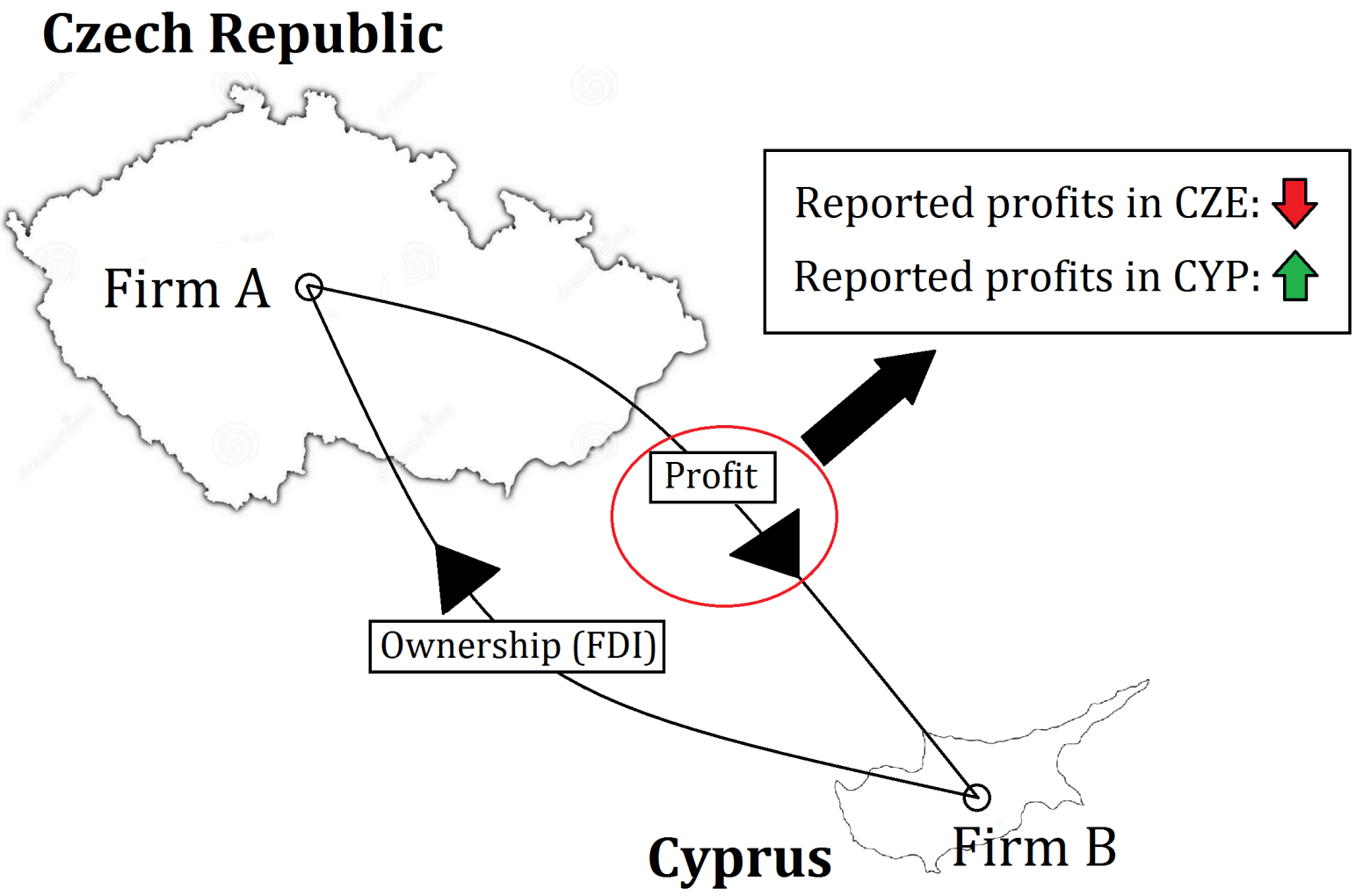
Czech Republic
Firm A
Reported profits in CZE:
Reported profits in CYP:
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Available data on FDI

- Stock
  - IMF Coordinated Direct Investment Survey: bilateral FDI stock data matrix
  - UNCTAD FDI Statistics: unilateral FDI stock

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  - IMF Coordinated Direct Investment Survey: bilateral FDI stock data matrix
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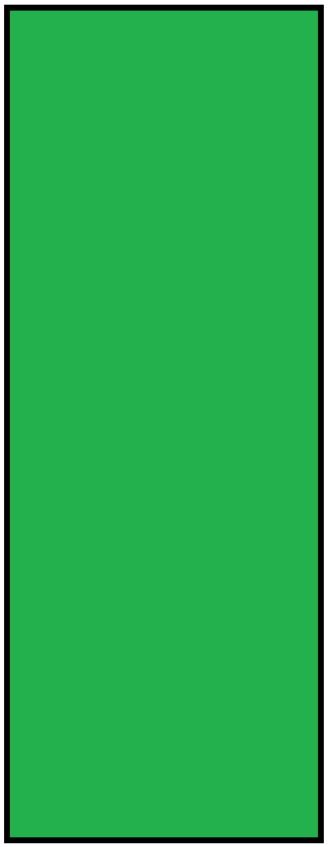
- Rate of return
  - IMF Balance of Payments: rate of return on FDI

The offshore indicator

- Definition: the share of inward FDI from "risky" countries
- Risky countries:
  - Tax havens (Cayman Islands, Jersey, Bermuda, ...)
  - Special purpose entity (SPE) enabling countries (the Netherlands, Luxembourg, ...)

The offshore indicator

FDI in country X



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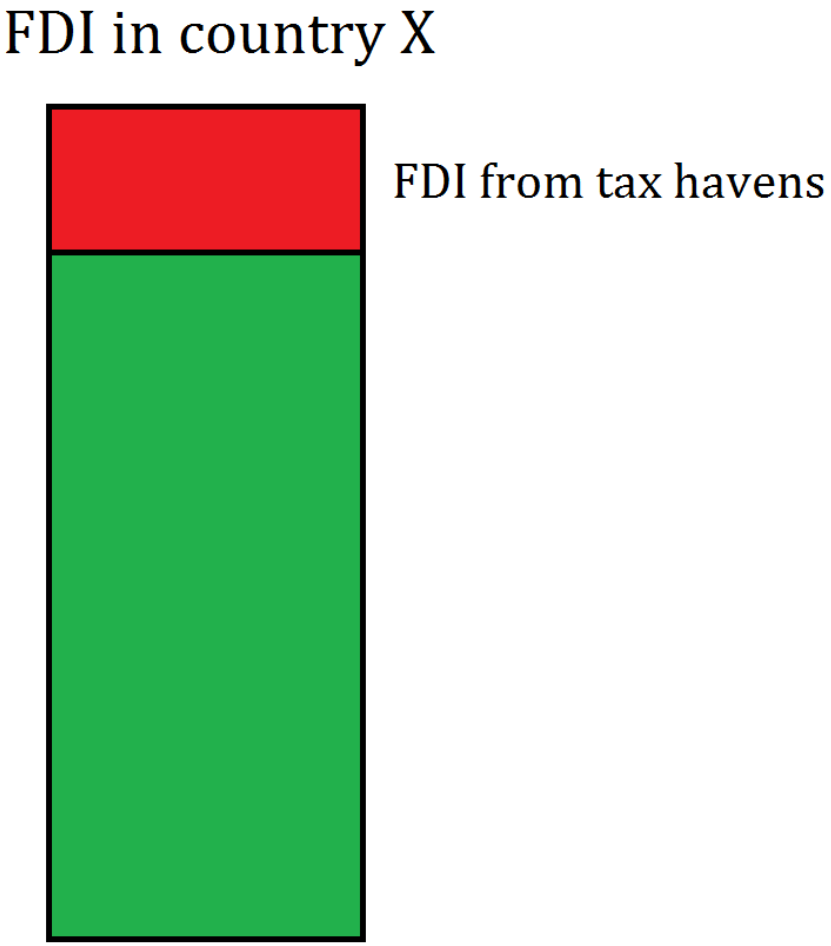

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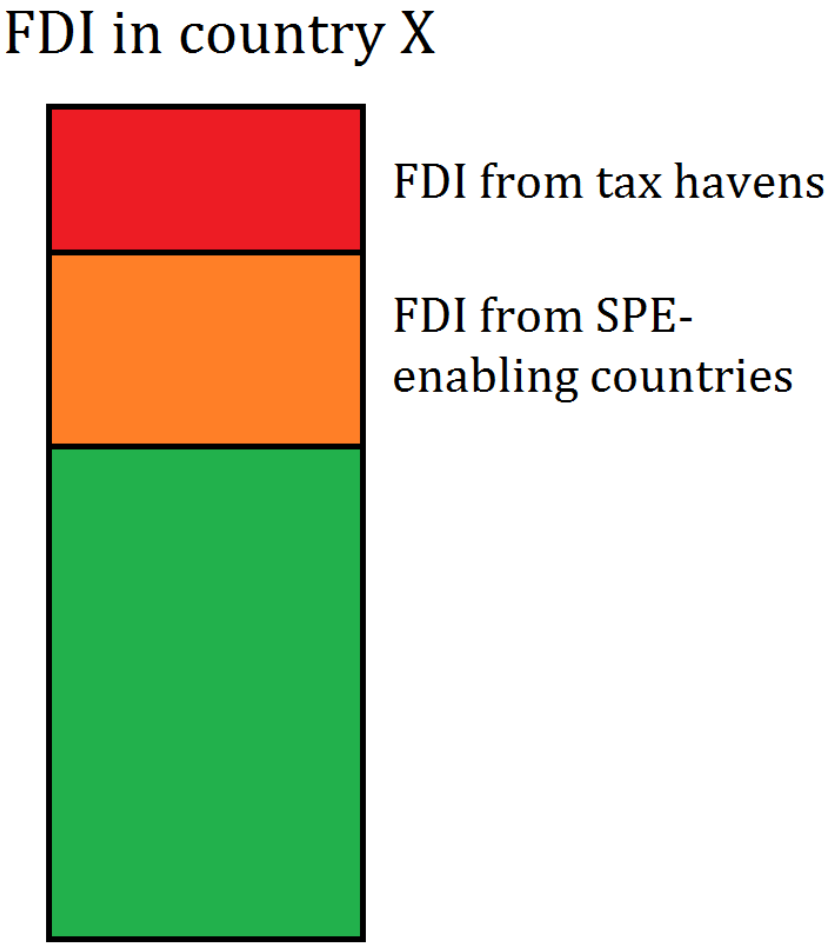

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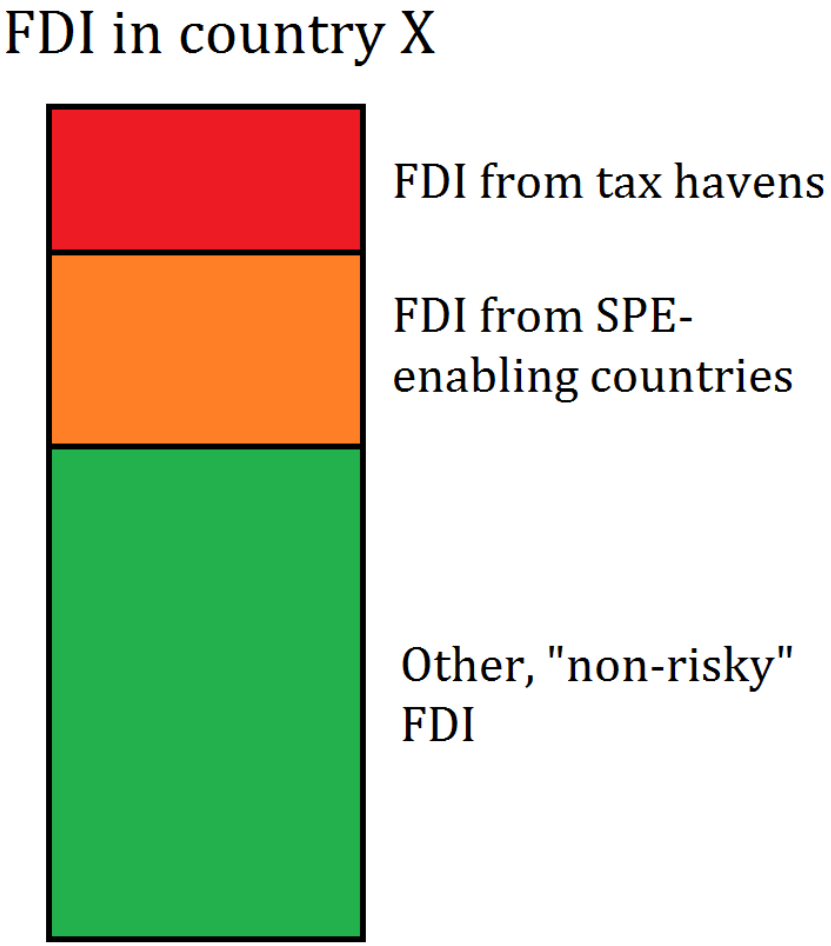

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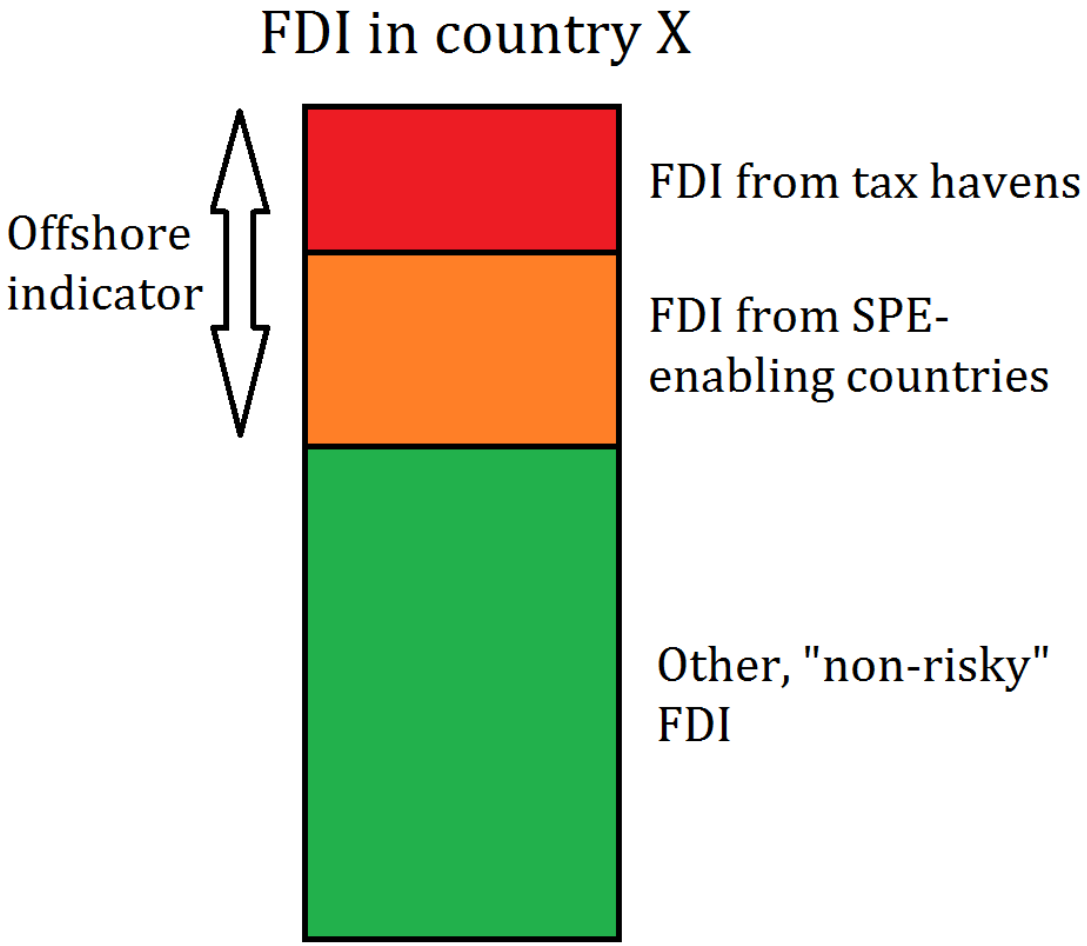
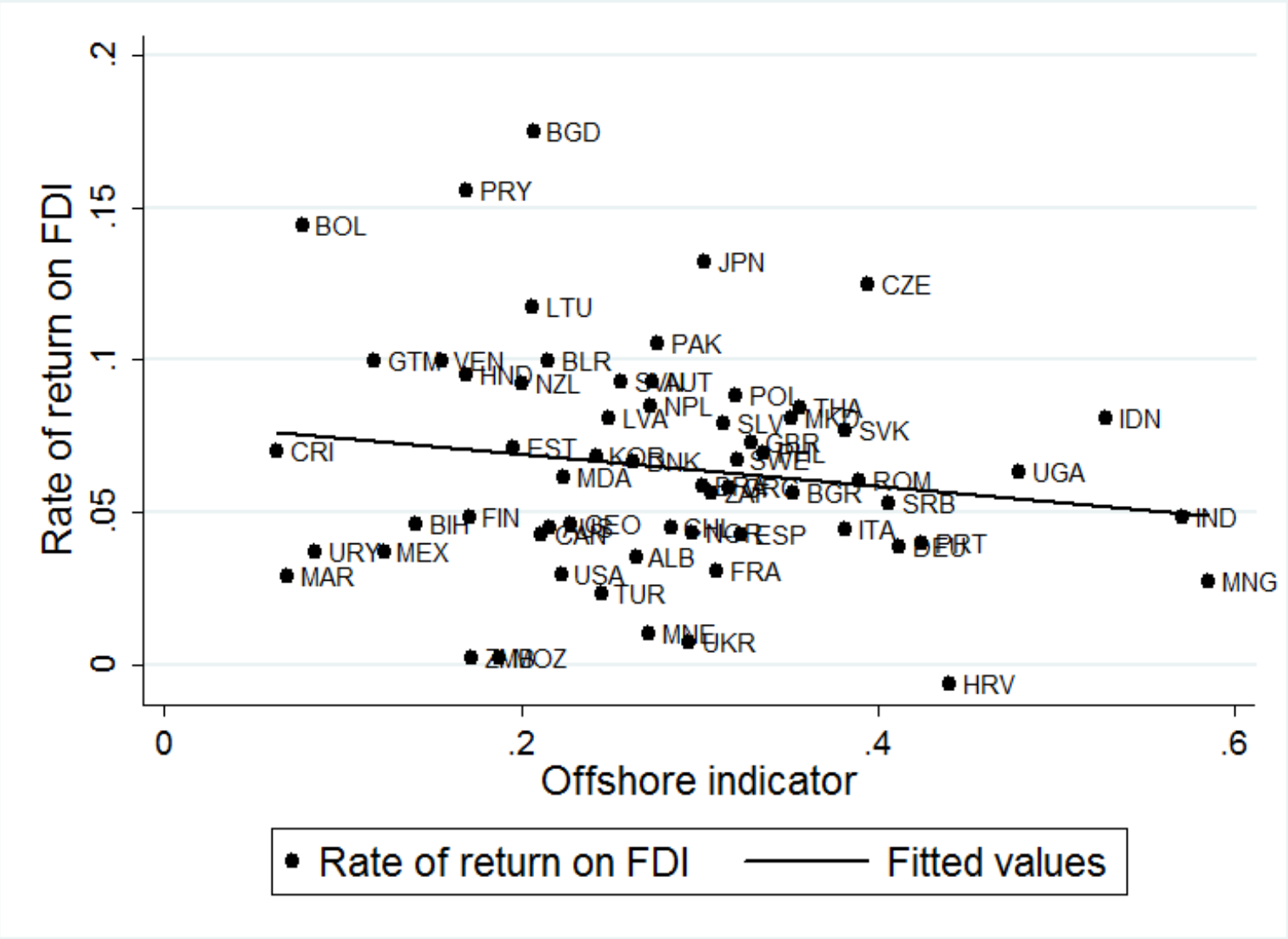


First look at the data



2. How much corporate profit is shifted and from which countries?

The profitability gap

- Definition: the difference in rate of return on FDI with respect to the expected rate of return
- We assume that this profitability gap is due to profit shifting

The profitability gap

	Rate of return	Rate of return – equity component
Offshore indicator (OI)	-0.143***	-0.115***
OI*Low income	Omitted (= base)	Omitted (= base)
OI*Lower middle income	0.229***	0.204***
OI*Upper middle income	0.285***	0.235***
OI*High income: non-OECD	0.237***	0.226**
OI*High income: OECD	0.339***	0.330***
OI*Sub-Saharan Africa	Omitted (= base)	Omitted (= base)
OI*Europe & Central Asia	-0.209***	-0.222***
OI*East Asia & Pacific	-0.152**	-0.165**
OI*Latin America & Caribbean	-0.276***	-0.264***
OI*Middle East & North Africa	-0.125*	-0.115
OI*North America	-0.133	-0.175**
OI*South Asia	-0.390***	-0.397***
Observations	509	498
R-squared	0.340	0.361

Czech Republic (and others..)

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Mozambique (and others..)

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Missing profit

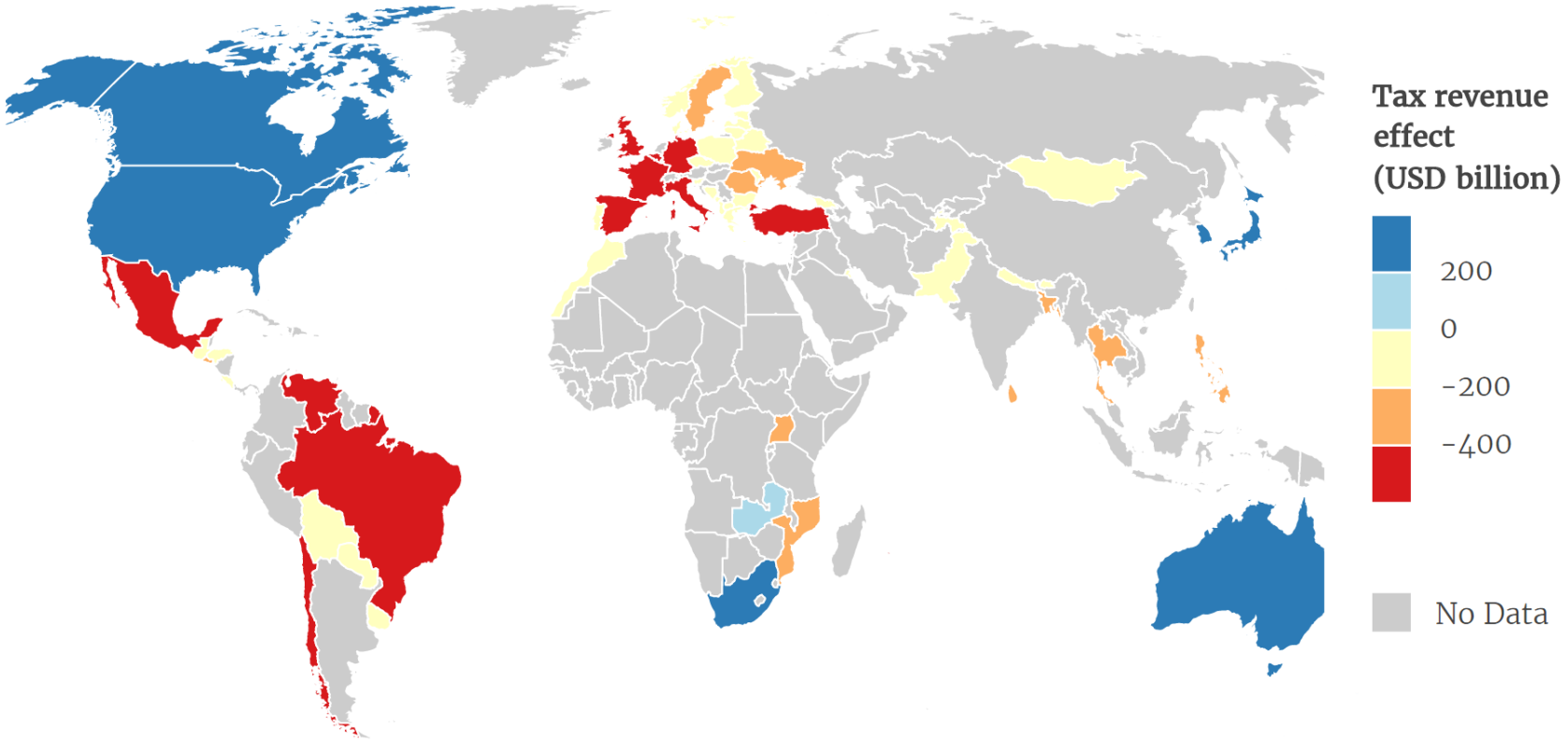
- The missing profit due to profit shifting can be easily derived from the profitability gap
- Missing profit =
  Profitability gap $*$ $\underbrace{\text{Offshore indicator} * \text{Total FDI}}_{\text{Risky FDI in USD}}$

3. How much do these countries lose on tax revenue as a result?

Tax revenue effects

- If the missing profits were not missing, how much more would countries collect in corporate tax?
- Tax revenue loss =
  Missing profit $*$ Effective corporate tax rate

Results



Results

	Rate of return		Rate of return on equity	
Country	Tax revenue losses (USD million)	Share on GDP (%)	Tax revenue losses (USD million)	Share on GDP (/1000)
Sint Maarten	23.10	6.242	19.47	5.261
Mozambique	366.08	2.441	294.51	1.963
Uganda	259.59	0.927	208.84	0.746
El Salvador	233.87	0.900	215.90	0.830
Honduras	171.11	0.856	157.97	0.790
South Africa	2,119.79	0.684	1,785.61	0.576
Zambia	124.75	0.594	128.75	0.613
Curacao	18.01	0.581	15.18	0.490
Brazil	9,551.08	0.531	10,306.46	0.573
Georgia	71.64	0.512	77.60	0.554

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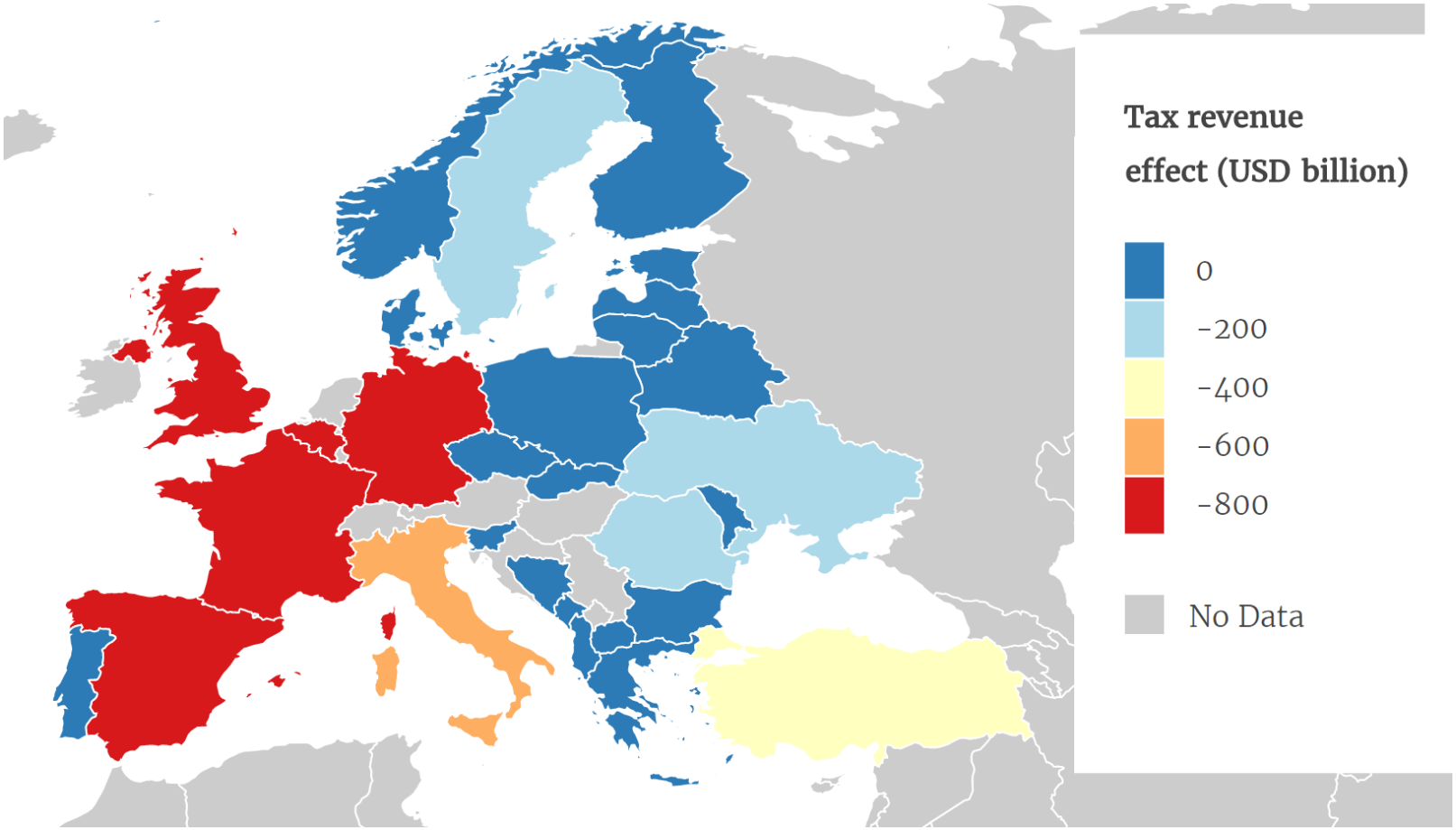

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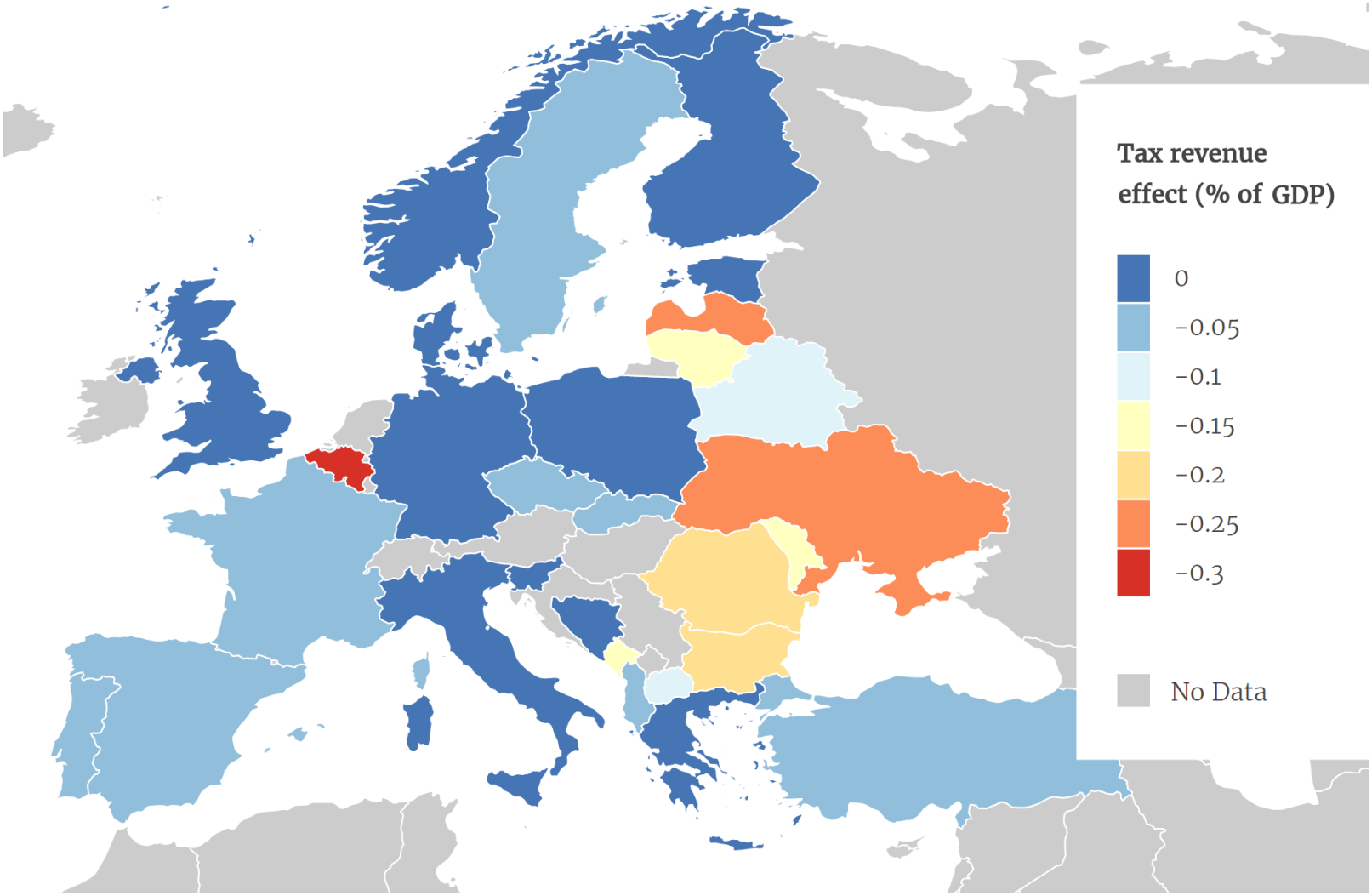

Conclusion

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- Lower income countries lose more in relative terms

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- Lower income countries lose more in relative terms
- At the same time, it is harder for lower income countries to fight back

Drawbacks

- Solvable (?)
  - Derive shares of corporate taxes (data now available in GRD)
  - Limited coverage
  - Still partly relies on a dichotomous classification of tax havens
  - Unique features of some countries (Belgium, ...)
  - Include tax treaties data
- Not solvable
  - Only practices that require a direct investment link
  - Inherently imperfect method (country-fixed or group-fixed effects, ...)
  - Effective vs. nominal corporate tax rates

Thank you!

Contact:

Miroslav Palanský

Institute of Economic Studies, Charles University, Prague

✉ miroslav.palansky@gmail.com

http://miroslavpalansky.cz/

http://coffers.eu/

@miropalansky

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References

UNCTAD. *World Investment Report 2015 - Reforming International Investment Governance*. United Nations Conference on Trade and Development, New York, USA and Geneva, Switzerland, 2015.