

Another Old Exam Question

$$GDP_A = GDP_B$$

A Variant

- Last year the newspapers were full of stories from Central Backwater, where its government undertook a \$100 million program to build a monumental tomb for its current ruler, who was not in the best of health. There was general agreement that this proposal was truly a monument to vanity and folly.

A Variant

- Unbeknownst to the world's press, Western Backwater was planning a project, which would also cost \$100 million. The project was unveiled today. While details of the project are hazy, all the nations eminent economists agree that this project will add boost A in Western Backwaters production function ($Y = AK^\alpha L^{1-\alpha}$) and add \$25 million a year to its GDP.

A Variant

- The project will be undertaken in year one and the benefits from the project will begin in year two. (Take all of these numbers as accurate).
- Like Central Backwater, this is a closed economy.

Funding Proposals

- Impose a special tax surcharge on last year's income tax bill sufficient to cover the project.
- Borrow the money. Beginning in year 2, impose a special tax on wage income sufficient to repay the debt over a 10 year period. (Accountants are working out the precise tax rate; you need not worry about that).

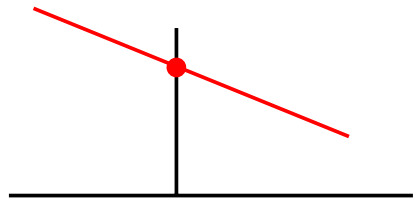
Your Questions

- What will be the impact on GDP, Investment and Interest Rates in the coming year?
- Rank the proposals in term of their impact on these three variables. Say where you do not have enough information.
- On grounds of economic efficiency, which one do you recommend? Why?

The Economic Efficiency

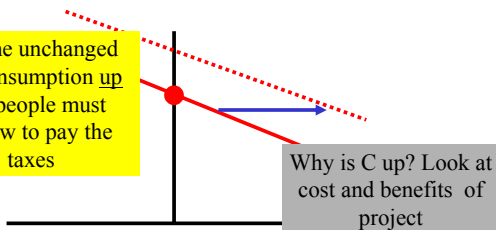
- Proposal A is the better. Even though the tax is levied all at once, it is based on last year's income. Too late to change that, so no disincentive effects.

Interest Rates



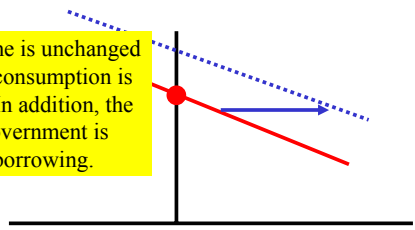
Demand For Loans (Case A)

Income unchanged but consumption up and people must borrow to pay the taxes



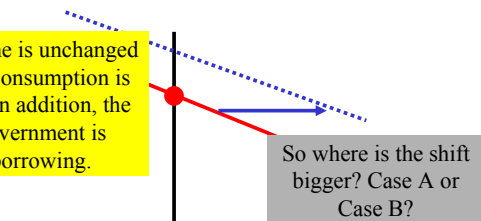
Demand For Loans (Case B)

Income is unchanged and consumption is up. In addition, the government is borrowing.



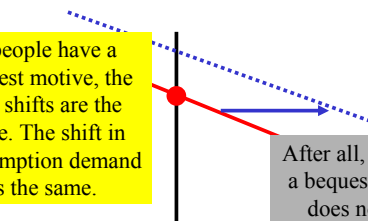
Demand For Loans (Case B)

Income is unchanged and consumption is up. In addition, the government is borrowing.



Demand For Loans

If people have a bequest motive, the two shifts are the same. The shift in consumption demand is the same.



After all, if you have a bequest motive, it does not matter whether you pay \$100 million at once or over time.

Demand for Loans

If people have a bequest motive, the two shifts are the same. The shift in consumption demand is the same.

Without a bequest motive, the demand for loans increases most in B; you can pass some of the project's cost along to future generations.

If you have a bequest motive, it does not matter whether you pay \$100 million at once or over time.

First Question

- What will be the impact on GDP, Investment and Interest Rates in the coming year?

r up in A and B
I down in A and B
GDP unchanged

Second Question

- Rank the proposals in term of their impact on these three variables. Say where you do not have enough information.

$GDP_A = GDP_B$
 (unchanged)
 With bequest motive
 $r_A = r_B$
 $I_A = I_B$
 W/o bequest motive
 $r_A < r_B$
 $I_A > I_B$

Third Question

- On grounds of economic efficiency, which one do you recommend? Why?

Case A

End

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