## Discussion of "Tax Policy, Investment and Profit-Shifting" by Bilicka, Devereux and Guceri

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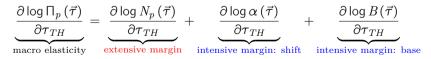
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- Great paper written by leading experts in this field! We have learned a lot.
- Main Contribution: The paper clarifies the difference between macro and micro tax rate elasticity of profit shifting with an aid of a model.
- Total shifted profits  $(\Pi_p)$ :

$$\Pi_{p}\left(\vec{\tau}\right) = N_{p}\left(\vec{\tau}\right) \times \alpha(\vec{\tau}) \times B\left(\vec{\tau}\right)$$

-  $N_p$  is the number of profit-shifting firms,  $\alpha$  is average shift share, B is the tax base.

• The semi-elasticity of tax rate changes on total shifted profits is:



• Main result: The macro elasticity is 24% higher than the micro elasticity.

•  $Y_i$  is referred to as "intangible asset". It really is a technology of profit-shifting (lawyers, accountants, legal structure of MNE etc.)

$$c\left(lpha_{ij},B_{ij},Y_{i}
ight)=rac{\gamma}{2}\left(rac{B_{ij}}{Y_{i}}
ight)^{m}lpha_{ij}^{2}$$

- Typically economists think intangibles are **non-rivalry in use** and used as **production input**. No direct linkage between  $Y_i$  and production in the paper.
- Related but broader point: authors leave the mechanism by which firms shift profits **unspecified**.
  - $\rightarrow\,$  Strategic Location of IP, International Debt Shifting, Transfer Pricing Manipulations?
  - $\rightarrow\,$  Matters for underlying economics, elasticities and welfare.

• The null relationship between profit shifting share  $\alpha$  and productivity  $\theta$  (if Y > 0):

$$lpha_{ij} = \left[rac{1}{\gamma}\left( au_j - au_X
ight)^{1+m} \left(rac{1}{2}rac{m}{p_i\left(1+r
ight)}
ight)^m
ight]^{rac{1}{1-m}}$$

- → If  $p_i$  and  $\theta_i$  are independent, then  $\partial \alpha / \partial \theta = 0$ → Is it true in the data? **Testable model prediction**.
- Profit shifting MNEs are profitable and productive firms from the very right-tail of size distribution. Would the model get this selection margin right?

• Identification issue. Note, revenues are:

$$\theta_i K^A_{ij} + \prod_{ij}$$

How do you separately identify productivity and demand? Pervasively problematic in working with firm level data (Foster, Haltiwanger and Syverson (2008)).

• Should the shifter be included in the tax base?

$$B_{ij} = \theta_i K^A_{ij} + \prod_{ij} - \delta K_{ij}$$

• Related, should the intangible capital investment  $p_i Y_i$  and cost of profit shifting  $C_{ij}$  be tax deductible?

- Great paper on a timely topic.
- Combines theory and empirics to clarify how tax reforms affect intensive and extensive margins of profit shifting.
- Quantifies the consequences of the OECD tax reform.

Thank you!