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# **Digital Taxation and National Measures: the Case of the Digital Service Tax**

**Francesca Gastaldi**  
**Italian PBO and University of Rome**  
**'Sapienza'**

**Alberto Zanardi**  
**Italian PBO and University of Bologna**

# Outline

- Illustrate main issues and recent policy measures to tax digital economy. In particular, the Digital Services Tax (DST) proposed by the EC and the DST-type tax unilaterally adopted by Italy
- Provide a simplified general framework to predict the possible tax strategies that could be adopted by single countries
- Empirically apply this framework to some MSs by using data on online advertising markets
- Evaluate the consistency of these empirical predictions with actual tax measures under implementation (or announced) by MSs

# Taxing digital economy: main issues

- In a tax competition regime, the digital economy exacerbates the problem of tax base erosion, offering opportunities for elusive practices above those already exploited by the traditional economy.
- The digital economy raises significant problems for direct tax design as for the definition of taxable value, tax base apportionment and withdrawal arrangements

# Taxing digital economy: main issues

- For a long time, a widespread system of bilateral and multilateral conventional agreement based on **PE definition** and **arm's length principle** has guaranteed a tax base distribution between the residence and the source countries, avoiding double taxation and conflicts related to the taxing rights.

# Taxing digital economy: main issues

- With digital economy three main issues:
  1. it is possible to disregard any physical presence in the destination countries of the goods. The line between “trade with”(export) and “trade in”(production) no more clearly defined;
  2. A large part of profits comes from intangibles (difficult to value)
    1. Free collection of data is source of value

# Taxing digital economy: main issues

Conventional models are no longer effective.

An international tax conflict may arise.

Problems can be identified both in the country of residence of the companies, mainly the US and China, and in the destination countries of digital goods and services, mainly Europe and the rest of the world.

# Taxing digital economy: policy options

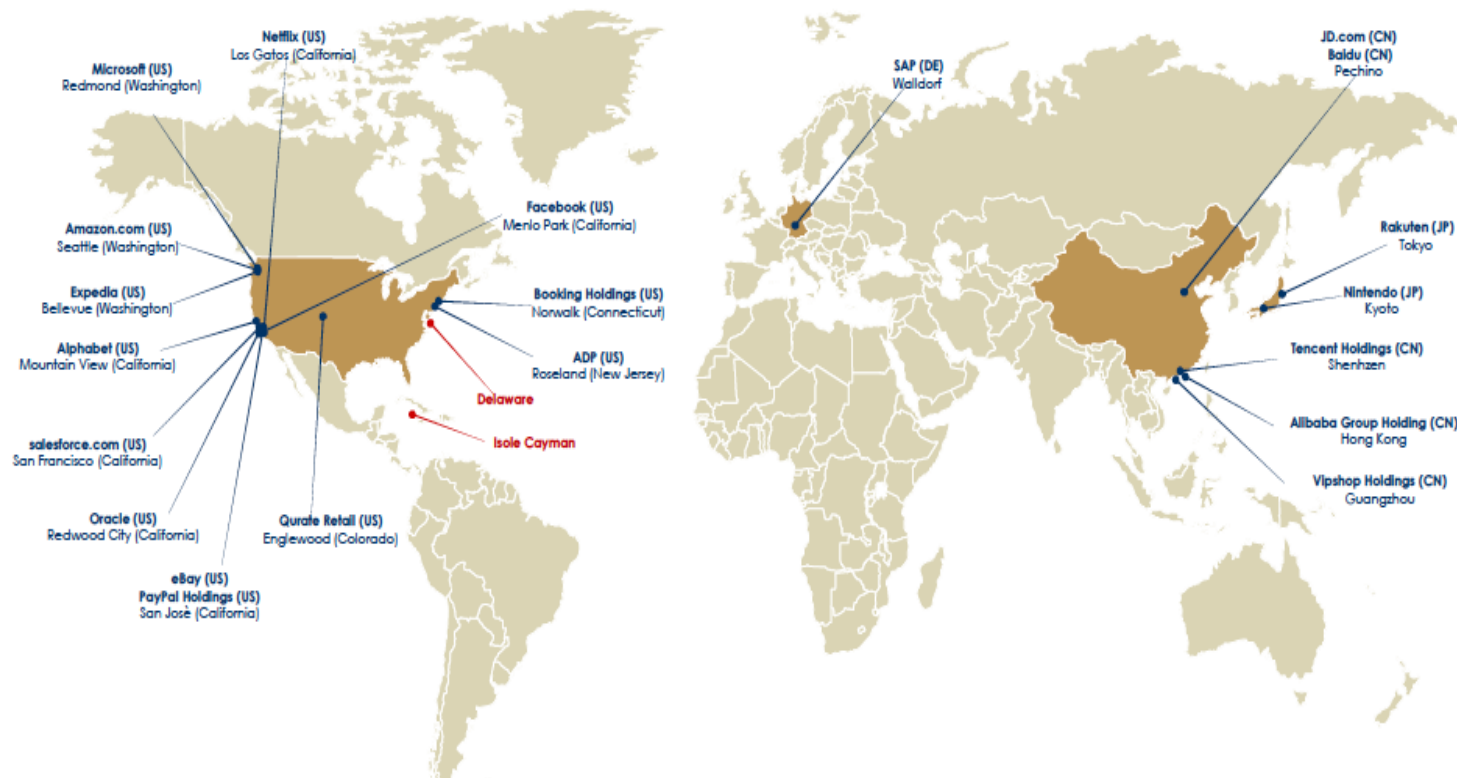
In **resident countries** digital multinationals reduce taxes on corporate income by exploiting transfer mechanisms and shifting taxable bases to countries with favourable tax regimes

- the country of residence is the country of 'origin' of Intellectual Property
- advantage of tax base deductions and tax credits
- These companies are unlikely to receive dividends from subsidiaries, which are also set up on the basis of legal institutions that also allow them to avoid the application of any CFC schemes.

**A) Tax conflict between the USA and Europe and the rest of the world**

# WEBSOFT: WHERE?

## Principal executive offices



- ♦ Evidente la concentrazione delle WebSoft **negli USA (13 companies)**, in particolare negli Stati di California e Washington
- ♦ Segue l'Oriente con **Cina (5 aziende)** e **Giappone (2 aziende)**; in coda l'Europa (solo la **Germania** vanta una software house di dimensioni rilevanti, la SAP)
- ♦ **Sede legale:** tutte le cinesi hanno la sede legale nelle Isole Cayman e tutte le statunitensi (ad eccezione della Microsoft) hanno la sede legale nello stato del Delaware



## Taxing digital economy: main issues

- In **source countries**, where users of digital platforms and networks are central for value creation, digital multinationals:
  - a. PE can be established where it is possible to minimize tax burden
  - b. without a PE, profit taxation can be avoided in other countries

B) Tax conflict arises where Global MNC revenue (from a range of countries), is highly concentrated in few countries (mainly Ireland, in Europe): formal allocation of revenues is different from the revenue-originating allocation

# Taxing digital economy: main issues

Market power and **taxing power** tends to be highly concentrated and more difficult to achieve a cooperative solutions

*as a mix of digitalisation of the economy and aggressive tax planning and harmful tax competition (driven by tax competition regime?)*

# Taxing digital economy: policy options

- Theoretical level => three possible tax solutions
- a) an **income tax**, even in the absence of a PE, for companies that operate predominantly in digital market;
- b) a **withholding tax** on revenues from digital transactions;
- c) An **excise tax** on the consumption of digital goods.

## *Income tax*

- I) a new nexus (PE not satisfactory)
- II) MNC income allocation among countries
- I) revenue collection.

*Income tax*

## **I) New nexus**

more extensive than PE?

In digital activities, **benefit principle** based no longer on its physical presence, but instead on the idea of value creation in the resident country of web users and client/consumers: services that make the market possible and for which the country has to bear relevant costs

*(for example, the legal system for running digital activities, the protection of IP and electronic payments, the maintenance of digital infrastructure).*

Which criteria? *online sales, number of contracts, number of users and network consumption level, etc..*

More extensive PE definition, larger the number of non-resident taxpayers => high administrative costs for collecting a “limited” tax revenue

Moreover,  
it needs to be widely shared at an international level in order to avoid increasing international legal conflicts and to revise all double taxation Conventions.

Caution has often been stressed in the international context for a too inclusive definition.

## *Income tax*

II) MNC income allocation among countries  
it is necessary to redefine transfer prices rules.

cooperative behaviour to avoid double taxation:

- *Formulary Apportionment* (United States and Canada)?  
Ireland and the Netherlands disagree!
- a modified *Split Profit Criterion* (*ex ante* allocation)
- Corporation tax on the destination principle

## *Income tax*

### III) Revenue collection

In this case it is necessary to have not only instruments that intercept the operations of digital companies but also financial administrations able to apply them at national and international level to levy taxation on companies.

A cooperative solution could provide that only one country is responsible for collecting tax yield, which will then be split between different jurisdictions (a kind of *one-stop-shop* used for VAT in the EU).

Again, a **high degree of cooperation is required** as this solution implies delegating taxation power to other states.



## ***Withholding tax on revenue***

A withholding tax on revenues related to digital transactions carried out by non-residents in the country.

As direct taxation: it could be applied to those payments that take the form of royalties

As indirect taxation...

## ***Excise tax on consumption***

An excise tax on the use of broadband proportional to the number of bytes used by internet sites.

This kind of tax has been criticised on the ground of both equity and administrative costs.

Proposals to strengthen progressivity (size and turnover business)

Internet as a public good but making reference to the ability-to-pay

## We can stress some general points

- For different countries, a tax on digital profits may be more or less preferable in relation to the criteria for allocating the tax base.
- With cooperative solutions, even if it is possible to define a new fiscal nexus for PE, for non-resident companies the problem remains of how to allocate profits and how to tax the value of production.
- In the case of the application of corporate income tax, the definition of revenues and costs to be attributed to the new entity is necessary, and it is therefore necessary to properly redefine the transfer pricing rules.

- In the case of unilateral profit tax adoption, in order to ensure the tax compliance of companies, on the one hand, the country should use tax ruling measures and, on the other hand, care should be taken regarding possible double taxation in the countries with which it is provided bilateral agreements.

In Italy, in both cases, unilateral and cooperative action, the option of taxing digital profits may not be convenient in terms of maximising tax revenue.

- Considering the option of a withholding tax on the outflows of revenues from digital transactions, tax revenue is potentially higher as the tax rate applies to gross profits (once the tax nature of these flows is specified and the issue of tax collection is resolved).
- Moreover, in the case of unilateral action, a relatively high tax rate could encourage digital companies to locate their operational digital activity at a permanent establishment in importer countries.

## Taxing digital economy: policy options

- International institutions (OECD BEPS project, EC) stressed the need for a coordinated effort to bring the digital economy to the existing framework of direct taxation
- Tax on profits may be theoretically more efficient but it is not a realistic option in the short term due to the need to comply with the existing legal framework (e.g. revision of double-tax conventions)
- As a short term solution, the international debate, mainly in EU, focuses on revenue taxes on digital services which are easier to reconcile with the current international tax framework.

# Taxing digital economy: policy options

- an equalization tax on turnover of digitalized companies;
- a withholding tax on digital transactions; and/or
- a levy on revenues generated from the provision of digital services or advertising activities.

# Taxing digital economy: policy options

Pending the decisions at international level, unilateral measures are adopted following country specific tax interest

- The adoption of ‘diverted profits taxes’ (DPTs) in the U.K. (2016) and Australia (2016), seen by some as early departures from the consensual approach of the BEPS project.

The first rule is designed to address arrangements which avoid a UK permanent establishment (PE) .

The second rule prevents companies from creating tax advantages by using transactions or entities that lack economic substance.



## Taxing digital economy: policy options

- The 2017 Trump Reform introduced a new model to tax revenues concerning intangible assets, regardless of the actual "repatriation" of such revenues (GILTI)

Little importance is given to the problems of international coordination of taxation.

*“the reform, inspired by the “America First” principle, does not take into account the need for coordination with other countries. The relationship is between the USA and the rest of the world; once the minimum of taxation at home is guaranteed, the other countries are free to decide how to tax American economic activities abroad”. (Ceriani, Ricotti, (2019))*

# Taxing digital economy: policy options

- As a reaction, in 2018 the EC presented a two-step proposal for EU-wide taxation of digital economy:
  - ✓ a long-term solution consisting in a revision of the profit tax based on a “significant digital presence” and on harmonized definition of the tax base

and to curb harmful unilateral initiatives by MSs:

- ✓ an *ad interim* solution, named DST, consisting in a **variation** of a revenue tax to take account of the contribution of users in value added creation

# The European DST: main elements

- Revenue tax on “large” digital multinationals (threshold criteria)
- Tax base referred to specific digital services where the role of users in value-added creation is central (online advertising, social networks, transmission of data collected from users)
- Tax base assigned according to each MS share of global digital users, regardless the geographical distribution of sales (different from a standard revenue tax)
- 3 percent tax rate
- Harmonised across MSs

# Unilateral measures

- The DST proposed by the EC is currently under discussion by the MSs
- However, Italy has recently unilaterally introduced a DST-type tax, to be applied from 2019, closely modelled on the EC proposal
  - ✓ 3 per cent tax rate applied on the **domestic share** of the global revenues of resident and non-resident digital multinationals
  - ✓ **Domestic share** is given by the share of domestic users on worldwide users

# Unilateral measures

Other MSs have recently announced and planned tax measures on the digital economy

- ✓ Spain envisages a very similar tax to the Italian one
- ✓ Austria is planning a tax on revenues from digital advertising, but the apportionment criterion is not clear
- ✓ France is considering a 5% levy on revenues, but the design of the tax has not yet been defined
- ✓ The UK will apply a 2% DST to revenues generated from the provision of some digital businesses

# Unilateral measures

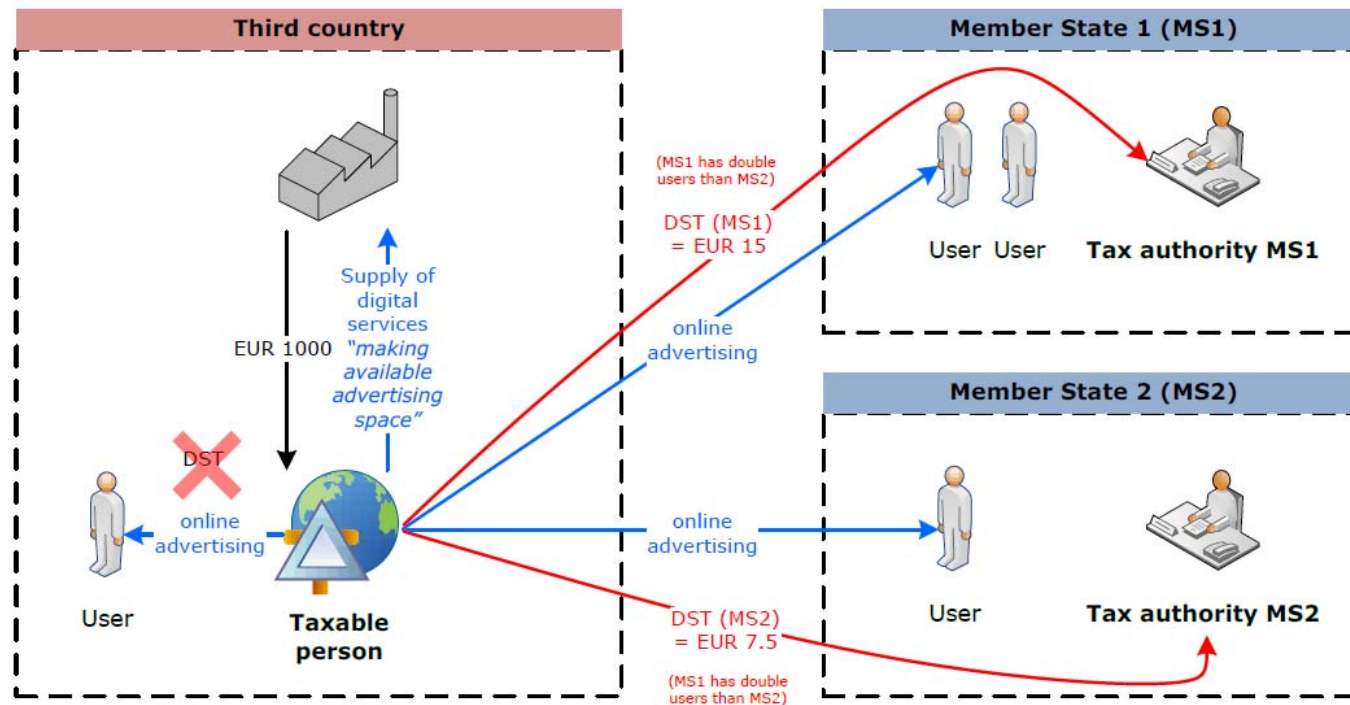
What will the overall outcome of these unilateral choices be?

Will the MSs independently converge toward the European DST proposal?

# DST: main elements

## *An example of DST applied to online advertising sales*

- DST rate = 3%
- It is assumed that all payments are in EUR



- DST taxable revenues = EUR 1000
- Place of taxation? Member States where users are located (MS1 and MS2)
- Apportionment in each MS proportional to the number of users in those MS (EUR 250 in third country, EUR 500 in MS1 and EUR 250 in MS2)
- DST due in MS1 ( $3\% \times 500$ ) = EUR 15
- DST due in MS2 ( $3\% \times 250$ ) = EUR 7.5

# National tax strategies: a general framework

We provide a simplified general framework:

- to clarify how the DST would work
- to predict the possible strategies to tax the digital economy that could be adopted by single MSs



# National tax strategies: a general framework

- two countries ( $i = 1, 2$ )
- two digital companies ( $j = 1, 2$ ) selling digital services to their customers in I
- digital tax entirely or partially shifted by the taxpayers (digital companies) to their customers by raising the price of marketed digital services
- ***T<sub>ij</sub>*** is the tax yield assigned to country  $i$  on company  $j$
- ***B<sub>ij</sub>*** the burden on company  $j$ 's customers established in  $i$  as a result of tax shift enacted by the same company.

# National tax strategies: a general framework

We compare two alternative schemes to tax the digital economy:

- 1) **the DST scheme (EC Option - C)**
  - 2) **a standard revenue tax in the form of a withholding tax on sales (Deviation Option - D)**
- under the assumption of equal statutory tax rates

# National tax strategies: a general framework

## 1) DST (EC Option - C):

- $$T_i^C = T_{i1}^C + T_{i2}^C = t_i^C \frac{U_{i1}}{\sum_i U_{i1}} \sum_i G_{i1} + t_i^C \frac{U_{i2}}{\sum_i U_{i2}} \sum_i G_{i2} \quad (1)$$

where:

$t_i^C$  is DST tax rate set by country  $i$

$U_{ij}$  is the number of digital users of company  $j$  located in  $i$

$G_{ij}$  are the sales of company  $j$  to its customers located in  $i$

- $$B_i^C = B_{i1}^C + B_{i2}^C = \alpha_{i1} t_i^C \frac{U_{i1}}{\sum_i U_{i1}} G_{i1} + \alpha_{i2} t_i^C \frac{U_{i2}}{\sum_i U_{i2}} G_{i2} + \alpha_{i1} t_{\neq i}^C \frac{U_{\neq i1}}{\sum_i U_{i1}} G_{i1} + \alpha_{i2} t_{\neq i}^C \frac{U_{\neq i2}}{\sum_i U_{i2}} G_{i2} \quad (2)$$

where  $\alpha_{ij}$  denotes the rate of tax shift enacted by company  $j$  on its customers located in country  $i$  (differentiated by company and by digital services but not by the tax authorities imposing the tax).

terms in red denote the tax burden imposed by the tax levied by country  $j$  (tax importing)

# National tax strategies: a general framework

## 2) A withholding tax on sales (Deviation Option - D)

- $T_i^D = T_{i1}^D + T_{i2}^D = t_i^D G_{i1} + t_i^D G_{i2} \quad (3)$

- $B_i^D = B_{i1}^D + B_{i2}^D = \alpha_{i1} t_i^D G_{i1} + \alpha_{i2} t_i^D G_{i2} \quad (4)$

where:

$t_i^D$  is withholding tax rate set by country  $i$ .

# National tax strategies: a general framework

Each country choose how to tax digital economy in a way as to maximise the objective function (assumed to be additive by simplicity):

$$W_i = w_i^T T_i - w_i^B B_i \quad (5)$$

and  $w_i^T, w_i^B$  are the social weights of tax yield

and  $w_i^T > w_i^B$  in order to make public intervention socially desirable.

# National tax strategies: a general framework

For country 1 (same occurs for country two) the choice between option C and option D depends on

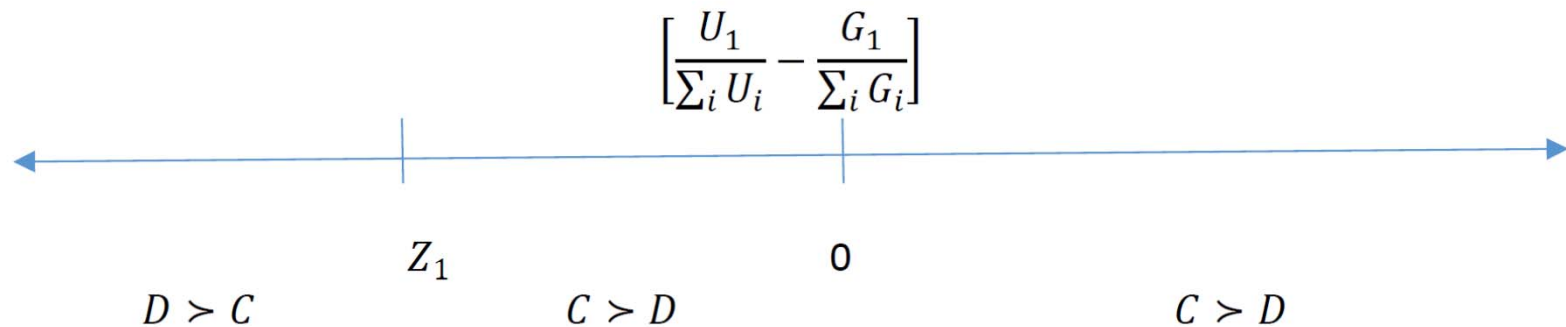
if  $\left[ \frac{U_1}{\sum_i U_i} - \frac{G_1}{\sum_i G_i} \right] > 0$  Option C is never dominated by Option D

if  $\left[ \frac{U_1}{\sum_i U_i} - \frac{G_1}{\sum_i G_i} \right] < 0$  Option C is dominated by Option D if:

$$\left[ \frac{U_1}{\sum_i U_i} - \frac{G_1}{\sum_i G_i} \right] < \frac{w^R \left[ \alpha_{11} G_{11} \left( \frac{U_{11}}{\sum_i U_{i1}} - 1 \right) + \alpha_{12} G_{12} \left( \frac{U_{12}}{\sum_i U_{i2}} - 1 \right) \right]}{w^T \sum_i G_i} < 0$$

If we denote this threshold as  $\frac{w^B \left[ \alpha_{11} G_{11} \left( \frac{U_{11}}{\sum_i U_{i1}} - 1 \right) + \alpha_{12} G_{12} \left( \frac{U_{12}}{\sum_i U_{i2}} - 1 \right) \right]}{w^T \sum_i G_i} = Z_1,$

# National tax strategies: a general framework



The position of  $Z_1$  depends on the values of  $w^B$ ,  $w^T$ ,  $\alpha_{11}$  and  $\alpha_{12}$ . The greater the value of  $w^T$  with respect to  $w^B$  and the smaller the rates of tax shift of company 1 and/or company 2 the less negative will be the value of the threshold  $Z_1$ , and therefore the greater will be the probability that Option D is preferred to Option C.

# National tax strategies: a general framework

The choices of countries 1 (leader) and country 2 (follower) can be jointly represented as follows:

			Country 2 F		
			Option 0	Option C	Option D
Country 1 L	Option C	$\left[ \frac{U_1}{\sum_i U_i} - \frac{G_1}{\sum_i G_i} \right] > Z_1$	never (loss)	$\left[ \frac{U_2}{\sum_i U_i} - \frac{G_2}{\sum_i G_i} \right] > Z_2$	$\left[ \frac{U_2}{\sum_i U_i} - \frac{G_2}{\sum_i G_i} \right] < Z_2$
	Option D	$\left[ \frac{U_1}{\sum_i U_i} - \frac{G_1}{\sum_i G_i} \right] < Z_1$		$\left[ \frac{U_2}{\sum_i U_i} - \frac{G_2}{\sum_i G_i} \right] > Z_2$	$\left[ \frac{U_2}{\sum_i U_i} - \frac{G_2}{\sum_i G_i} \right] < Z_2$



# National tax strategies: a general framework

- If in all countries the share of users is equal/quite similar to the share of sales, DST is adopted everywhere (convergence toward DST)
- On the contrary, if one country (or few countries) shows a share of users much smaller than the share of sales (so that the difference is smaller than  $Z_i$ ), that country deviates from the DST solution. Therefore, in this case the final result is that the convergence toward DST is not achieved

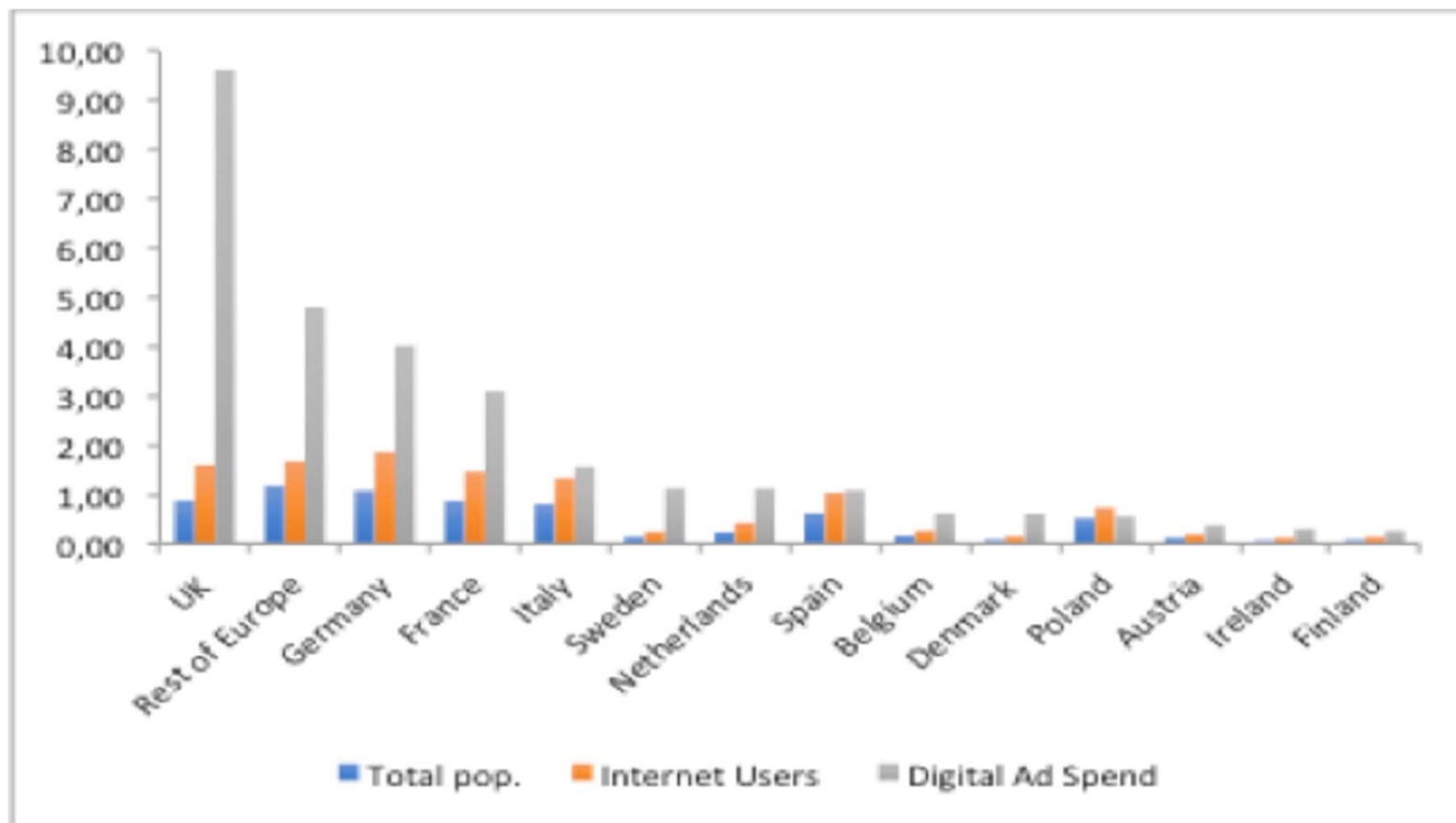
# National tax strategies: empirical evidence

Only online advertising sector

- 2017 data for EU countries
- total online advertisement spending of customers (IAB data) as a proxy for sales revenues of MNCs
- total internet users (WorldStat data) assuming equal users distribution for each MNC

# National tax strategies: empirical evidence

*Internet users and digital advertising spending, worldwide % (2017)*



# National tax strategies: empirical evidence

*Users and sales in online advertising markets (EU countries, 2017)*

	$U_i/\sum_i U_i$	$G_i/\sum_i G_i$	$\frac{U_i}{\sum_i U_i} - \frac{G_i}{\sum_i G_i}$	$Z_i$	(a)-(b)	C/D
			(a)	(b)		
Austria	0.002	0.004	-0.002	-0.002	0.001	C
Belgium	0.003	0.006	-0.004	-0.004	0.001	C
Denmark	0.001	0.006	-0.005	-0.004	-0.001	D
Finland	0.001	0.003	-0.001	-0.002	0.000	C
France	0.015	0.031	-0.016	-0.020	0.004	C
Germany	0.019	0.040	-0.021	-0.026	0.005	C
Ireland	0.001	0.003	-0.002	-0.002	0.000	C
Italy	0.013	0.016	-0.002	-0.010	0.008	C
Netherlands	0.004	0.011	-0.007	-0.007	0.000	C
Poland	0.007	0.006	0.002	-0.004	0.005	C
Spain	0.010	0.011	0.000	-0.007	0.007	C
Sweden	0.002	0.011	-0.009	-0.007	-0.001	D
United Kingdom	0.016	0.096	-0.080	-0.063	-0.017	D
Rest of Europe	0.017	0.048	-0.031	-0.031	0.000	C
Total Europe	0.112	0.291	-0.179	-0.172	-0.007	D
Rest of the World	0.888	0.709	0.179	-0.053	0.232	C

welfare weights : 1.5 for tax revenue and 1 for tax burden

# National tax strategies: empirical evidence

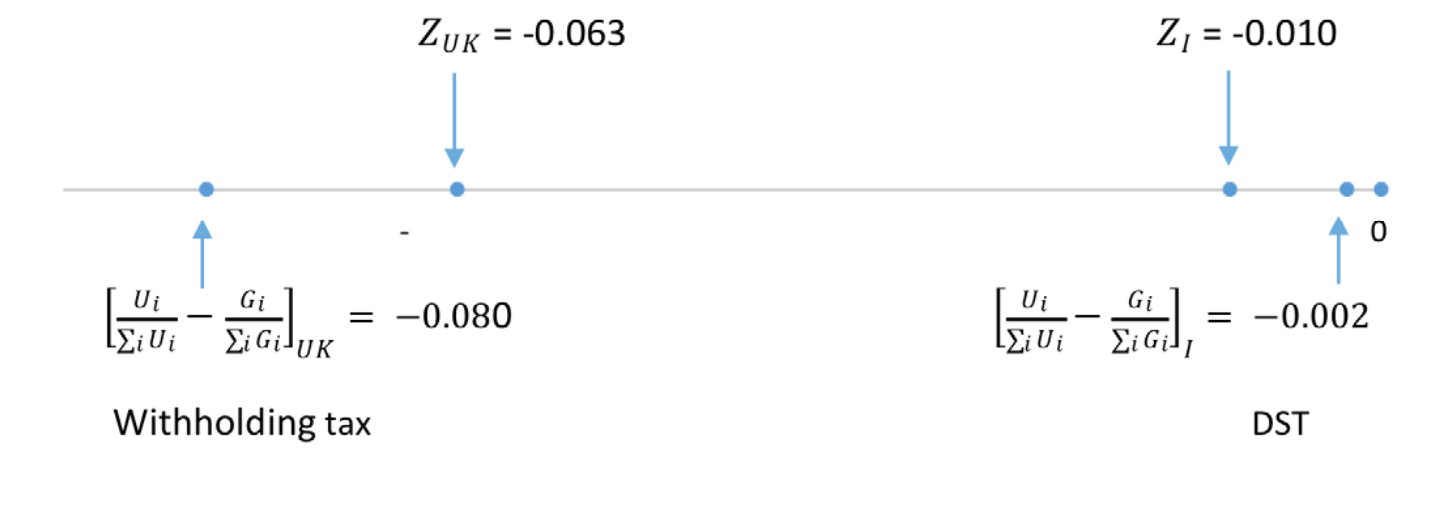
Different tax preferences across countries can be derived from digital markets data. Considering the distance between the user-sale share difference and the threshold:

- a **negative** value for **UK and Sweden**  
⇒ preference for a withholding tax on sales
- a **positive** value for all other countries and in particular for **Italy**  
⇒ preference for the DST option

As a consequence, unilateral tax implementation can depart from a coordinated DST as supported by the EC

# National tax strategies: empirical evidence

*The case of the UK and Italy*



# National tax strategies: empirical evidence

## Limitations:

- we use “by country” data instead of “by firm and by country” data jointly
- the results are contingent on welfare weight values for tax revenue and tax burden respectively

## Possible development:

- consider tax competition driven by the differing mobility of tax bases between the withholding tax and the DST

# National tax strategies: empirical evidence

Are these empirical results consistent with the tax measures implemented - or just announced - by European countries? Yes, to a large extent!

- Spain and Italy are implementing the DST
- France announced the introduction of a DST-type taxation
- Ireland and Nordic countries (which are very close to their respective threshold) are requiring a global agreement
- Sweden immediately disagreed with the adoption of DST
- The UK has announced the introduction of a DST very similar to the EC proposal. But the new DST will supplement the Diverted Profit Tax (DPT) introduced in 2015, which is substantially a withholding tax on sales



# Conclusions

- Analyse the DST, recently proposed by the EC to tax digital economy and unilaterally adopted by some MSs
- Highlight the critical role of the distance between users and sales shares on the decision to adopt the DST
- Derive empirically predictions about tax strategies to be adopted by European countries and find preliminary evidence of their consistency with tax measures actually adopted or announced

## Caution:

- ignore tax competition driven by the differing mobility of tax bases between the withholding tax and the DST
- disregard other factors relevant for national tax strategies: enforcement issues and compliance costs allocation among domestic and non-domestic taxpayers
- severe data limitations

# Unilateral measures

- As a significant number of digital companies are active in more than one jurisdiction, an increasing number of unilateral and country specific measures increase competitive distortions, compliance burden and double taxation disputes.
- Furthermore, it will get more difficult to harmonise the variety of taxes or agree on comprehensive solutions in the future.

**Thank you for your attention**