

Public Economics

Incidence. General Equilibrium. Open Economy

Based on Raj Chetty and Gregory A. Bruich

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Open Economy Application

- Key assumption in Harberger model: both labor and capital perfectly mobile across sectors
- Now apply framework to analyze capital taxation in open economies, where capital is more likely to be mobile than labor
- See Kotlikoff and Summers section 3.1 for a good exposition

Open Economy Application: Framework

- One good, two-factor, two-sector model
- *Sector 1*: small open economy where L_1 is fixed and K_1 mobile
- *Sector 2*: rest of the world L_2 fixed and K_2 mobile
- Total capital stock $K = K_1 + K_2$ is fixed

Open Economy Application: Framework

- Small country introduces tax on capital income (K_1)
- After-tax returns must be equal:

$$r^* = F_{2K} = (1 - \tau)F_{1K}$$

- Capital flows from 1 to 2 until returns are equalized; if 2 is large relative to 1, no effect on r^*
- Wage rate $w_1 = F_{1L}(K_1, L_1)$ dec. when K_1 dec. b/c L_1 is fixed
- Return of capitalists in small country is unchanged; workers in home country bear the burden of the tax
 - Taxing capital is bad for workers!

- Mobility of K drives the previous result
- Empirical question: is K actually mobile across countries?
- Two strategies:
 - 1 Test based on prices and equilibrium relationships [Macro-finance]
 - 2 Look at mobility directly [Feldstein and Horioka 1980]

Strategy One: Macro-Finance approach

- Test based on prices and equilibrium relationships
- Check whether net returns r are equal across countries
- General finding - covered interest parity: obligations that are protected against fluctuations in inflation and exchange rates have the same returns across countries
- Difficulties in generalization: many assets yield different returns, unexpected inflation, changes in currency exchange rates
- Need models with uncertainty, risk aversion to deal with other assets
- Difficult to implement this test for risky assets

- Second strategy: look at capital mobility directly
- Feldstein and Horioka use data on OECD countries from 1960-74
- Closed economy: $S = I$; open economy: $S - I = X - M$
- Motivates regression:

$$I / GDP = \alpha + \beta S / GDP + \dots$$

- Find $\beta = 0.89$ (0.07)

- In closed economy, $\beta = 1$
- But do not know what β should be in an open economy
- β may be close to 1 in open economy if
 - 1 Policy objectives involving $S - I$ (trade deficit balance)
 - 2 Summing over all countries: $\bar{S} = \bar{I}$ as imports and exports cancel out
 - 3 Data problem: S constructed from I in some countries

- Large subsequent literature runs similar regressions and finds mixed results
 - Generally finds more flow of capital and increasing over time
- General view: cannot extract money from capital in small open economies
 - Ex. Europe: tax competition has led to lower capital tax rates
 - Could explain why state capital taxes are relatively low in the U.S.