Externalities in International Tax Enforcement: Theory and Evidence

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Introduction

Multinational firms can avoid taxes by shifting profits from high-tax countries to low-tax countries

- ▷ Recent estimates suggest that this shifting causes significant losses of tax revenue

  (Bolwijn et al., 2018; Beer et al., 2019; Crivelli et al., 2015; Clausing, 2016; Tørsløv et al., 2020; Alvarez-Martinez et al. 2018)

- ▷ Legal framework to fight shifting to havens with no "economic substance": general anti-avoidance rules

- ▷ Ongoing ambitious policy efforts (BEPS)

Why do profit shifting to tax havens nonetheless persist?

Why do governments fail to fight profit shifting?

This paper provides a new explanation: misaligned incentives in tax authorities

- ▷ Potentially higher gain of relocating base booked in other high-tax countries than base shifted to havens
- ▷ Rational outcome: chase profits booked in other high-tax countries, not those shifted to havens
- ▷ Example of Denmark

This paper: new data and theory

1. Detailed data on international tax enforcement efforts
   - ▷ Danish data on universe of transfer price corrections
   - ▷ Global data on transfer price correction from EY, EU and OECD
   - ▷ **Main finding: the bulk of tax enforcement is directed at transactions between high-tax countries — not tax-havens**
2. Theoretical model to explain observed patterns
   - ▷ Main finding: we show how our empirical findings can be rationalized as the results of current incentives faced by tax authorities

Background: International tax enforcement in practice

Rules governing the division of profits across countries

All firms are required to price *all* internal transactions between affiliates (transfer prices) using an arm's-length principle $\rightarrow$ treat as you would a 3rd party

Common points of disputes:

- ▷ Pricing of intangible assets (>90%)
- ▷ Financing
- ▷ Headquarter services

The arm's-length principle can be hard to follow and sometimes not conceptually well-defined

A transfer pricing from the beginning to the end

1. Tax authority chooses a local affiliate to examine
2. The multinational firm presents transfer pricing documentation (>500 pages justifying current transfer pricing).
3. The tax authority decides whether to **raise** the taxable income of the multinational's local affiliate pointing to a mispriced transaction (penalties are rarely used)
4. The tax authority negotiates a final change in the taxable income of the local affiliate with the foreign country on the other side of the transaction where a corresponding change must occur
5. The firm can accept the final correction or go to court

Someone has to pay $\rightarrow$ the mutual agreement procedure

Example: The Danish tax authority corrects a transaction by a Danish entity (tax rate=22%) with a Swedish affiliate (tax rate=22%) raising the Danish tax base by €1 billion

- ▷ Then Denmark will approach Sweden to have them lower the Swedish affiliate's tax base by €1 billion
- ▷ Impact on Danish tax revenue +€220M=22% $\times$ €1Bn.
- ▷ Impact on Swedish tax revenue −€220M=-22% $\times$€1Bn.
- ▷ Impact on global tax bill = 0

Transfer price enforcement = asymmetrical

Transfer price enforcement is unlike any other form of tax enforcement by being asymmetrical

That is, the tax authority never lowers the tax base of the firm being audited

Concretely, say the tax authority in country X finds two mispriced transactions:

- ▷ Excessive payments into country X $\rightarrow$ ignored
- ▷ Excessive payments out of country X $\rightarrow$ corrected

Someone has to pay $\rightarrow$ the mutual agreement procedure

The mutual agreement procedure:

- ▷ A dispute resolution mechanism for countries to agree on a transfer price correction to avoid double taxation
- ▷ Process is lengthy (several years) but results in agreement in $>$90% of procedures
- ▷ In the EU several strict dispute resolutions mechanisms exists, including the Arbitrage Convention (forced agreement within 2 years)

Tax externalities in international transfer price enforcement

€1 corrected means the same in Denmark whether it comes from Sweden (tax rate=22%) or Bermuda (tax rate=0%)...

... but in one case the impact on the global tax bill is zero while in the other case its positive ...

... each tax authority fails to take this into account when deciding which transactions to correct

The Danish Case

Feedback from interviews with Danish tax inspectors: we mainly correct mistakes

We interviewed the Danish transfer pricing unit ...

... and we were surprised by their perception of their job

They described how they spend the bulk of their time correcting *unintentional* mistakes

Feedback from interviews with retired tax inspectors: correcting mistakes is easier

We discussed the matter with a cross-section of retired transfer pricing inspectors at the EU Commission...

. . . they agreed that the job mainly is to correct unintentional mistakes . . .

. . . and added that this was easier than to go after intentional profit shifting

Data: Danish transfer price corrections

Confidential micro-data on the universe of transfer price corrections undertaken by the Danish tax authority

Covers the years 2008 and 2014-15 (the only years for which comprehensive data is available).

Includes: Year, counterpart country, amounts

We compare the pattern of corrections with

- ▷ Available estimates of profit shifting Alvarez-Martinez et al. (2018) and Tørsløv et al. (2020)
- ▷ All firm linkages between Danish and foreign affiliates
- ▷ Size of FDI flows between Denmark and trading partners

Our data set

The auditing of transfer pricing in the case of Denmark

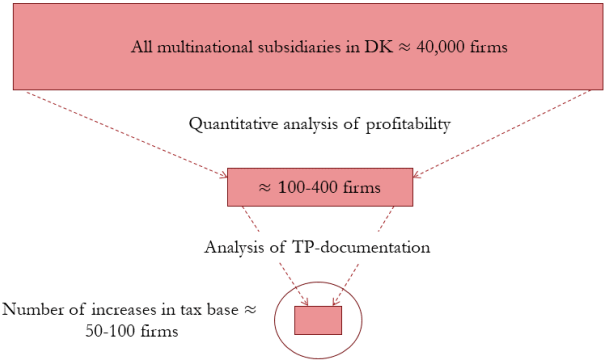

Table 1: Danish estimated profit shifting and corrections per year (2008, 2014, 2015)

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Panel a: Tax-motivated profit shifting	**All countries**	Non-tax havens	Tax havens
Amounts (€, Millions)	**2215**	-455	2670
% of tax base	**6%**	-2%	8%

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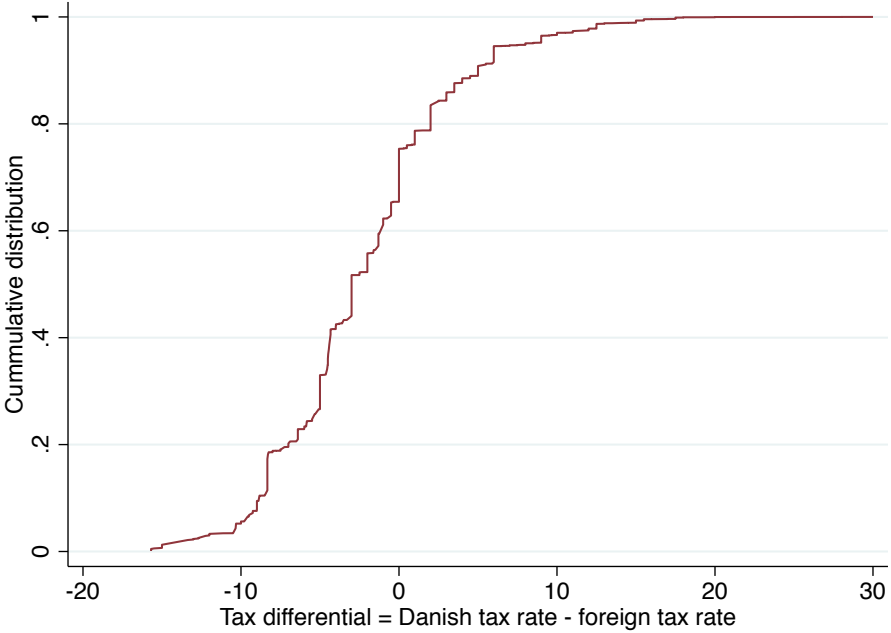
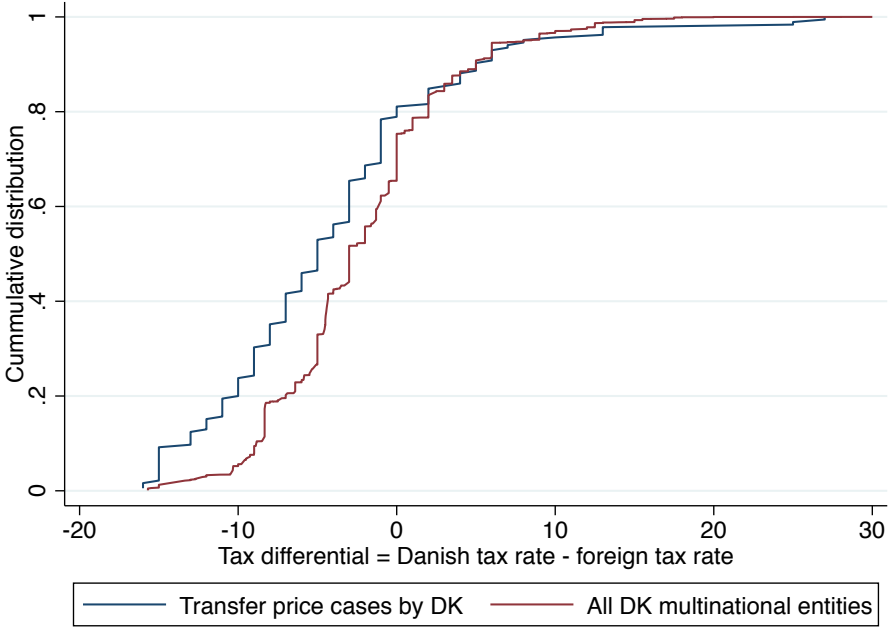
Panel c: Estimated tax revenue impact (€, Millions)			
Implied increase in tax revenue in Denmar	**315**	264	51
Implied decrease in tax revenue abroad	**333**	323	10
Net change in global tax bill	**-19**	**-59**	**41**

Distribution of tax differentials between all Danish entities and their affiliates



Tax differential in transfer price corrections



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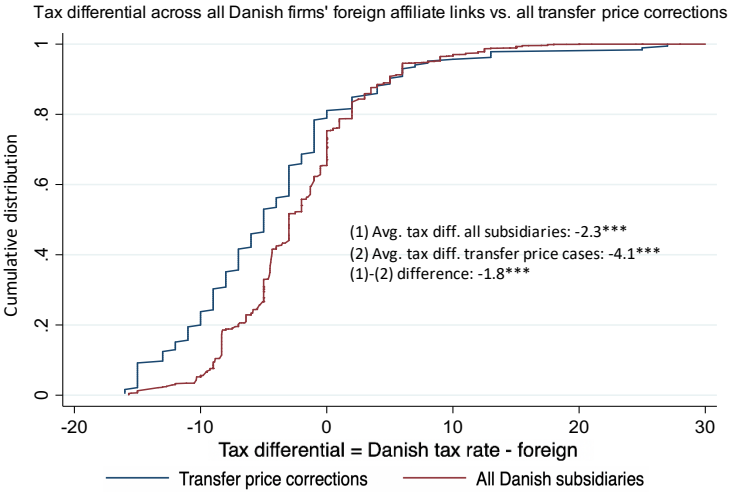


Data: Danish data on court cases

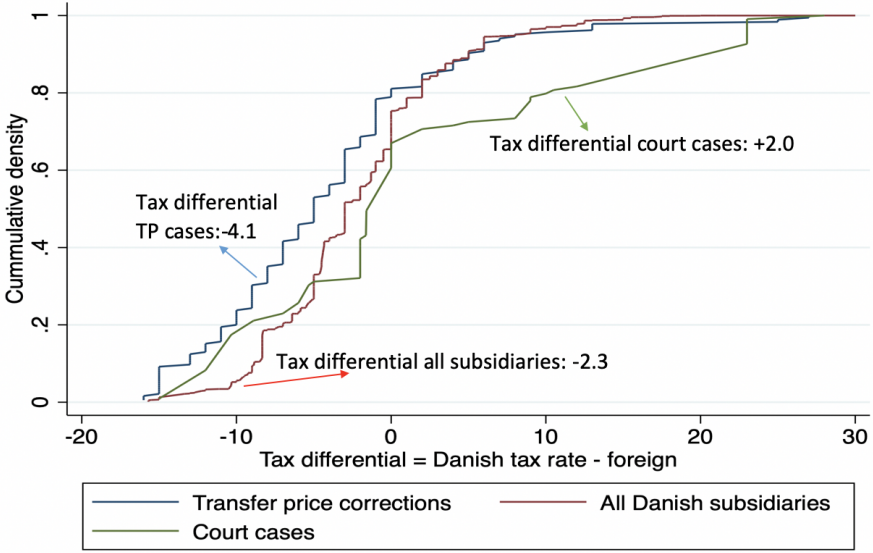
In addition to transfer price corrections we obtained a list of initiated court cases objecting to the correction (2011-2016)

Court cases are often initiated as a safety net when mutual agreement procedure is uncertain

Court cases proxy for push-back when mutual agreement procedure is certain

Note: we cannot observe final outcome or link to transfer price corrections

Tax planning firms fight back



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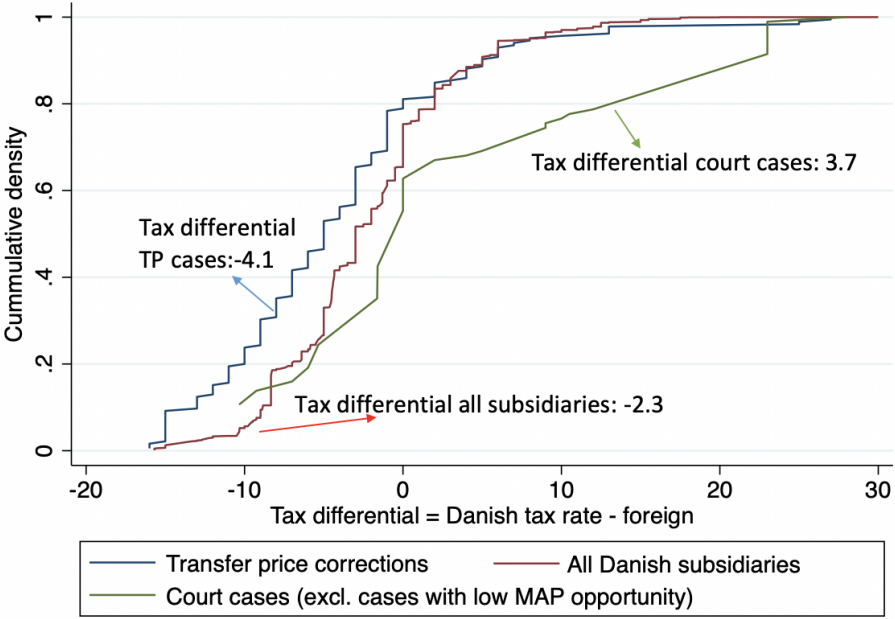
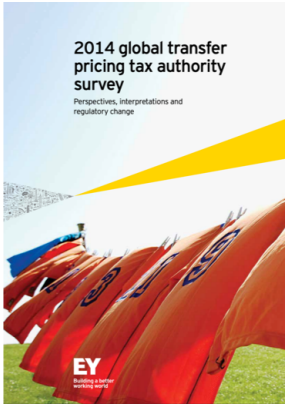


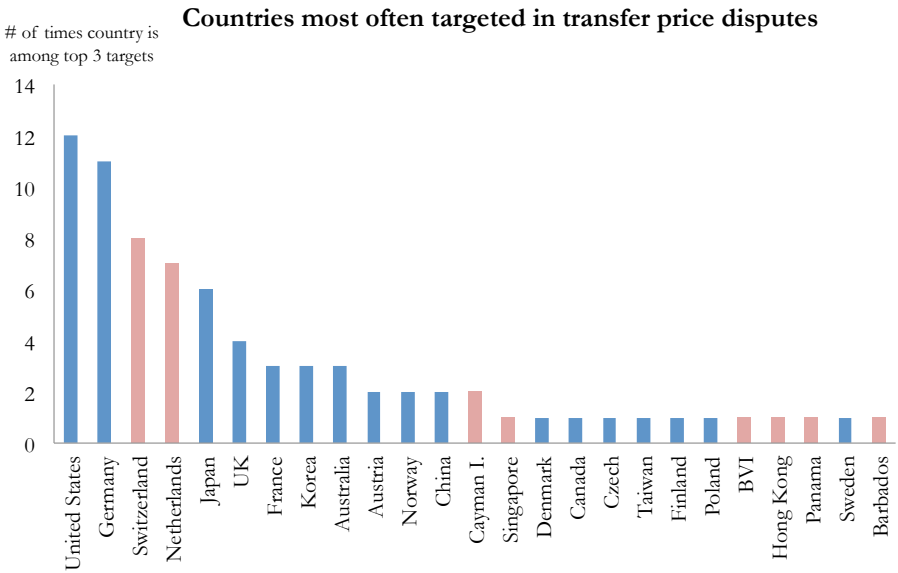
Global data

EY Global Transfer Pricing Tax Authority Survey

The accounting firm EY conducted a transfer price authority survey of 26 major economies asking which countries were the focus of their transfer price correction efforts



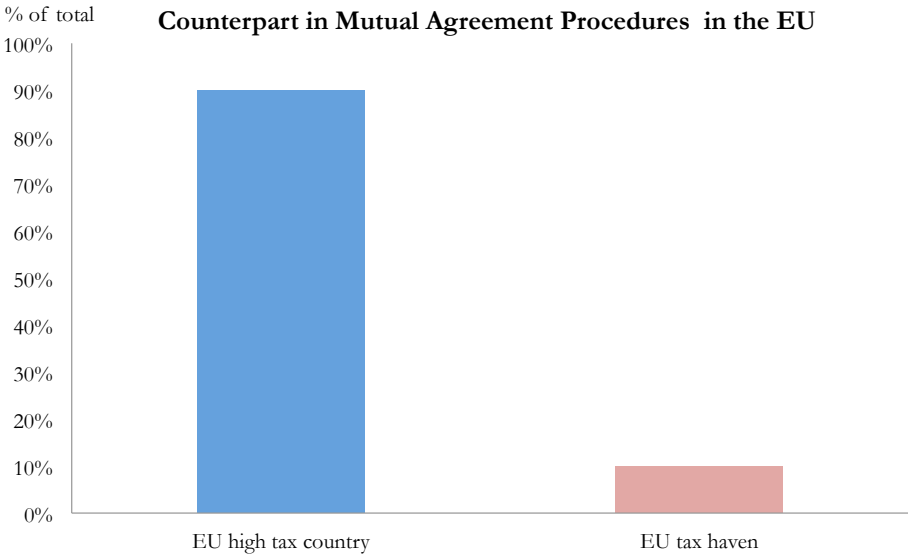
Most transfer price enforcement is against other high-tax countries



Data from EU mutual agreement procedures

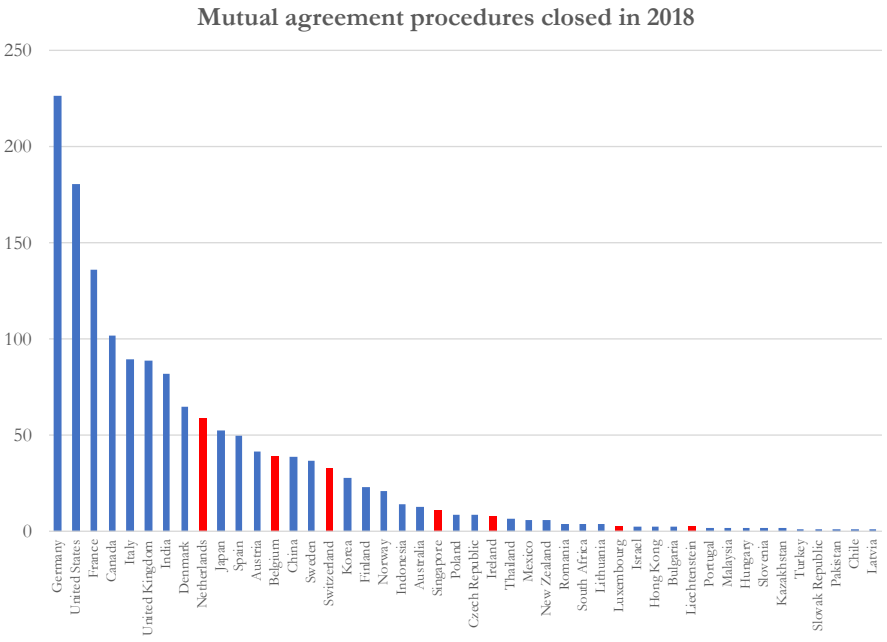
In 2011 the EU published the full matrix of mutual agreement procedural cases initiated under the Arbitrage Convention

Most mutual agreement procedures in the EU occur between high-tax countries



Data from OECD's inclusive framework on taxation

Following the OECD BEPS project 137 countries in the inclusive framework systematically report the number of mutual agreement procedures they have closed


Mutual agreement procedures closed in 2018
250
200
150
100
50
0
Germany
United States
France
Canada
Italy
United Kingdom
India
Denmark
Netherlands
Japan
Spain
Austria
Belgium
China
Sweden
Switzerland
Korea
Finland
Norway
Indonesia
Australia
Singapore
Poland
Czech Republic
Ireland
Thailand
Mexico
New Zealand
Romania
South Africa
Lithuania
Luxembourg
Israel
Hong Kong
Bulgaria
Liechtenstein
Portugal
Malaysia
Hungary
Slovenia
Kazakhstan
Turkey
Slovak Republic
Pakistan
Chile
Latvia

Theory

Rationalizing our findings

We try to explain our empirical findings in a simple model

- In the model a tax authority can correct *intentional* transfer mispricing to a low-tax country and *unintentional* transfer mispricing between high-tax countries
- As the tax authority is resource constrained, correcting *unintentional* mistakes crowds out correction of *intentional* tax-motivated transfer mispricing
- The tax-planning firm doing *intentional* profit shifting can influence the ease of conducting a correction to shift the attention of the tax authority

Main insights from model

In equilibrium, the tax authority will only do corrections of transactions with high-tax countries

- ▷ Issue is that the tax authority fails to take into account the tax externality of its corrections abroad
- ▷ Coordination of international tax enforcement between high-tax countries could make both countries better off

Key model prediction: increasing the ease of correcting transactions between high-tax countries will increase profit shifting in equilibrium

- ▷ Questions the current OECD agenda of facilitating dispute resolution between high-tax countries

The model consists of 3 countries

1. High-tax country H1 with tax rate t_{H1}
2. High-tax country H2 with tax rate t_{H2}
3. Low-tax country L with tax rate t_L

$$t_{H1} = t_{H2} >> t_L$$

The model consists of 3 agents

1. A non-tax planning firm with 2 entities: one in high-tax country H1 and the other in high-tax country H2
   - ▷ Transacts internally a number of N services at price p_i^H
   - ▷ Tries to obey the arm's-length principle but make unintentional mistakes $\epsilon_i \sim U[-b, b]$
2. A tax planning firm with 2 entities: one in high-tax country H1 and the other in low-tax country L
   - ▷ Transacts 1 service with the sole intention of maximizing profit shifting
3. A tax authority operating in high-tax country H1
   - ▷ Corrects transfer prices of the two firms with the intention of maximizing corrections under resource constraint $\bar{N}$

Correcting unintentional mistakes

If there was no tax planning firm, the tax authority would spend all its resources correcting the $\bar{N}$ largest unintentional deviations from the arm's-length price

We denote the value of the marginal correction ϵ_N

Expected tax value of marginal correction: $t_{H1} \cdot \gamma_H \cdot \epsilon_N$

- ▷ γ_H the success rate of conducting correction with high-tax country

Expected tax value of marginal correction

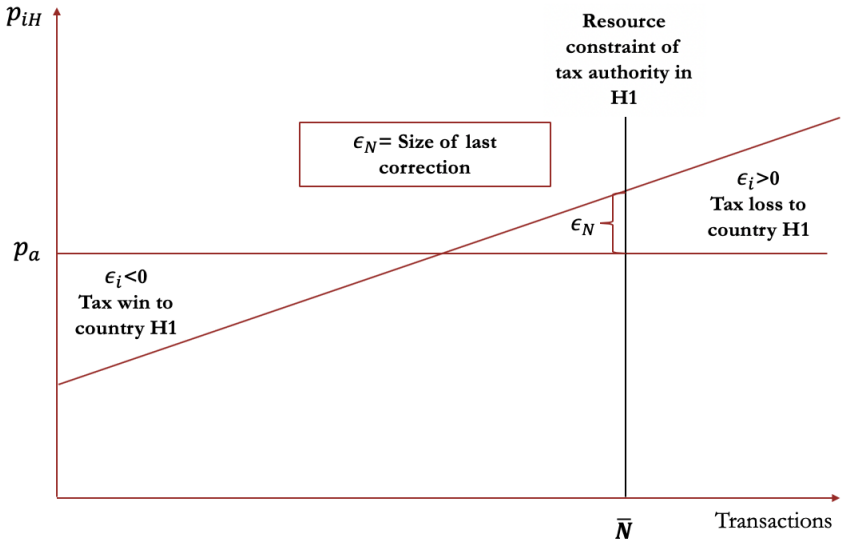
$$t_{H1} \cdot \gamma_H \cdot \epsilon_N$$

Tax rate to be applied

Success rate of correction

Size of marginal correction

Correcting unintentional transfer mispricing



Profit shifting in equilibrium

The tax planning firm maximizes profit shifting by ensuring that $t_{H1}\gamma_L \Delta p_L^* = t_{H1}\gamma_L \epsilon_N \rightarrow \Delta p_L^* = \frac{\gamma_H}{\gamma_L} \cdot \epsilon_N$

- ▷ Δp_L^*: intentional profit shifting
- ▷ $\frac{\gamma_H}{\gamma_L}$: relative ease of correcting tax planning firm
- ▷ ϵ_N: size of marginally corrected mistake

No corrections of intentional profit shifting in equilibrium

Intuition: The tax planning firm exploits the distraction of the correcting unintentional mistakes to do profit shifting under the radar of the tax authority

Tax planning firm putting up a fight

The ease of correction γ_i is endogenous to the investment I_i of the firm in the transfer price documentation and legal defense $\frac{\delta \gamma_i}{\delta I_i} < 0$

- ▷ Tax planning firm will invest in I_L as positive tax benefit while the non-tax planning firm has no tax incentive to do so
- ▷ Implies that $\frac{\gamma_H}{\gamma_L} < 0$ making it relative easier to correct the tax planning firm and exacerbating profit shifting
- ▷ Similar argument made by Becker and Davies (2014)

In the case of Denmark, a transfer price correction against tax haven is >50% more likely to go to court

The equilibrium outcome is sub-optimal in maximizing tax revenue

1. Corrections of the non-planning firm deliver no change in global tax revenue

2. Corrections of the tax-planning firm does

1+2 $\rightarrow$ Global tax revenue could increase if high-tax countries cooperated $\rightarrow$ both high-tax countries could be made better off by cooperating

High-tax countries may enter into wasteful arm's race

High-tax countries can invest in their ability to do transfer price corrections (through training, better data, recruitment) at a cost C

If the outcome of this investment implies that $\frac{\Delta\gamma_H}{\gamma_H} = \frac{\Delta\gamma_L}{\gamma_L}$
$\rightarrow$ no impact on *intentional* profit shifting

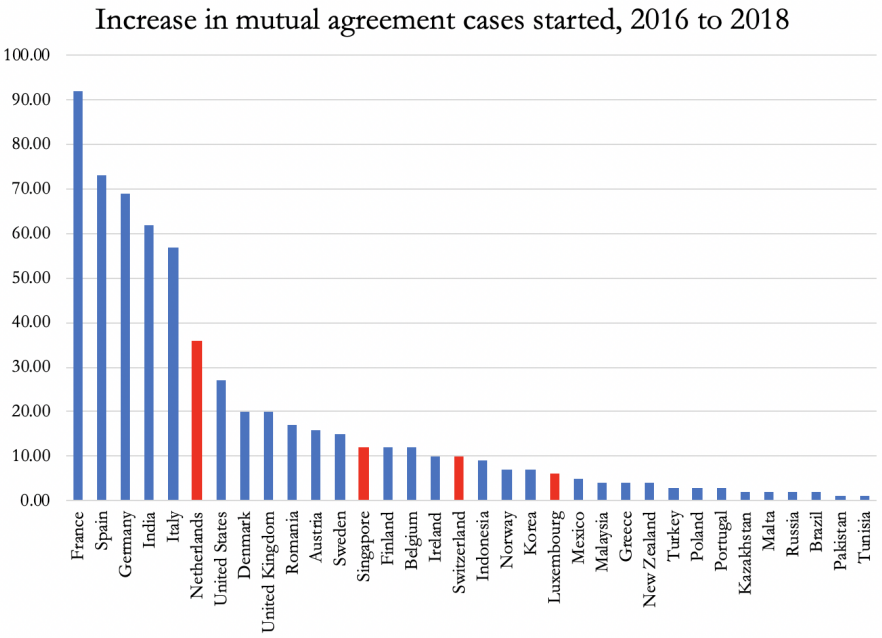
If the outcome of this investment implies that $\frac{\Delta\gamma_H}{\gamma_H} > \frac{\Delta\gamma_L}{\gamma_L}$
$\rightarrow$ increase in *intentional* profit shifting

Unintended consequences of dispute facilitation

OECS BEPS Action 14 contains a commitment by 137 jurisdictions that they resolve treaty-related disputes in a timely, effective and efficient manner

This has led to a marked increase in mutual agreement procedures (initiated and closed) in high-tax countries not seen in low-tax countries

Suggests $\frac{\Delta\gamma_H}{\gamma_H} > \frac{\Delta\gamma_L}{\gamma_L} \rightarrow$ crowding out enforcement of *intentional* profit shifting?


Increase in mutual agreement cases started, 2016 to 2018
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
France
Spain
Germany
India
Italy
Netherlands
United States
Denmark
United Kingdom
Romania
Austria
Sweden
Singapore
Finland
Belgium
Ireland
Switzerland
Indonesia
Norway
Korea
Luxembourg
Mexico
Malaysia
Greece
New Zealand
Turkey
Poland
Portugal
Kazakhstan
Malta
Russia
Brazil
Pakistan
Tunisia

Summary of findings

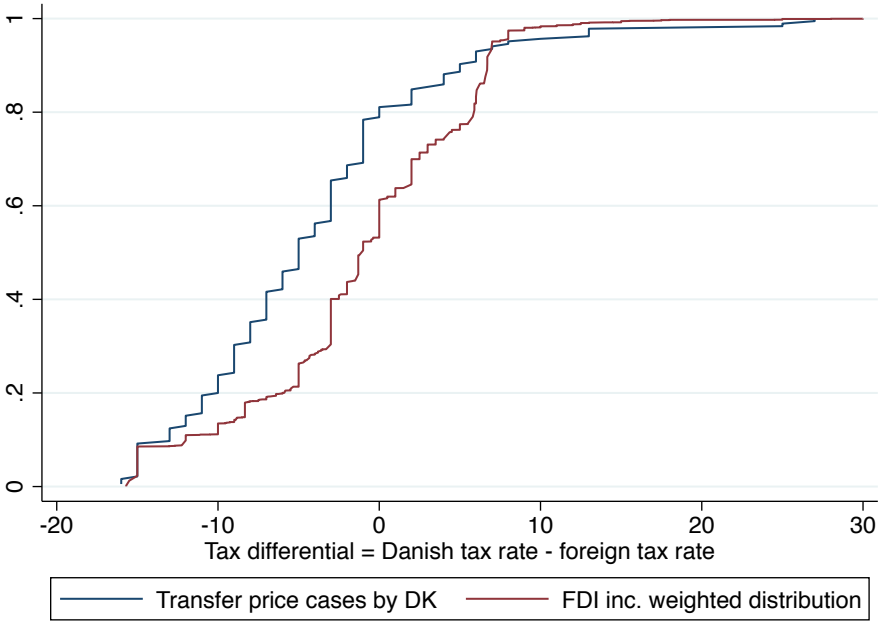
Global international tax enforcement focuses on correcting transactions between high-tax countries

This outcome is inefficient in maximizing tax collections and could be improved by coordination

Current efforts in the OECD to promote dispute resolution might further exacerbate the issue

Backup slides

Tax differential distribution in transfer pricing cases vs FDI income flows



Transfer pricing specialists in the private vs government sector