Consumption Tax

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Outline

- What is a Consumption Tax?
- Pros and Cons
- Transitional Effects

What is a Consumption Tax

- A tax on consumption, not on savings
  - Income = Consumption + Savings

Components of the Tax Base

- $GNP = C+I+G+X-M+R^f = W+R+R^f$
  - ..where C is consumption, I is gross investment, G is government spending, X is exports, M is imports, W is wage income, R is domestic gross capital income, and R^f is net foreign income (foreign income of domestic residents less domestic income of foreign residents).

Components of the Tax Base

- $C = W + R - I - G - X + M$
- $C = W + R - I - X + M$
  - ..with the assumption that consumption tax has no impact on government expenditures.
- Balanced current and capital accounts:
  - $(X - M + R^f) = I^f$
    - ..where I^f is net foreign investment
- $C = W + (R - I) + (R^f - I^f)$
  - ..the relevant tax base of a consumption tax.

Cashflows from Investments

- With a constant tax rate over time, the cash flows of zero-present-value investments would have no impact on the present value of government revenues.
  - Thus, *Blueprints for Basic Tax Reform* gave taxpayers a choice under a consumption tax of whether assets held at arms length would be subject to tax or both investments and returns would be ignored by the tax system.
    - $C = W + (R - I) + (R^f - I^f)$

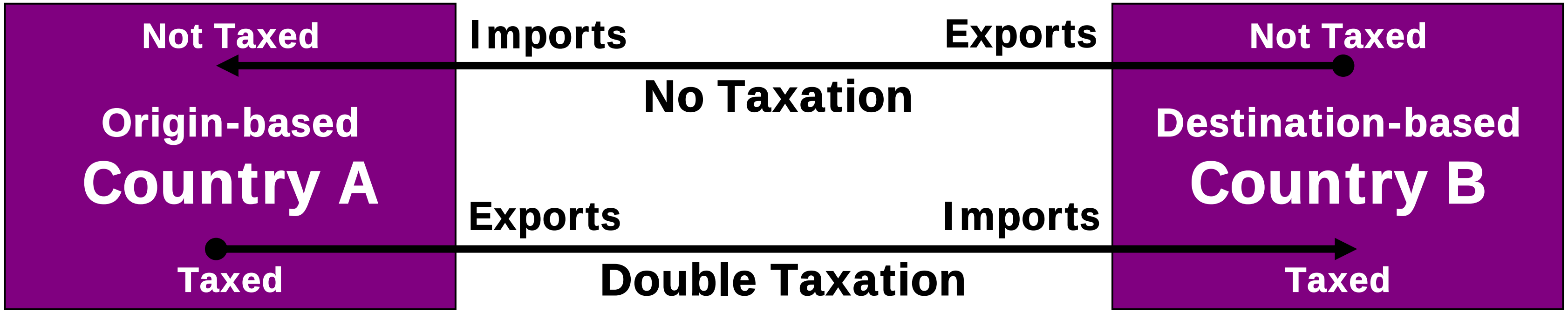
Cashflows from Investments

- Zero-Present-Value Investment
  - *i = 20%, τ = 40%*

T	0	1	2	3	
(1) CP_0	600				
(2) CF_t		320	280	240	
(3) DEP_t	600				
(4) Tax $Base_t$ (2)-(3)	-600	320	280	240	
(5) Tax_t	-240	128	112	96	→ *PV = 0*
(6) After-Tax CF_t (2)-(1)-(5)	-360	192	168	144	→ $NPV_\tau = 0$

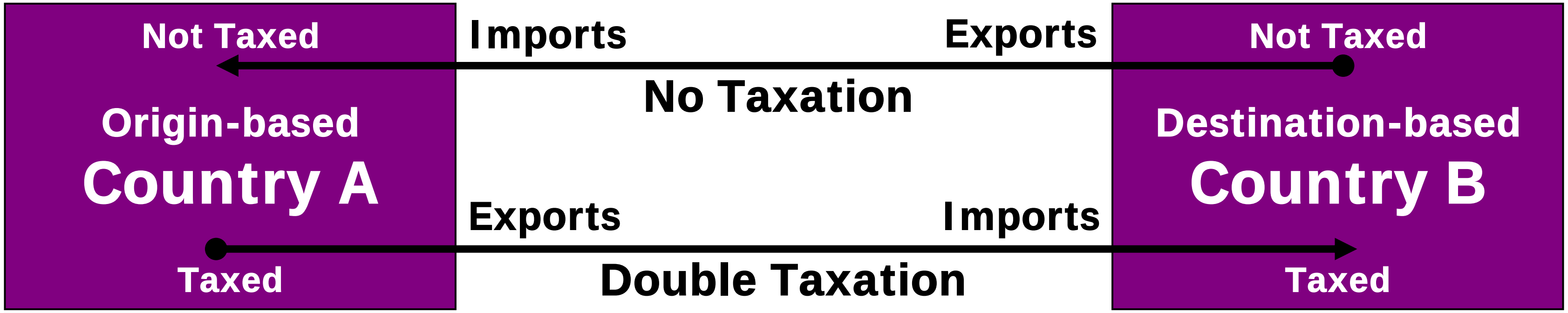
Origin vs Destination Basis

- Different basis would create some inequalities btw exporters and importers
  - However currency appreciation (in the country which has switched to destination base) would maintain justice.



Origin vs Destination Basis

- Assume that Country A has an exchange rate of e (per one unit of Country B's currency) and the relevant tax rate is τ.
  - The price of imported goods of Country B would be raised by $(1+\tau)$ due to the double taxation.
  - The price of exported goods of Country B would be decreased by $(1+\tau)$ due to no taxation.
    - As a result, e would increase by $(1+\tau)$



Financial Assets and Liabilities

- Alternative tax basis:
  - $C = W + (R - I) + (R^f - I^f)$
    - Financial position is not included into the tax base.
  - $C = W + (R - I) + (R^f - I^f) + (F - J)$
    - ..where F is the net flows from financial assets and J is the net purchases of financial assets.
    - Flows between the business sector and the household sector are ignored in this tax base. In such a situation firms can shifts their profits from real to financial activities.
  - *"R + F"* tax base
    - ..all components of F is distinguished from R.
    - Flows between firms and their shareholders are ignored in this tax base. In such a situation firms can manipulate their payments between debt and equity.

Timing of Tax Payments

- Tax-exempt approach
  - No tax payments
    - Cost not deductible
    - Returns are not taxed

→ Less costly

Timing of Tax Payments

- Cash-Flow approach
  - Effective tax rate = 0
    - Deductions for cost
    - Taxes on returns

→ Offsetting only with a constant tax rate over time

Timing of Tax Payments

- Case 1: decreasing tax rates over time

T	0	1	2	3
(1) CP_0	600			
(2) CF_t		320	280	240
(3) DEP_t	600			
(4) Tax $Base_t$ (2)-(3)	-600	320	280	240
(5) Tax_t	-240	128	98	72
(6) After-Tax CF_t (2)-(1)-(5)	-360	192	182	168

Present Value of Taxes = -23,61
NPV_τ = 23,61

- Case 2: increasing tax rates over time

T	0	1	2	3
(1) CP_0	600			
(2) CF_t		320	280	240
(3) DEP_t	600			
(4) Tax $Base_t$ (2)-(3)	-600	320	280	240
(5) Tax_t	-180	96	98	96
(6) After-Tax CF_t (2)-(1)-(5)	-420	224	182	144

Present Value of Taxes = 23,61
NPV_τ = - 23,61

Taxation Level

- Three different levels
  - Business level
  - Individual level
  - Business and personal level
- Level may influence
  - The fairness
  - The price level, wages, returns

Taxation Level

- Fairness
  - Aims in progressivity
  - Can only be achieved on individual level
- Price level, wages, returns
  - Business shifts economic incidence to individuals by increasing prices and lowering wages and returns

Pros and Cons

- Equity
- Economic Efficiency
- Administrative Feasibility
- Tax Evasion
- Internationality & Politics

Equity – Horizontal Equity

- Lifetime income
- Interest income at pre-tax rate
- „Saving, and therefore the household that prefers to consume later, is no longer discriminated“

Equity - Example

- Earnings: 50.000 €
- Tax rate: 30%
- Interest rate: 20%
- 1. case: use income for consumption
- 2. case: save income one year long

Equity - Example

Case 1		Both systems	
	Income	50.000 €	
	Tax	15.000 €	
	Consumption	**35.000 €**	
Case 2		Income Tax	Consumption Tax
Year 1	Tax	15.000 €	-
	Saving	35.000 €	50.000 €
Year 2	Interest income	7.000 €	10.000 €
	Income	50.000 €	50.000 €
		57.000 €	60.000 €
	Tax	17.100 €	18.000 €
	Consumption	**39.900 €**	**42.000 €**

Equity – Vertical Equity

- Consumption tax might be regressive
- Discriminates the individuals with the lowest incomes
- Seen as unfair

Economic Efficiency

- Reduction of distortions
  - Increasing capital accumulation
  - Allocation of capital
  - Firm’s financial structures

➡ More savings, more investment, more innovation, higher living standards and family incomes

Economic Efficiency

- Tax base will decrease
- Revenues will decrease
- Higher tax rate is required

→ Influence on location decisions of firms

Administrative Feasibility

- Firms do not have to consider
  - Depreciation rules
  - After-tax NPV
  - Capital gains

- Existing administrative problems
  - Gifts and inheritances
  - Reporting

Internationality & Politics

- Internationality
  - Absence of international experience
  - Compatibility

- Political Reasons
  - Resistance of special interest groups
    - Misallocation of total tax burden

Transitional Effects

- Switching to a consumption tax would..
  - ..increase saving and real output per person which leads to an increase in the real GDP in the long run.
  - ..negatively affect the real value of existing capital.
  - ..lower the pre-tax interest rate.
  - ..not be able to avoid transfer pricing by multinational corporations.

Transitional Effects

- Switching to a consumption tax would..
  - ..cause a short-term revenue loss for the government due to the tax coverage of immediate depreciation.
  - ..cause large losses on the owners of the existing assets by not allowing the remaining depreciation deductions.,
- Thus, some temporary rules are essential to avoid these problems during the transition.

Summary

- Any questions?
- Thanks for listening!