Return to the Business Cycle
### Keynesian Policy

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<th>State of the Economy</th>
<th>Expansion</th>
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<td>Government Expenditures</td>
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**Policy**

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Therefore, policy measures are like military counter-measures. We adopt the policy to counteract the state of the economy.

A major tenant of Keynesian economics is to borrow and spend money when the economy is in recession and raise taxes to pay off debts during periods of growth.
A change in GDP is proportional to a change in government expenditures.

In other words,

$$\Delta \text{GDP} = k^e \ast \Delta \text{G}$$

From a policy prescription,

$$\Delta \text{G} = \frac{\Delta \text{GDP}}{k^e}$$

We can estimate $\Delta \text{GDP}$. But to find $\Delta \text{G}$, we must know $k^e$?
So, how do we find $k^e$?

Recall the circular flow. GDP equals

$$Y = C + I + G + NX$$

We also know that the same GDP equals

$$Y = \text{Consumption} + \text{Savings} + \text{Taxes}, \text{ or } Y = C + S + T$$

For each additional dollar that the consumer receives, they consume, save or have it taxed.
This implies that,

\[ \Delta Y = \Delta C + \Delta I + \Delta G + \Delta NX \]

Dividing by \( \Delta Y \),

\[ 1 = \frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y} + \frac{\Delta T}{\Delta Y} \]

\( \Delta C/\Delta Y = \) marginal propensity to consume (MPC)

\( \Delta S/\Delta Y = \) marginal propensity to save (MPS)

\( \Delta T/\Delta Y = \) marginal propensity to tax (MPT)
Recall, \( k^e = \Delta GDP / \Delta G \), but we still have not found \( k^e \). So, we ESTIMATE. That is, the proportional change in GDP for a proportional change in government expenditures is simply

\[
k^e = \frac{1}{MPS} = \frac{1}{1 - MPC}
\]

This is the simple fiscal policy multiplier.
Review

All we have said is

1. Fiscal policy can be used to remediate business cycle fluctuations.

2. We can estimate $\Delta GDP$ and $k^e$, so can estimate $\Delta G$.

Are you fed up?

Like you need a break?
Examples:

Suppose MPC=.8 and $\Delta GDP=\$100\ billion$ is needed to bring the economy out of recession. What is the required $\Delta G$ to bring us back to full employment?

1. $K^e=1/(1-.8)=1/.2=5$
2. $\Delta G=\$100\ billion/5=\$20\ billion$

This means that a $\$20\ billion$ increase in government spending will lead to a $\$100\ billion$ increase in GDP.
Suppose \( \Delta G = (-20) \) and the MPS = .75. What is the \( \Delta GDP \)

1. \( k^e = 1/(1-.75) = 1/.25 = 4 \)
2. \( \Delta G = (-$20 \text{ billion}) \times 4 = -$80 \text{ billion} \)

A $20 billion decrease in government expenditures leads to an $80 billion decrease in GDP.

Suppose \( \Delta GDP = $300 \text{ billion} \) and \( \Delta G = $30 \text{ billion} \).

What is the fiscal policy multiplier?

\( k^e = $300/$30 = 10 \)

A $1 increase in government expenditures leads to a $10 increase in GDP.
What are the benefits of fiscal policy?

1. Perceived ability of policy makers to manage aggregate demand.

2. Automatic stabilizers that take away income when the economy is growing and gives back to the economy when the economy contracts. This reduces the size of business cycle fluctuations.
Problems with fiscal policy

1995 Nobel Prize winner Robert Lucas

“As an advice-giving profession, we are in way over our heads.”

On another occasion when asked whether the job of government was to look after its citizenry, Dr. Lucas responded “I don’t think that is what the ancient Egyptians thought.”
Lucas Critique of fiscal policy.

1. We simply know too little about the business cycle to place great trust in government to remedy cyclical fluctuations.

2. Models and statistics are not formed or analyzed in real-time. However, policy making decisions must be made in real time.
   A. “Maya”, don’t mistake the map for the terrain.
   B. Can not trust $k^e$ because it is historical.
3. Expectations are important--- The Pygmalion effect.
A. Keynesian economics does not account for expectations in the economy. He relied on a “convention.” What economic agents thought about the past will continue into the future.
B. Lucas said, “not so.” When we change policy economic agents change their behavior.

For Lucas, this rendered fiscal policy mute.
Beyond Lucas Criticisms

*Public Choice*

We like to think that the objective of politicians is to maximize social welfare. However, evidence suggests an entirely different picture. Politicians seek their own self-interest. This means that fiscal policy will not be used for its intended effect, i.e., deficits will not be paid off during prosperity.
So, is there anything that policy can do?