

• Ch. 11

• fiscal + monetary policy

• **big issue**

→ • does money matter
: yes

$$\frac{\Delta \text{RGDP}}{\Delta M_2} > 0$$

→ • does fiscal policy
matter : yes

$$\frac{\Delta \text{RGDP}}{\Delta (T-G)} < 0$$

→ • does policy drive
the business cycle?
: NO

• does the business
cycle claim policy:
yes

evidence: headout

Green span

Monetary Policy Report

please
read.

this lecture : behavioral issues

does fiscal policy matter?

11.5

- do changes in G, T or t have real consequences?
- does a change in the deficit $(G-T)$ have real consequences?
- does a change in the surpluses have real consequences?
- do changes in private spending $(\bar{C}, \bar{I}, \bar{X})$ have real consequences?

recall

$$Y^{ss} = \frac{h}{h[1-c(1-t)] + \pi} (\bar{I} + \bar{G})$$

extreme values

$$h \rightarrow \infty$$

$$h \rightarrow 0$$

$$b \rightarrow 0$$

$$b \rightarrow \infty$$

Keynesian

Neoclassical

ZS-LM framework

14.6

• fiscal policy

• does an increase in \bar{G} decrease the budget surplus?

$$J = T - G$$

$$S = \bar{T} + tY^{ex} - G$$

$$\Delta S = t \Delta Y^{ex} - \Delta G$$

$$\frac{\Delta S}{\Delta G} = t \frac{\Delta Y^{ex}}{\Delta G} - 1.0$$

$$\frac{\Delta S}{\Delta G} = t \frac{h}{h[1-c(1-u)] + kb} - 1.0$$

Keynesian: $h \rightarrow \infty$; $b \rightarrow 0$

$$\frac{\Delta S}{\Delta G} = \left(\frac{t}{[1-c(1-u)]} - 1.0 \right) < 0$$

Monetarist: $h \rightarrow 0$; $b \rightarrow \infty$

$$\frac{\Delta S}{\Delta G} = -1.0$$

IS-LM framework

11.7

- private spending
- does an increase in \bar{I} increase the budget surplus?

$$S = T - G$$

$$S = \bar{T} + tY^e - \bar{G}$$

$$\Delta S = \Delta \bar{T} + t \Delta Y^e - \Delta \bar{G}$$

$$\frac{\Delta S}{\Delta \bar{I}} = 0 + t \frac{\Delta Y^e}{\Delta \bar{I}} - 0$$

$$\frac{\Delta S}{\Delta \bar{I}} = t \frac{1}{h[(1-c)(1-t)] + k.b}$$

Keynesian: $h \rightarrow \infty; b \rightarrow 0$

$$\frac{\Delta S}{\Delta \bar{I}} = \frac{1}{(1-c)(1-t)} > 0$$

consistent
with current
results

Neoclassical:

$$h \rightarrow 0; b \rightarrow \infty$$

$$\frac{\Delta S}{\Delta \bar{I}} = 0$$

inconsistent
with current
results

[note that reduced
surplus has not included]

IS-LM framework

11.3

• crowding out

• does an increase in autonomous
public spending, cause a decrease
in private induced spending?

$$\frac{\Delta I}{\Delta G} < 0 ?$$

$$\frac{\Delta I}{\Delta G} = -1.0 ?$$

Planned Investment Schedule:

$$I = \bar{I} - b i$$

LM curve:

$$i = -\frac{1}{h} \cdot \frac{\bar{M}}{P} + \frac{k}{h} \cdot Y$$

Substitute above:

$$I = \bar{I} - \frac{b}{h} \cdot \frac{\bar{M}}{P} - \frac{b \cdot k}{h} \cdot Y$$

per the question:

$$\frac{\Delta I}{\Delta G} = 0 - 0 - \frac{b \cdot k}{h} \cdot \frac{\Delta Y}{\Delta G}$$

$$\frac{\Delta I}{\Delta G} = -\frac{b \cdot k}{h} \cdot \frac{h}{h(1-c(1-c)) + k \cdot b} < 0$$

crowding out (confirmed)

11.9

$$\frac{\partial I}{\partial \bar{g}} = -1.0?$$

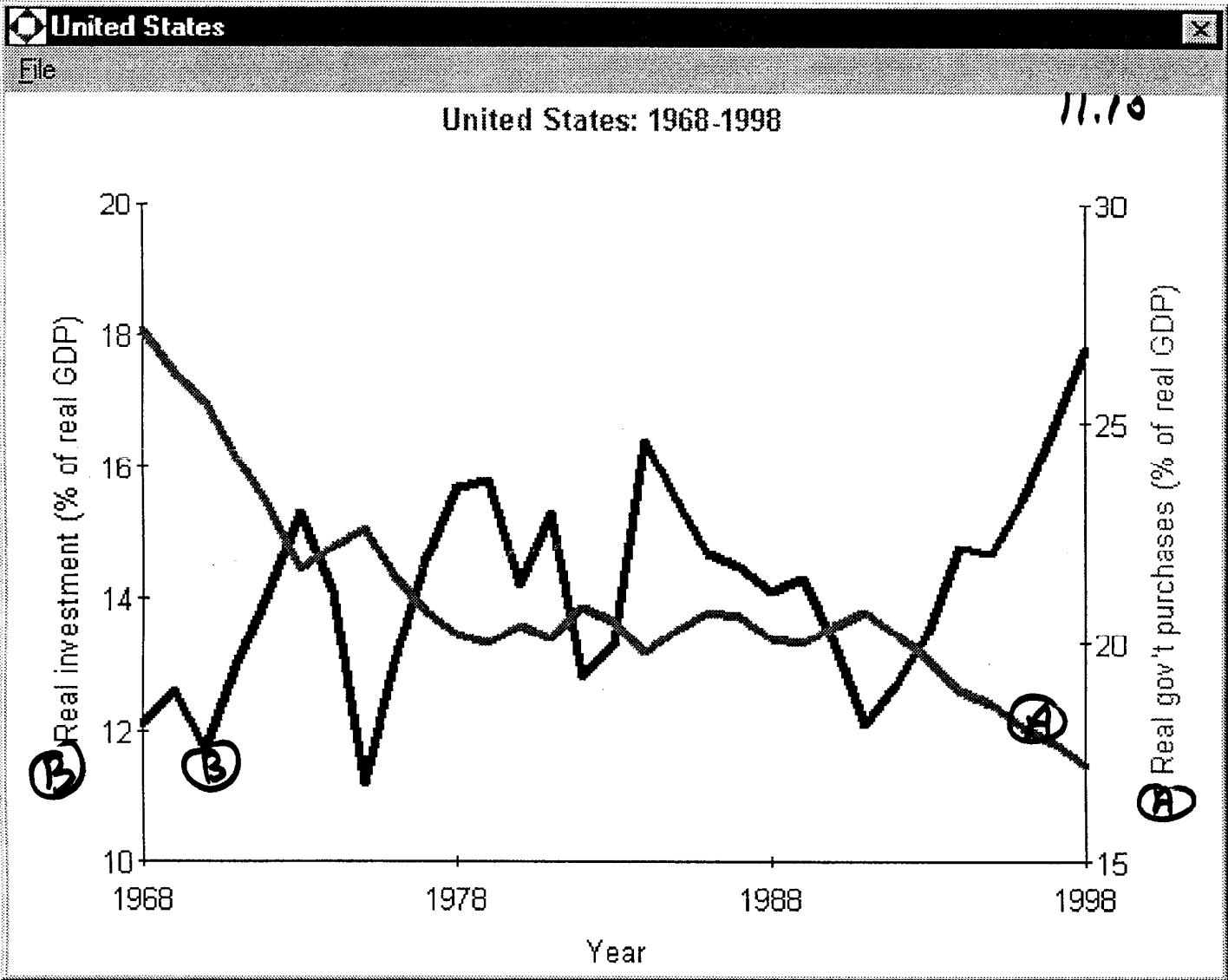
$$\frac{\partial I^{ex}}{\partial \bar{g}} = \frac{-b h}{h[1 - c(u - \epsilon)] + kb} < 0$$

assume $h \rightarrow 0$

more
reactive
position

← the demand for real
cash balances is interest
inelastic; L is vertical

$$\frac{\partial I^{ex}}{\partial \bar{g}} = -1.0$$



• no evident strong negative

correlation as implied if $\frac{\Delta I}{\Delta G} = -1.1$

21-607 framework

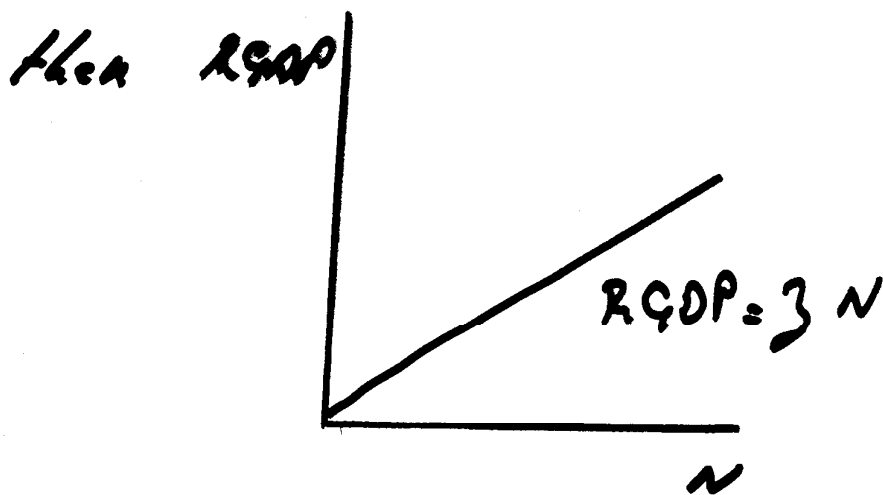
11.11

- do fiscal and monetary policy affect the unemployment rate?
- does private spending affect the unemployment rate?

$$RGDP = f(T, K, N)$$

$$K/N = Cap/125 = \text{constant}$$

T : constant



→ the demand for labor

$$N^D = \frac{1}{3} * RGDP^{2/3}$$

→ additional (crucial) assumption

$$N^D = N^S$$

$$U.R. = \frac{\bar{N}^S - N^D}{N^D} = \text{unemployment rate} \quad 11.16$$

substitute:

$$U.R. = \frac{\bar{N}^S - \frac{1}{3} Y^{eq}}{Y^{eq}} = \frac{\bar{N}^S}{Y^{eq}} - \frac{1}{3}$$

• as income in Y^{eq} decreases

U.R

increases, Chapter 3,

Okun's Law

$$\Delta U.R. / \Delta \bar{G} < 0 \quad ; \quad \Delta U.R. / \Delta \bar{I} < 0$$

$$\Delta U.R. / \Delta \bar{M}_2 < 0$$

$$\Delta U.R. / \Delta (\bar{T} - \bar{G}) < 0$$

↑
budget surplus

$$\Delta U.R. / \Delta \bar{I} > 0$$

↑
strong increase in
private spending

$$U.R. = \frac{\bar{N}^S - N^D}{N^D} = \text{unemployment rate}$$

substitute:

$$U.R. = \frac{\bar{N}^S - \frac{1}{3} Y^{23}}{Y^{23}} = \frac{\bar{N}^S}{Y^{23}} - \frac{1}{3}$$

• an increase in Y^{23} decreases

U.R

recall, chapter 3,

Okun's Law

$$\Delta U.R. / \Delta \bar{G} < 0 \quad ; \quad \Delta U.R. / \Delta \bar{I} < 0$$

$$\Delta U.R. / \Delta \bar{H}_2 < 0$$

Current event:

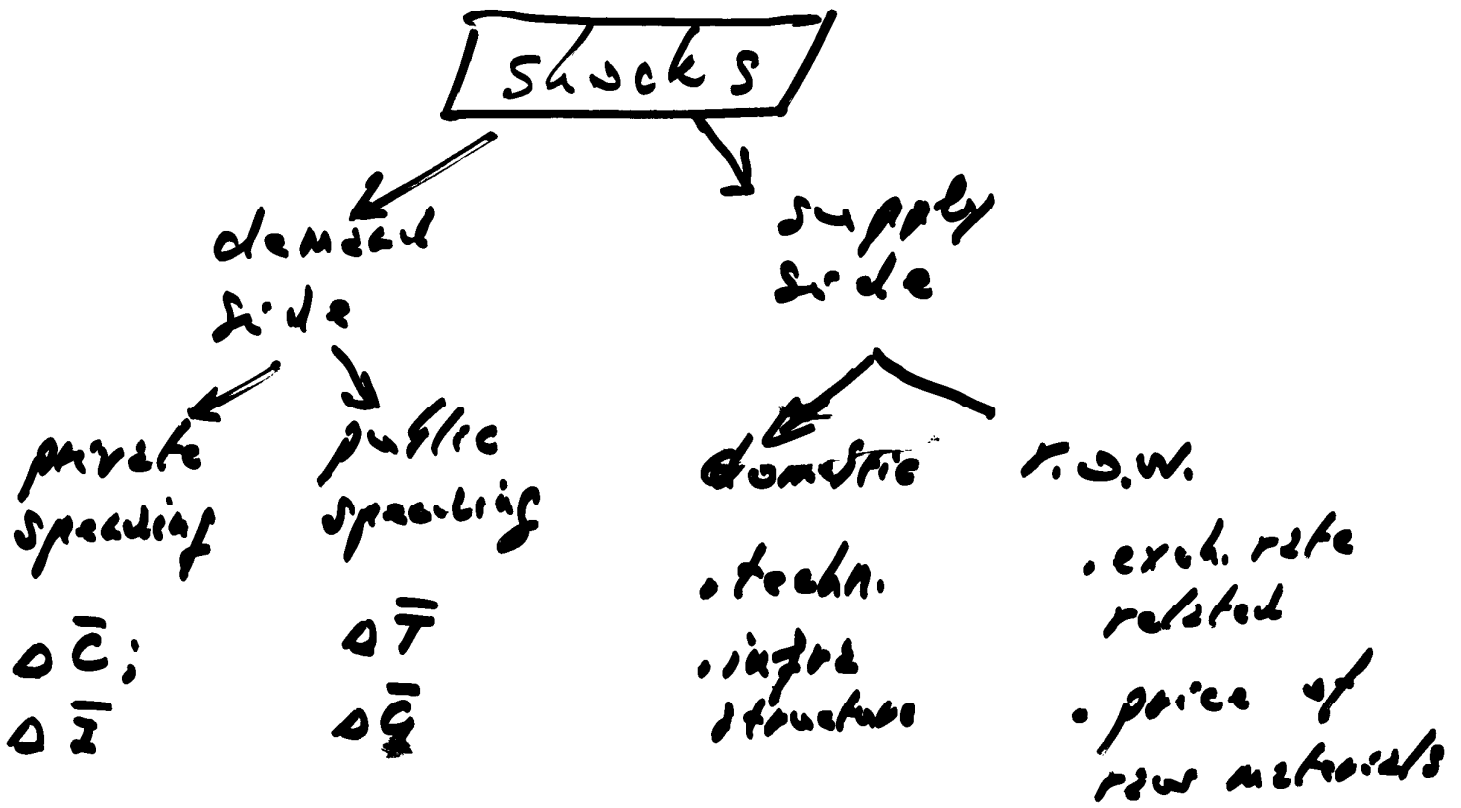
$$\Delta U.R. / \Delta (\bar{T} - \bar{G}) > 0$$

↑
budget surplus

$$\Delta U.R. / \Delta \bar{I} < 0$$

↑
strong increase in private spending

In which effect is stronger?

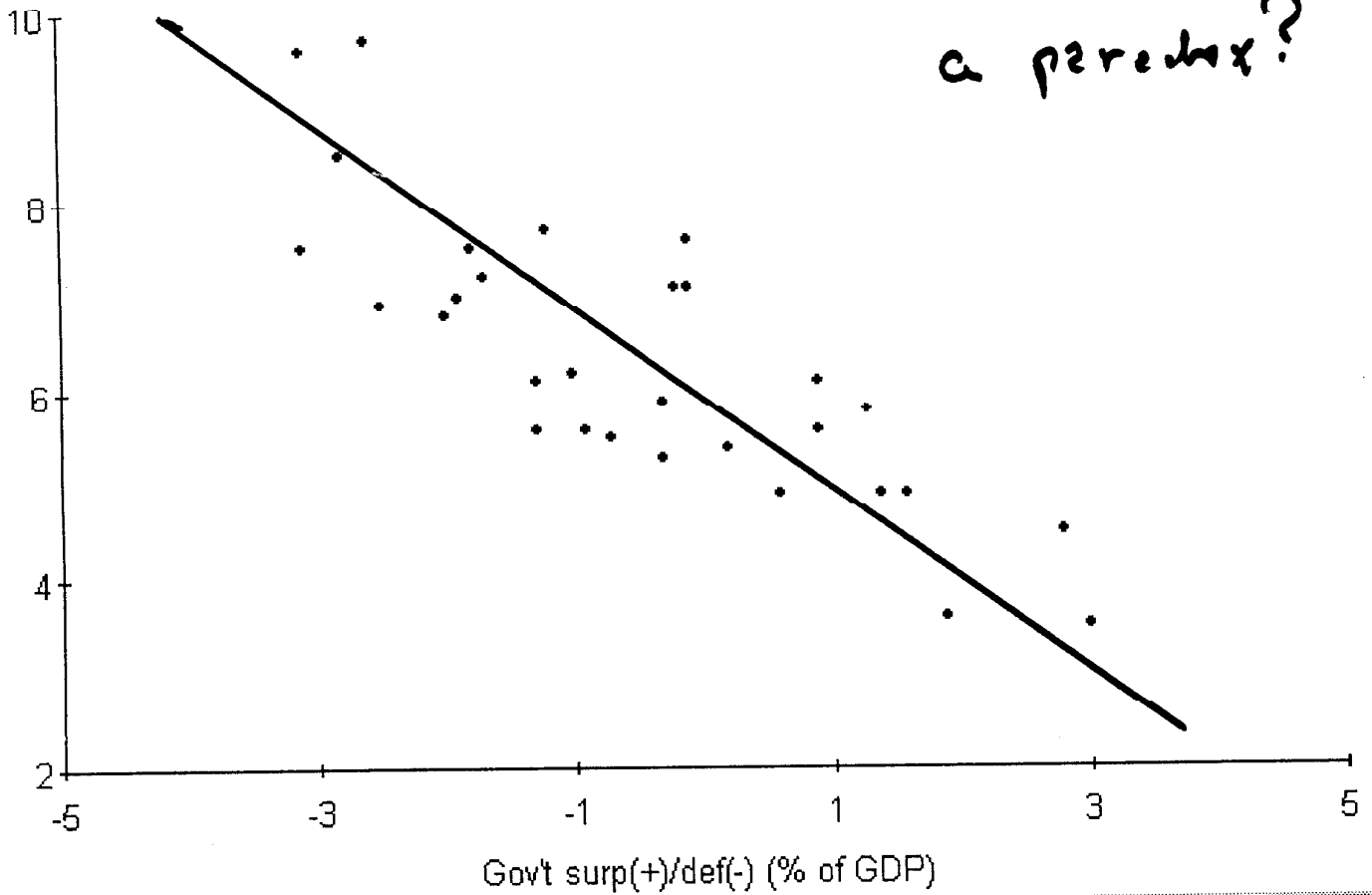


* What expansion developments (shocks) are predominant?

• the business cycle drives fiscal policy.

United States: 1968-1998

Unemployment (% of labor force)



$$\Delta UR = f(\Delta(\bar{T} - \bar{G}); \Delta \bar{I})$$

	$\Delta(\bar{T} - \bar{G})$	$\Delta \bar{I}$
ΔUR	+	-

the business cycle is with us:

- historically the effect of changes in private spending are more important than ~~the~~ net changes in public spending