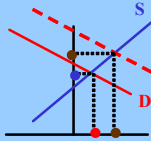


More on Debt and Taxes



Objections to Ricardian Equivalence

- People don't understand deficits.
- We have passed the debt to our children.
- This means we never need to tax.
- Incentive Effects.

People Don't Understand Deficits

- People do not understand the equivalence between taxes now and taxes in the future.

Lincoln's Law

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- Lincoln's Law implies that people will not be systematically fooled

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Rational Expectations

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Suppose the policy choice is between taxing John and Sally each \$50 now or \$50 in the future.

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While John may blithely underestimate his future taxes, Sally may panic and overestimate hers. Rational expectations implies their errors will cancel out.

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The General Theorem

A general theorem: models built on the assumption that people are stupid just don't work.

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- People don't understand deficits.
- **We have passed the debt to our children.**
- This means we never need to tax.
- Incentive Effects.

Just What Does This Mean

- We reduce investment to finance the deficit, and hence reduce the capital available for future generations.
- For this to happen, there must be a differential impact on the demand for loans.

John's Taxes

- The government decides to spend \$100, and tax John to pay for it. $\Delta z = -\$100$ so $\Delta c = -\$10$ (say). Ergo, John's demand for loans increases by \$90.

John's Taxes

- Instead of taxing John – aged 40 – \$100, and reducing his wealth by \$100, the government decides to borrow the money.
- But how?

John's Taxes

- Instead of taxing John – aged 40 – \$100, and reducing his wealth by \$100, the government decides to borrow the money. John gets hit for the taxes to pay interest and principal.
- The government borrows \$100, agrees to pay 5% interest – the market rate – and redeem the bond in 5 years.

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- The government borrows \$100, agrees to pay 5% interest – the market rate – and redeem the bond in 5 years. No big deal. The present value of John's Tax Liabilities is \$100, so taxing and borrowing are equivalent.

John's Taxes

- Instead of taxing John – aged 40 - \$100, the government borrows \$100 in a *consol*, a bond that will pay \$5 a year in perpetuity. No big deal present value. John's Tax Liability is \$100, so and borrowing are equivalent.
- The government's demand for loans is \$100 but John, reducing consumption by \$10 supplies another \$10 of loans. The net demand for loans goes up by \$90. John gets hit for the taxes to pay interest and principal.

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- But how?
- The government borrows \$100 in a *consol*, a bond that will pay \$5 a year in perpetuity.
- John gets hit for the taxes to pay the interest.

John's Taxes

- Instead of taxing John and by the way, if John expected to live forever, no big deal. The PV of the tax liabilities will equal to \$100.
- The government borrows \$100 in a *consol*, a bond that will pay \$5 a year in perpetuity.
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John's Taxes

- Instead of taxing John and by the way, if John expected to live forever, no big deal. The PV of the tax liabilities will equal to \$100. Score another win for Ricardian Equivalence.
- The government's demand for loans is \$100 but John, reducing consumption by \$10 supplies another \$10 of loans. The net demand for loans goes up by \$90. John gets hit for the taxes to pay the interest.

John's Taxes

- Instead of taxing John and by the way, if John expected to live forever, no big deal. The PV of the tax liabilities will equal to \$100. John's Life Expectancy is 40 years, and the PV of \$5 a year for 40 years is \cong \$85.
- The government borrows \$100 in a *consol*, a bond that will pay \$5 a year in perpetuity.
- John gets hit for the taxes to pay the interest. After he dies, his kids get the bill.

John?

• Instead of taxing John's Life Expectancy is 40 years, and the PV of \$5 a year for 40 years is \cong \$85.

If John were hit with a \$100 tax, $\Delta z = -\$100$ and $\Delta c = -\$10$. Here, $\Delta z = -\$85$ and $\Delta c = -\$8.50$. The net demand for loans goes up by \$91.50

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If John were hit with a \$100 tax, $\Delta z = -\$100$ and $\Delta c = -\$10$. If John has a bequest motive he will take into account the taxes his kids will pay after his death.

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If John were hit with a \$100 tax, $\Delta z = -\$100$ and $\Delta c = -\$10$. But is there a bequest motive? And is it universal? Are consumers like immortal consumers? Yes, they pay after his death.

Debt and Taxes

- If consumers are immortal consumers, then borrowing and taxing are equivalent.
- If not, then borrowing and taxing are not equivalent, but consumers do discount taxes during their lifetime.

Debt and Taxes

- If consumers are immortal, borrowing and taxing are equivalent, but consumers die during their lifetime
- If not, then borrowing and taxing are not equivalent

As a practical matter, many economic models assume immortal consumers and hence Ricardian Equivalence

Debt and Taxes

- If consumers are immortal, borrowing and taxing are equivalent, but consumers die during their lifetime
 - If not, then borrowing and taxing are not equivalent
- If there is a difference between borrowing and taxing – which there may well be – it is small.

As a practical matter, many economic models assume immortal consumers and hence Ricardian Equivalence

End

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