Yet Even More on Debt and Taxes Lectures in Macroeconomics- Charles W. Upton

Borrowing

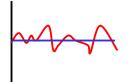
- The government need not balance its books each year.
- It must eventually pay back what it borrows.
- Is there a case for borrowing?

KENT STATE

Yet Even More on Debt and Taxes

The Case for Deficit Financing

- The optimal tax policy is a smooth policy.
- So, if spending oscillates, lets borrow to keep taxes smooth,



KENT STATE

Yet Even More on Debt and Taxes

Why Deficits can be Good

	Sales tax this Year	Sales tax next Year	Efficiency Loss from this year's Sales Tax	Efficiency Loss from next year's Sales Tax
İ	1%	0%	\$100	0
	0%	1%	0	\$100

KENT STATE

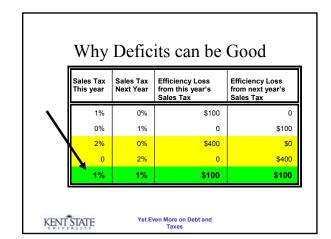
Taxes

Why Deficits can be Good

Sales Tax This year	Sales Tax Next Year	Efficiency Loss from this year's Sales Tax	Efficiency Loss from next year's Sales Tax
1%	0%	\$100	0
0%	1%	0	\$100
2%	0%	\$400	\$0
0	2%	0	\$400
1%	1%	\$100	\$100

KENT STATE

Yet Even More on Debt and Taxes



Some Applications

· Financing World War II

KENT STATE

Yet Even More on Debt and Taxes

Some Applications

- Financing World War II
- · Capital Projects

KENT STATE

Yet Even More on Debt and Taxes

Some Applications

- · Financing World War II
- Capital Projects
- Community Bond Issues

KENT STATE

Yet Even More on Debt and

Optimal Policy I

- Flatland has total national income of \$100 million. It is not expected to grow.
- Current government expenditures are \$15 million, and the national debt of \$100 million carries a 5% interest rate.
- What is the optimal deficit reduction policy?

KENT STATE

et Even More on Debt an

Optimal Policy I

- Flatland has total national income of \$100 million. It is τ τ=20%
- Current gover million, and the million carries national debt

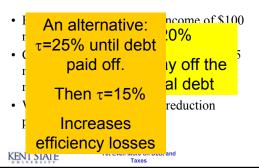
 Output

 Don't pay off the national debt
- What is the optimal deficit reduction policy?

KENT STATE

Yet Even More on Debt and Taxes

Optimal Policy I



Optimal Policy II

- Wedgwood has total national income of \$100 million, is expected to grow at 3% per year, as are current government expenditures of \$15 million per year.
- The \$100 million debt carries an interest rate of 5%.
- What is the optimal deficit reduction policy?

KENT STATE

Yet Even More on Debt and Taxes

Optimal Policy II

- Wedgwood has total national income of $\tau = 17\%$ \$100 million, per year, as are cu
- expenditures c Let the national The \$100 mill debt grow at 3% rate of 5%.
- per year. • What is the op policy?

KENT STATE

Yet Even More on Debt and Taxes

Optimal Policy II al income of An alternative: 7% per τ=25% until debt paid off. national

w at 3% Then $\tau=15\%$ vear. Increases efficiency losses

Optimal Policy II Another An alternati alternative: τ =20%; balance τ =25% until paid off. budget. w at 3% Then $\tau=15\%$ vear. **Increases** efficiency losses

Another An alternat alternative: -250/ until =20%; balance τ would drop each budget. year; increase w at 3% efficiency losses vear.

Optimal Policy II

Increases efficiency losses KEN I STALE

Optimal Policy III

- Assume: the United States of Antarctica has a GDP of \$11 trillion, expected to grow at 5% a year, as are government expenditures.
- The debt is about \$4 trillion.
- What is the optimal deficit policy?



Yet Even More on Debt and Taxes

Optimal Policy III

- Assume: the United States of Antarctica Let the national has a GDP of debt grow at 5% at 5% a year, a expenditures. per year.
- The debt is about \$4 trimon.
- What is the optimal deficit policy?

KENT STATE

Yet Even More on Debt and Taxes

Optimal Policy III

- of Antarctica That is, run a national ow deficit of \$200 w at 5% billion per year. per year.
- The debt is about \$4 trillion.
- What is the optimal deficit policy?

KENT STATE

Yet Even More on Debt and Taxes

Optimal Policy IV

- · Assume: the United States of Antarctica has a GDP of \$11 trillion, expected to grow at 5% a year, as are government expenditures.
- The debt is about \$4 trillion.
- The current deficit is \$500 billion per year, and that rate will be flat.

KENT STATE

Optimal Policy IV

- Assume: the United States of Antarctica Policy A: raise has a GDP of at 5% a year, a taxes by \$300 expenditures. billion
- The debt is about \$4 trillion.
- The current deficit is \$500 billion per year and that rate will be flat.

KENT STATE

Optimal Policy IV

of Antarctica Policy B: do A: raise ow nothing, let the y \$300 debt/GDP ratio ion rise. Less efficiency loss, for billion per year we have lower taxes. KEN I SIAI E

Taxes

End

©2004 Charles W. Upton. All rights reserved



Yet Even More on Debt and Taxes