Economics of Globalization

Sébastien Laffitte
Sciences Po Saint-Germain-en-Laye

Last weeks

- Multinational firms are key actors of today's globalization.
  - Few, but account for a large share of value-added, innovation, employment, etc.
  - Their size give them corporate power.
- Countries try to regulate their activity.
  - Favorable policies to attract MNEs: risk of regulatory competition.
  - Not Favourable: countries want to limit the negative impacts of multinational firms.
- Increase in inequalities since $\approx$ 1980's associated with globalization.

This week

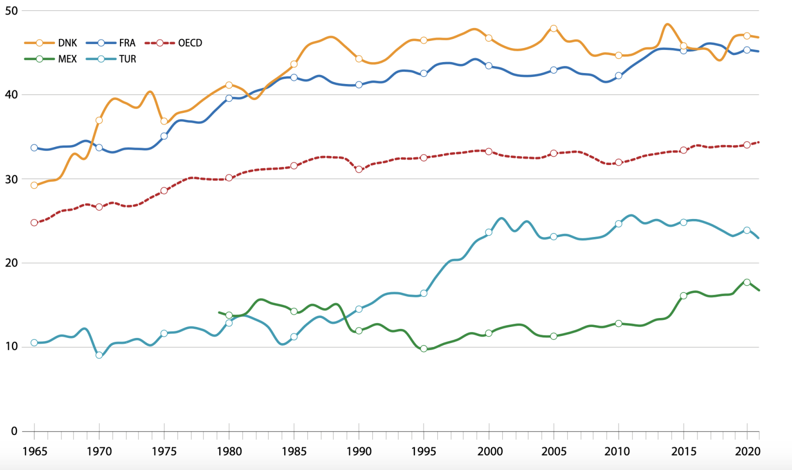
- International taxation is an important area of multilateral MNE regulation.
  - Current negotiations at OECD, reform incoming in the EU.
- But international taxation goes beyond MNEs: international taxation is a central topic of today's globalization
  - Tax policy is at the center of everyday life and a key activity of modern states.
  - It shapes wealth-creation processes and inequalities.
  - It is deeply affected by globalization.

Why taxing?

- “The history of state revenue production is the history of the evolution of the state.” (Levi, 1989)
- Key economic and social policy tool of modern states.
  - From 6.6% of GDP in 1830’ to 33.4% in OECD countries.
  - From trade taxes to income taxes.
- Taxation finance public goods.
  - Taxation has been developed during war time: need of public spending (Tilly, 1993).
  - Democratization and modern states modernization also helped developing taxation.
  - Increase in the demand for public spending from the 19th century (education, infrastructures, social spending).

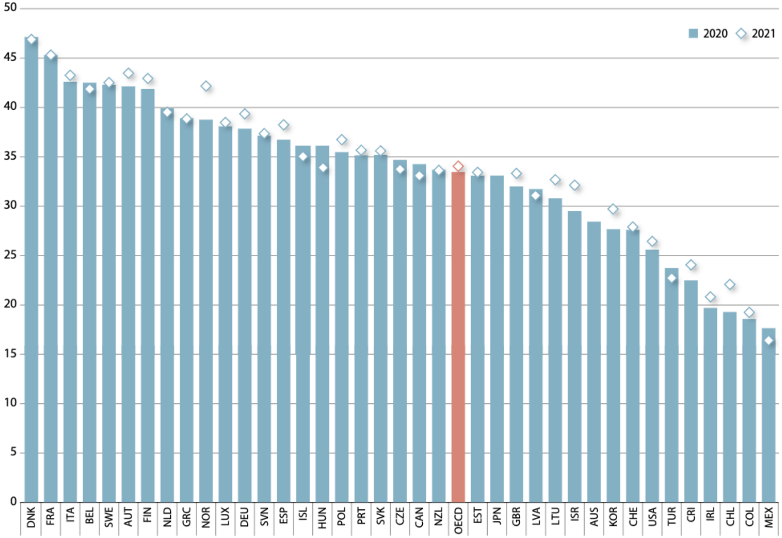
Why taxing?

Figure 1. **Trends in tax-to-GDP ratios, 1965-2021p (as % of GDP)**

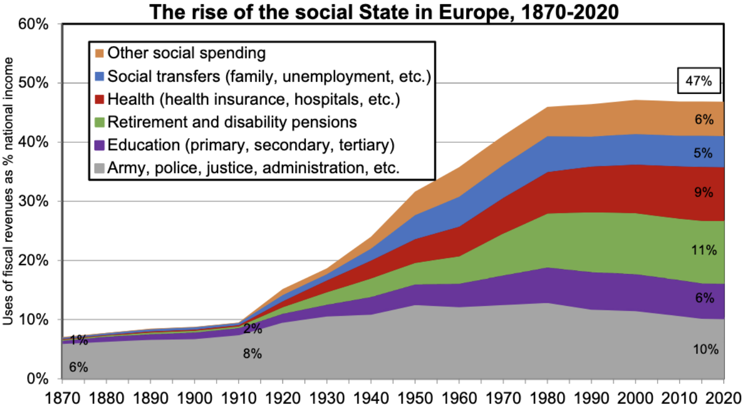


Why taxing?

Figure 4. **Tax-to-GDP ratios, 2020 and 2021p (% of GDP)**



Note: Preliminary data for 2021 were not available for Australia and Japan.



Interpretation. In 2020, fiscal revenues represented 47% of national income on average in Western Europe et were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% for health; 5% for social transfers (other than pensions); 6% for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues.

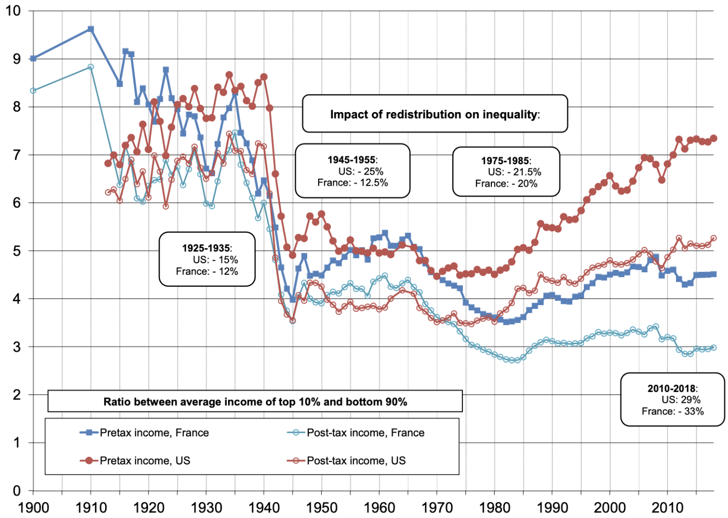
Note. The evolution depicted here is the average of Germany, France, Britain and Sweden. **Sources and séries**: see piketty.pse.ens.fr/equality (figure 19)

Why taxing?

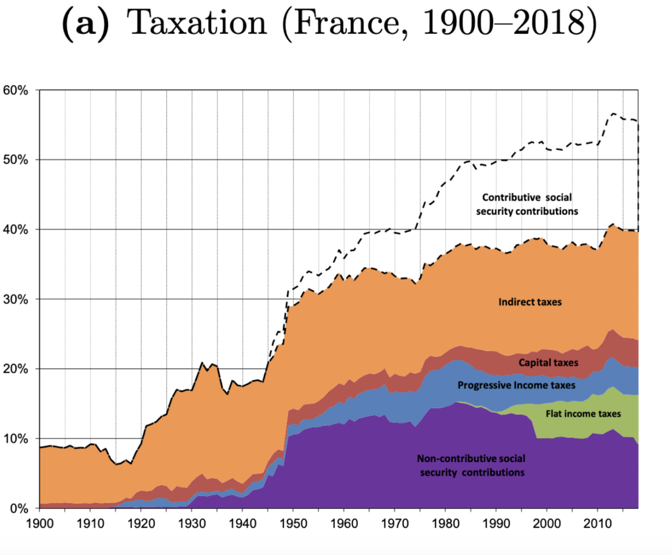
- Equity motives.
  - Bozio et al. (2023): taxation in France increase by 50% the income share of the bottom 50 and decrease by 25% the income share of the top 10%
- Efficiency motives: public spending allow to compensate for private under-investment in public goods (Smith, 1764 , Barro, 1990).
- Central trade-off to taxation: efficiency-equity trade-off.

Why taxing?

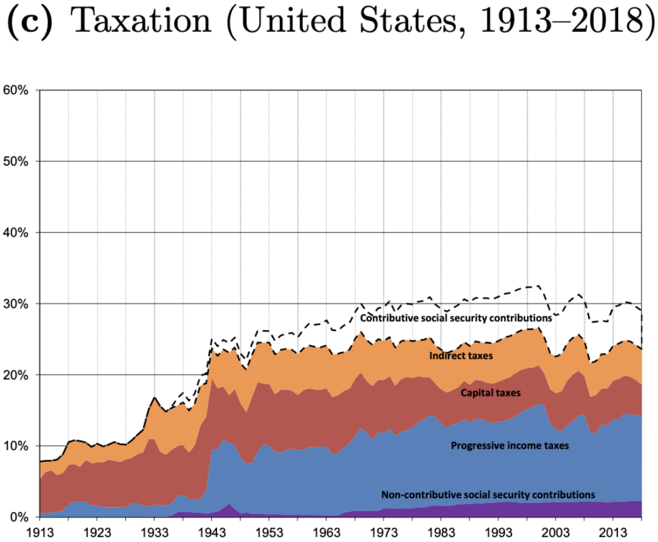
(b) Ratio T10/B90



Why taxing?


(a) Taxation (France, 1900–2018)
60%
50%
40%
30%
20%
10%
0%
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
Contributive social security contributions
Indirect taxes
Capital taxes
Progressive Income taxes
Flat income taxes
Non-contributive social security contributions

Why taxing?


(c) Taxation (United States, 1913–2018)
60%
50%
40%
30%
20%
10%
0%
1913
1923
1933
1943
1953
1963
1973
1983
1993
2003
2013
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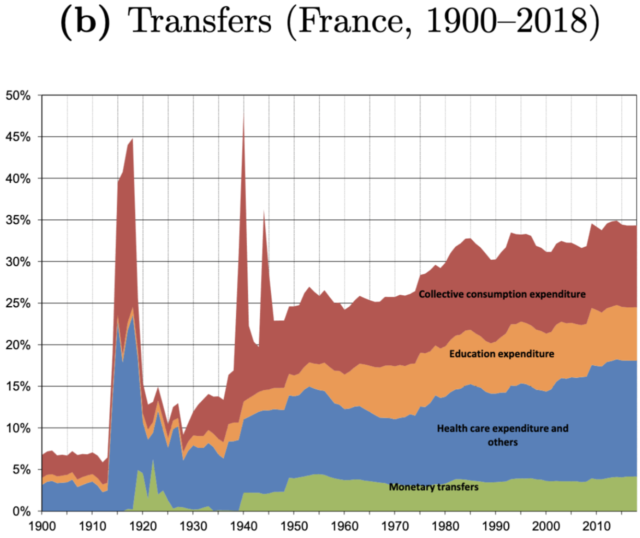
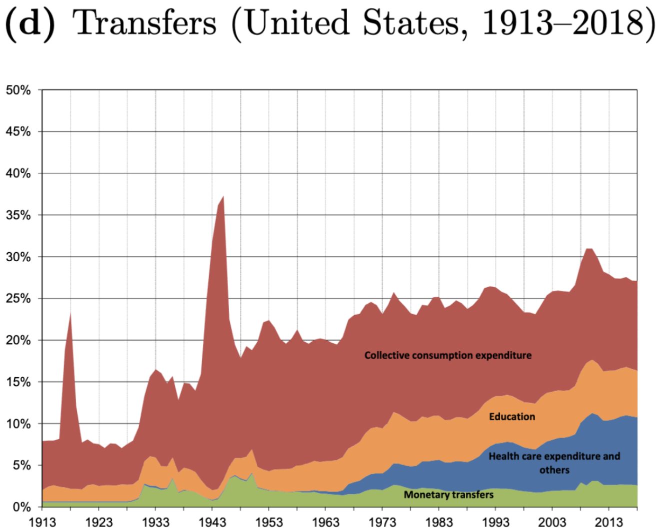
Why taxing?


(b) Transfers (France, 1900–2018)
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
Collective consumption expenditure
Education expenditure
Health care expenditure and others
Monetary transfers

Why taxing?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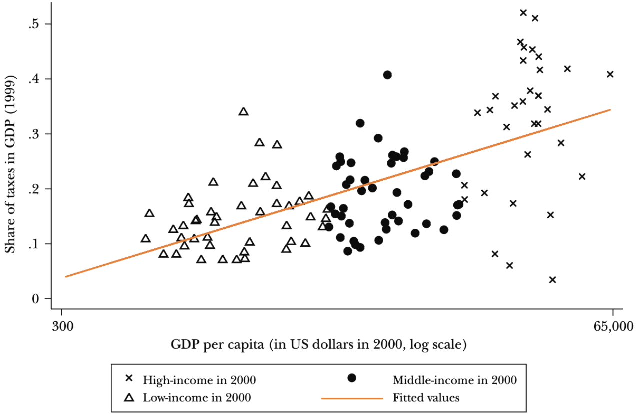
Why taxing?

Modern Taxation

- Large base
  - Pre-modern tax have small base, easily observable (*e.g.* tax on doors and windows in France from 1798 to 1926).
- Administrative complexity
  - Need of a lot of information to observe revenues and transactions.
  - Need a large tax administration.
- Redistributive motives
  - Public spending and progressive schedule.
- First target individuals, then enterprises.
  - Corporate taxation is a back-stop to individual taxation.
  - Without it, individual could keep their revenues into corporations without distributing them.

Why taxing

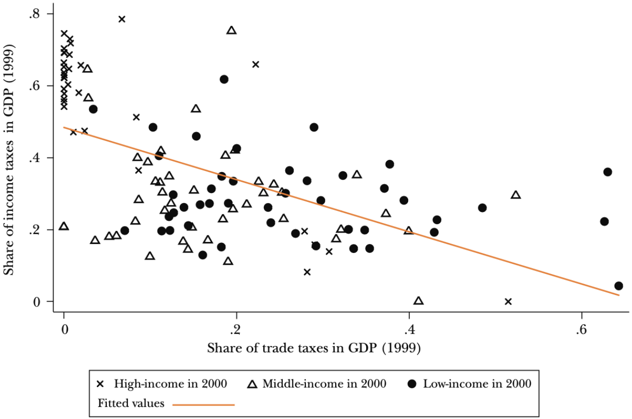
Figure 2
Country-level Taxes and Income



Notes and Sources: Figure 2 plots the total tax take as a share of GDP (from Baunsgaard and Keen 2005) against the log of GDP per capita (from the Penn World Tables), both measured around the year 2000. The outliers visible in the lower right corner are the three oil states of Bahrein, Kuwait, and Oman.

Why taxing

Figure 4
Income Taxes versus Trade Taxes, for Countries with Different Levels of Income



Sources: Baunsgaard and Keen (2005) and the Penn World Tables.
Note: Figure 4 plots the share of income taxes in GDP on the y-axis versus the share of trade taxes in GDP on the x-axis (as of 1999) for countries that were high-, middle-, or low-income in 2000.

Why taxing

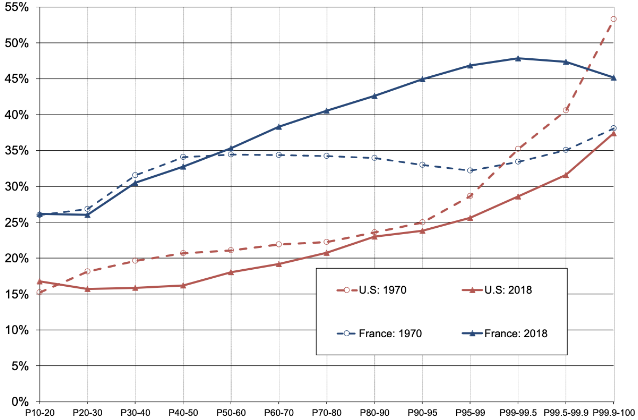


Figure 6 – Taxes paid by pre-tax income group, 1970 vs 2018

Taxation and Globalization

- How should globalization affect taxation?
  - Progressive taxation may serve as a mean to mitigate the inequality-increasing effects of international trade (**inequality-reducing**).
  - Globalization increase the (tax) mobility of capital and high-earners, limiting the opportunities to tax them (**inequality-increasing**).
- In developing countries: globalization shifts activity from small informal businesses to bigger formal business which increases the taxation of capital overall.
- Which effect dominates?

Taxation and Globalization

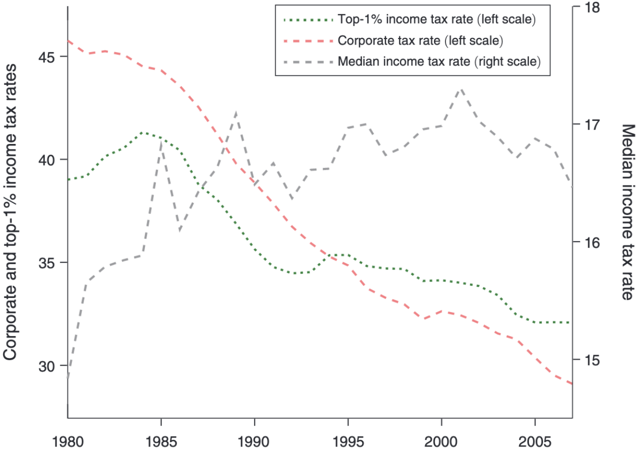
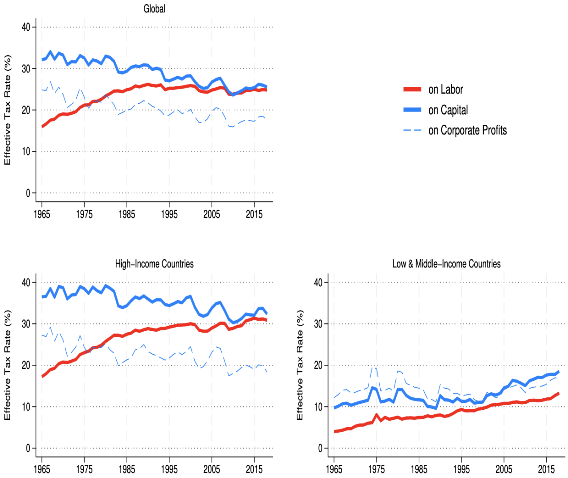


FIGURE 1. CORPORATE TAX RATES AND LABOR INCOME TAX RATES FOR TOP-1 PERCENT AND MEDIAN WORKERS IN 65 ECONOMIES OVER 1980–2007

Taxation and Globalization

Figure 1: Effective Taxation of Capital and Labor



Challenges posed by international taxation

- Two main challenges:
  - When economic activity is mobile, countries are tempted by tax competition to attract firms and individuals.
  - When economic agents have economic activity in several countries, how to allocate taxing rights?
    - The goal is to avoid no taxation or double taxation.

Challenges posed by international taxation

- Tax havens appear in this context.
  - Countries that set up an *offshore legal architecture* offering low tax rates and legal and administrative secrecy.
    - Goes beyond tax rates.
  - Goal is not to attract the *real* activity but only assets and revenues coming from foreign activities.

Principles of International Taxation

- Personal Income Tax:
  - Generally levied on the domestic and foreign income of its residents (*residence principle*) and the domestic income of non-resident (*source principle*).
  - Double taxation can arise. The source principle generally has a priority. Double tax relief is done through *exemption* or *tax credit*.

Principles of International Taxation

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  - Double taxation can arise. The source principle generally has a priority. Double tax relief is done through *exemption* or *tax credit*.
- Corporate Income Tax:
  - The *territorial* (or *source*) principle dominates. Few examples of residence-based tax system (*e.g.* USA before 2017).

  ⟶ Firms are taxed where they have their economic activity, where they produce. Principle of taxing firms where they "create value".
    - Is it true that value creation is always in the source country?

⟶ The international tax system is organized through bilateral tax treaties, setting up priorities between source and residence countries for a variety of incomes.

The role of mobility across borders

Tax competition

- Tax competition is a relatively recent phenomenon.
    - Correlated with the rise of globalization and the increasing mobility of firms and individuals.
- Each country is incentivized to decrease its tax rate to attract the economic activity.
    - Tax rates are set below their optimal level.
    - Erodes countries' tax revenues.
- Linked to the source-based system of taxation.
    - For instance when taxation depends purely on residence, the location of profits does not matter.
- New forms of tax competition, more targeted appear *e.g.* schemes for foreigners, high-wealth individuals, *etc.*

The role of mobility across borders

Tax competition

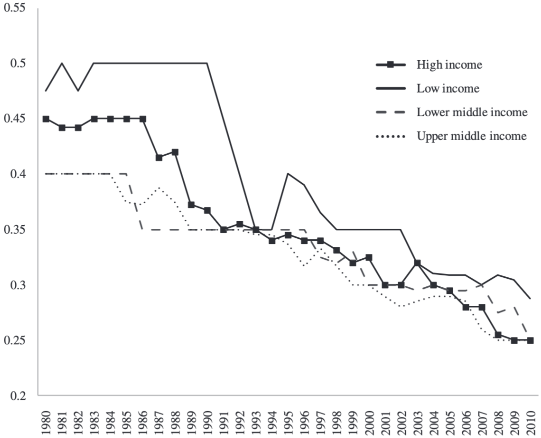

Figure 1 Median statutory corporate tax rates by income group, 1980–2010. *Note*: Tax rates from KPMG tax rates online and IMF compilation. Countries classified by income, at each date, into four equal-sized groups.

Tax avoidance and tax evasion

- **Tax avoidance** generally refers to aggressive tax optimization practices, legally in the gray zone.
  - Typically refers to the use of tax havens by MNEs
  - Prominent example: profit shifting.
- **Tax evasion** generally refers to illegal practices to locate its assets and revenues in tax havens.
  - Typically refers to the use of tax havens by individuals.

Profit Shifting by Multinational Firms

- Corporate taxes need to be paid where the profits are made.
    - To define where profits are made, the economists of the Society of Nations decided in the 30' the rule of transfer pricing.

$\longrightarrow$ Internal prices should be set at the same level as the arm length's transaction.

    - This is the Arm's Lenght Principle (ALP).
    - Different ways of shifting profits to tax havens:
        - Manipulating intra-group imports/exports.
        - Intra-group borrowing.
        - Locating intangibles in tax havens.

Profit Shifting by Multinational Firms

Profit Shifting by Multinational Firms

- The use of tax havens affects tax revenues.
  - In 2016, 40% of U.S. profits were located in tax havens.
  - $350bn shifted per year to tax havens over the period 2010-2014 (Ferrari et al., 2023).
  - Around $1bn shifted in 2019 corresponding to $250bn of tax losses (Wier and Zucman, 2023).
- Countries might compensate the revenue loss through other taxes (*e.g.* VAT) or debt.

Profit Shifting by Multinational Firms

- One methodology to estimate profit shifting (Torslov, Wier and Zucman, 2022):
  - Estimate the *excess profits* in tax havens.
  - *Excess profits* are profits that would not have been located there if the country was not a tax haven $\longrightarrow$ we need a benchmark!
  - Idea: Compare in tax havens the profitability of local firms and of foreign firms.
    - Local firms in tax havens have few tax avoidance incentives.
    - Their profitability reflect their *true* profitability while the profitability of multinational firms is biased by profits shifting.

Profit Shifting by Multinational Firms

Consequences (Torslov et al., 2023)

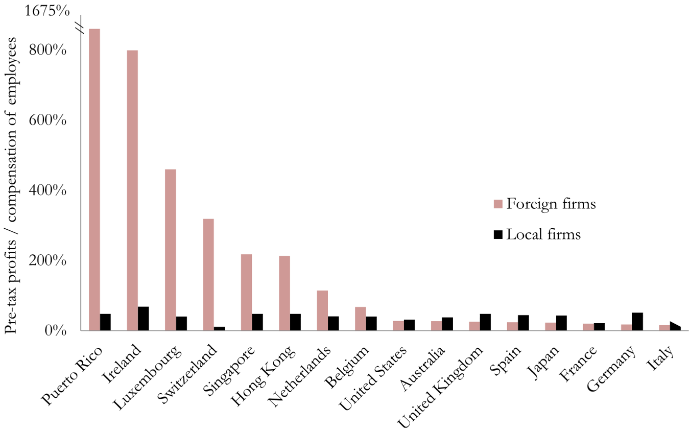

FIGURE 4
Profitability in foreign vs. local firms

Profit Shifting by Multinational Firms

Consequences (Torslov et al., 2023)

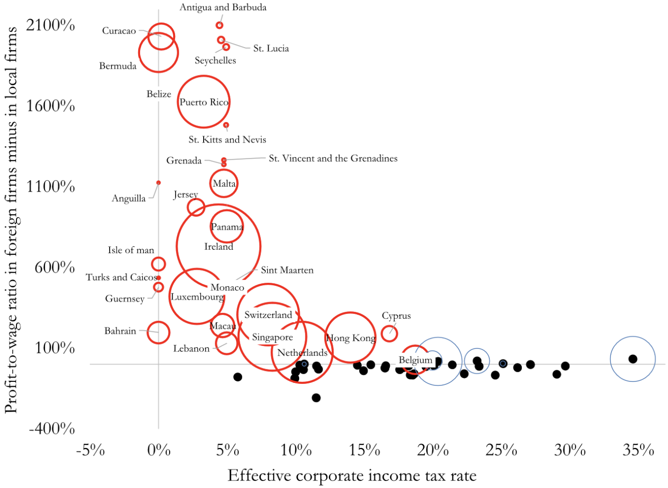

FIGURE 2

Excess profitability vs. effective tax rates

Profit Shifting by Multinational Firms

Consequences (Torslov et al., 2023)

- An example with Ireland in 2015:

Profit Shifting by Multinational Firms

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Profit Shifting by Multinational Firms

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Profit Shifting by Multinational Firms

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- $\Pi_L = 32 \quad w_L = 47 \quad \frac{\Pi_L}{w_L} = 68\%$

Profit Shifting by Multinational Firms

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- $\Pi_F = 116$

Profit Shifting by Multinational Firms

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- Applying local firm profitability to foreign firms:

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Profit Shifting by Multinational Firms

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- Profit shifted in Ireland is approximated by the difference between observed profits and *normal* profits:

Profit Shifting by Multinational Firms

Consequences (Torslov et al., 2023)

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$$PS_{IRL} = \underbrace{\Pi_F}_{\textit{Observed Profits}} - \underbrace{w_F \times \frac{\Pi_L}{w_L}}_{\textit{Normal Profits}} = 116 - 10.2 = 105.8$$

Profit Shifting by Multinational Firms

Consequences (Ferrari et al., 2023)

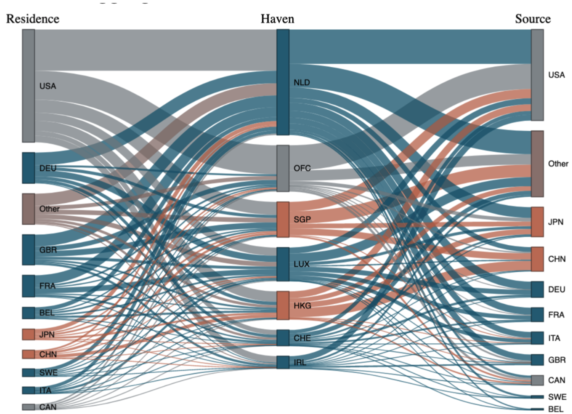


Figure 1: Profit shifting shares from residence-country i to h (PS_{ih}/PS_i) and from source-country l to h (χ_{lh}).

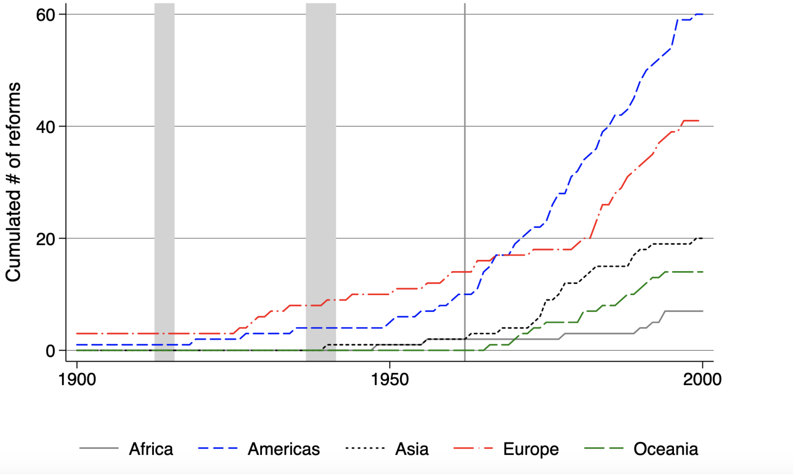
Tax havens

History

- Countries that make tad avoidance scheme possible.
- Rise of tax havens in the 20th century with the development of modern taxation.
- Tax havens chose their specialization (individuals, corporations, exempt companies, offshore banking, *etc.*)
- Gains of becoming tax haven: tax revenues not collected by other countries.
- Country characteristics also matter.
  - Tax havens are small countries.
  - They include many former and current UK colonies.

Tax havens

History



Tax Havens

Consequences

- Affect economic measurement
  - GDP is underestimated, productivity is overestimated, FDI, balance of payments., *etc.*
- Used by elites to capture revenues or avoid regulations.
  - Evidence that petro-rents and foreign development aid are diverted by elites from developing countries to tax havens .
- Perceptions of government and elites.
- Inequalities.
  - Tax havens are mostly used by large firms and rich individuals $\longrightarrow$ tend to increase inequalities
  - Tax havens affect the measurement of inequalities: rich people appear less rich that what they really are in official statistics.

Tax havens

Consequences

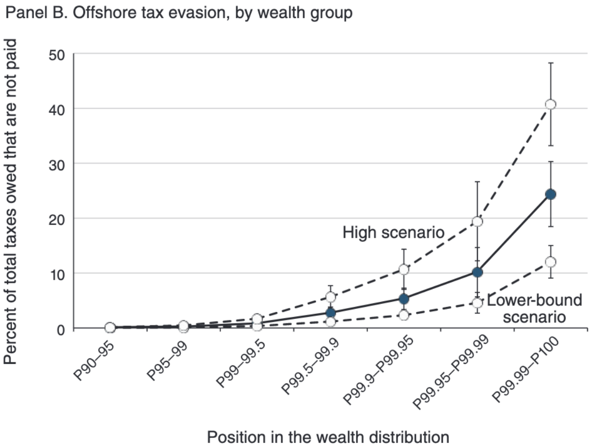


Figure 4. The Distribution of Offshore Wealth and Offshore Tax Evasion

Tax havens

Consequences (Alstadsaeter et al.)

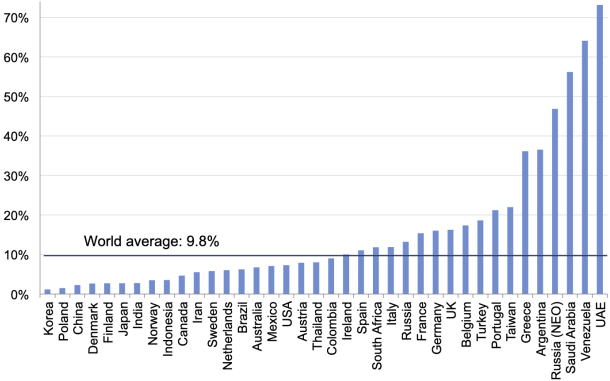


Fig. 5. Offshore wealth, % of GDP. Notes: This figure shows the amount of household wealth owned offshore as a percentage of GDP, in 2007. The sample includes all the world's countries with more than $200 billion in GDP in 2007. Offshore wealth is estimated by allocating the global offshore wealth estimated by Zucman (2013), on the basis of the geographical distribution of bilateral cross-border bank deposits in offshore centers—see text. For Russia, we also report an alternative estimate ("Russia (NEO)") obtained by cumulating net errors and omissions in the balance of payment, as estimated in Novokmet et al. (2017). Source: Appendix Table A.3.

Reforms

- Collective action problem: solutions need to be found at a larger scale than country-level $\longrightarrow$ need of coordination, risk of free-riding.
- The OECD has a leadership in terms of international taxation.
  - First treaty model in the 60'.
  - Work on tax havens since 2000'.
    - BEPS project against Base Erosion and Profit Shifting: automatic exchange of information (CRS), country by country reporting, etc.
    - Two-Pillar reform of international taxation.

Reforms

OECD: Two-Pillars reform

- Double objective:
  - Limit the use of tax havens by firms.
  - Adapt the tax system to modern economic activity, in particular digital models.
    - Triggered digital taxes (or "GAFA" taxes) and retaliatory responses.
    - Need to find a more sustainable and cooperative system.

Reforms

OECD: Two-Pillars reform

- Pillar 1: Allocate a share of largest MNE profits to destination markets.
    - The taxing rights on this profits are allocated following the destination markets of the companies.
    - *e.g.* if Facebook has 10% of its users in France, France has the right to tax 10% of these profits, independent of where they are located.
    - Kills profit shifting.
    - Only the $\approx$ 100 largest firms are included in this mechanism.
    - Adoption blocked by the U.S.

Reforms

OECD: Two-Pillars reform

- Pïllar 2: Creates a minimum tax rate of 15%.
  - If a French company has an effective tax rate of 5% in Ireland, France has the right to tax the Irish profits of this firm at the rate of 10% (Minimum tax rate - Effective tax rate = 15-5).
  - We expect tax havens to raise their tax rates to 15% so that they can benefit from additional tax revenues.
- This reform might be Pareto improving because tax havens will increase their tax rate and obtain potentially larger revenues and non-haven will gain in tax revenues.
- Information-intensive reform that needs global cooperation.
- Implementation from 2024.

Conclusion

- International Taxation is a key area of global policy-making.
- It's one of the rare areas where global progress, despite not being sufficient, are made.
- Is is at the core of many globalization challenges:
  - FDI and multinational firms
  - Migration
  - Redistribution
  - Regulatory competition
  - Global cooperation
  - Global policies
  - Environment
  - *etc.*