

Terms/Concepts for Econ Test 2.

-Fiscal Policy → What the government is suppose to do to smooth out the business cycle.

-3 Major Goals:

1. Economic Growth (GDP)
2. Low Unemployment Rate
3. Low Inflation

KEYNESIAN FISCAL POLICY TOOLS:

To Fight Unemployment

Expansionary Fiscal Policy

1. + Government Spending
2. - Taxes
3. + Transfer Payments

To Fight Inflation

Contractionary Fiscal Policy

1. - Government Spending
2. + Taxes
3. - Transfer Payments

-Refer to notes/handout

-GDP_e → Where the economy is; equilibrium.

-GDP_{full} → Full employment; where you want the economy to be.

FOR EXAMPLE:

Suppose that the economy (the GDP) is at \$1,600, to use an easy number. (That is 1.6 trillion.) Further suppose that full-employment GDP is \$2,000. That means that the change in AD = +\$400 billion.

QUESTION: How much money would the government have to spend to “lift” the economy (the GDP) from \$1,600 to \$2,000?

According to John Keynes:

-Money has a multiplier effect → Derby example = rates go up (hotels, bars, etc.)

-Government Spending → $1/(1-MPC)$

$$MPC = 0.75$$

$$1/(1-0.75) = 4$$

Change in Government Spending → Change in AD / M government spending

$$400/4 = +100$$

-Spending Cycle

-Taxes → $-MPC/(1-MPC)$

$$-0.75/(1-0.75) = -3$$

Change in Taxes → Change in AD / M taxes

$$400/(-3) = -133.33$$

-Simplified Keynesian formula of equilibrium:
 *** $Y = C_a + MPC(Y-T) + I + G$ ***
 Y_e = same as GDP equilibrium
 Y_f = same as GDP full
 C_a = Autonomous Consumption → how much you could live on if you had no income
 What we are doing above in the Keynesian formula is using Y_e
 Example:
 $Y = 300 + .80(Y-200) + 200 + 300$
 $Y_f = 3600$
 1. Solve for Y_e
 2. Solve for Y_f (doesn't go anywhere in this formula)
 $Y = 800 + .8Y - 160$
 $Y = 640 + .8Y$
 $1Y - .8Y = 640$
 $.2Y = 640$
 $.2Y/.2 = 640/.2$
 $Y_e = 3200$ → solved for the first step
 3. Subtract to find the change in AD
 a. $3600 - 3200 = 400$ AD
 4. What are you fighting, inflation or unemployment?
 a. $Y_f > Y_e$ → Fighting Unemployment
 b. $Y_f < Y_e$ → **Fighting Inflation**
 5. Do you need to "increase" or "decrease"
 6. Find multiplier
 7. Divide the change in AD by the multiplier
 a. $400/5 = 80$
 -Change in Gov't Spnd = Change in Aggregate Demand/Multiplier gov't spnd
 -Balanced Budget → multiplier is one

EXAMPLE of "Round X Round" Keynesian Multiplier:

<u>Spending Cycles:</u>	<u>Change in Spending</u>	<u>Cumulative Increase in Spending</u>
First cycle:	\$100.00	\$100.00
Second cycle:	75.00	175.00
Third cycle:	56.25	231.25
Fourth cycle:	42.19	273.44
Fifth cycle:	31.64	305.08
Sixth cycle:	23.73	328.81
Nth cycle and beyond:	400.00

Faster way to figure the various multipliers:

MPC:	<u>.9</u>	<u>.8</u>	<u>.75</u>	<u>2/3</u>	<u>.6</u>	<u>.5</u>
GS:	10	5	4	3	2.5	2
Tax:	-9	-4	-3	-2	-1.5	-1
T. Pmt.	9	4	3	2	1.5	1

(1) Keynesian Theory →

1. Increase government spending or cut tax rates to put more disposable income in peoples' hands.
2. People use increased income to buy more goods and services—aggregate demand increases.
3. To meet new demand, companies expand output.
4. Employment rises, new plants go up, the whole economy expands.

NOTE: The Keynesian Multiplier is NOT as powerful as the theory suggests.

In reality, there are “leakages.” For example:

1. Some of the “extra money” may be saved after all;
2. Some of the extra money may go to taxes;
3. If the money would have been spent anyway, (say on another project) then there is no extra boost;
4. If the multiplier is to work its magic, resources that would have otherwise been unemployed must be brought into the production process. Unless this is the case, the expansion in demand will simply lead to higher inflation.

MOST ECONOMISTS BELIEVE THAT THE REAL MULTIPLIER IS ABOUT 1.80. (!)
-Automatic Transfers/Stabilizers→ Federal expenditure or revenue items that automatically respond counter-cyclically to changes in national income.

What is the purpose of the AS? It is to try to smooth out the ups and downs of the macro economy; to give people money when they don't have money to pay their bills. (See RSI #9.1)

Balanced Budget Multiplier Example: $Y = 625 + .75(Y - 300) + 100 + 300$

$Y_e = 3200$. What if you want to be at 3230? Add \$30 to BOTH G and T!!!

(2) SUPPLY-SIDE THEORY → (Used to fight “cost-push” inflation, aka “stagflation”)

1. Cut tax rates to boost incentives to work and invest because: (a) High marginal tax rates discourage work effort and productivity. (b) High marginal tax rates adversely affect the rate of capital formation and the efficiency of its use. (c) High marginal tax rates encourage people to substitute less-desired tax-deductible goods for more-desired nondeductible goods.
2. Firms invest more and try new ventures; jobs are created; people work harder—aggregate supply increases
3. New investment and labor being increased output
4. Employment rises, new plants go up, and the whole economy expands.

[Coffee Pot Analogy]

(3) FISCAL POLICY and the Crowding Out Effect→ If the government raises taxes or borrows more money, it effectively crowds out consumers and investors who would otherwise be spending or borrowing; there is only so much money out there and if the government “hogs” all of the money, we (society), get crowded out.

-Crowding Out→ A reduction in private sector borrowing and spending caused by increased government spending.

(4) FISCAL POLICY and the New Classical View:

New classical economists believe that there are **strong forces** pushing a market economy toward full-employment equilibrium and that macroeconomic policy is an ineffective tool with which to reduce economic instability. (Remember: Classical economists believe that wages and prices are FLEXIBLE; Keynesians do NOT believe this!)

The new classical economists stress that debt financing simply substitutes higher future taxes for lower current taxes. Thus, budget deficits affect the timing of the taxes, but not their magnitude. They believe that fiscal policy is completely impotent.

[See RSI: 9.1]

(5) RATIONAL EXPECTATIONS THEORY:

Hypothesis that people's spending decisions are based on all available information, including the anticipated effects of government intervention.

In other words, people act to better their own self-interests: their utility (pleasure) and their profits. They anticipate what policies the government will enact in the future and how those policies will affect them. They will then take counter-measures now. Fiscal policy is therefore weakened before it takes hold and well before it becomes "shovel ready." (See IMG 2289)

Remember the "unintended consequences of an action."

(6) MONETARISTS THEORY:

Inflation is a phenomenon of too much money in the economy. To control inflation (and the macro economy in general) "keep your eye on the money supply!" Everything else is window dressing! [This theory will be explained in detail under the "Federal Reserve and Monetary Policy" lecture.]

TIMING OF ANY FISCAL POLICY:

Four lags:

1. Recognition lag.
2. Legislative lag.
3. Implementation lag.
4. Impact lag.

-National Deficit: The difference between what the government takes in and what it spends.

-National Debt: All of the deficits added together.

-To whom is the debt owed?

The PUBLIC sector: Social Security: 23%; Federal agencies: 22%; Federal Reserve: 5%; State and local governments: 5%.

The PRIVATE sector: (banks, money market funds, etc., and individuals): 17%.

The FOREIGN sector: 28%.

Where does the government get its money? One of three ways:

1---TAXES. Good: not inflationary; bad: takes away spending power of those taxed. Not politically popular.
Is anything gained? Keynesians would say yes—the “balanced budget multiplier” scenario.

2---BORROWING from the public (and foreign countries): Good: no need to raise taxes which is politically popular.
Bad: needs to be paid back with interest; shifts the debt responsibility to future generations; can get out of control (go figure!)

3--- BORROWING from the FED. (SEIGNIORAGE) This term has different meanings, but here we basically mean that the government (the Fed) “creates” money out of thin air---in a sense “printing money.”
(Example: if your bank’s main computer said that you had \$100,000 in your checking account, than you DO have \$100,000 in your checking account!)

Good: politically popular, no taxes, no added debt.
Bad: can be highly inflationary because it is NEW money that is being added to the economy, not money just being “passed around.”

[See 14th Amendment to the U.S. Constitution, Section 4.]

The following quotes are from a Scottish professor named Alexander Tytler:

“A democracy cannot exist as a permanent form of government. It can only exist until the voters discover that they can vote themselves largesse from the public treasury. From that moment on, the majority always votes for the candidates promising the most benefits from the public treasury with the result that a democracy always collapses over loose fiscal policy, always followed by a dictatorship. The average age of the world’s greatest civilizations has been 200 years.”

And: “Great nations rise and fall. The people go from bondage to spiritual truth, to great courage, from courage to liberty, from liberty to abundance, from abundance to selfishness, from selfishness to complacency, from complacency to apathy, from apathy to dependence, from dependence back again to bondage.”

A History Lesson:

History has revealed to us that there are 6 steps to conquer and subjugate a society:

1. Keep them fed.
2. Keep them entertained. (The Romans called these two “Bread and Circus.”)
3. Confiscate their wealth.
4. Confiscate their weapons.
5. Eliminate their belief in a higher almighty power. (Karl Marx called religion “The Opiate of the People.”)
6. Make them beholden to the government for their income, support, and their basic right to live or die. (National Health Care?)

ARE WE THERE YET? (See “64 Years Later”)

[See “Review Questions for Test 2”]

Sounds like a plan...

Subject: Fwd: a message from Warren Buffett

"I could end the deficit in 5 minutes," he told CNBC. "You just pass a law that says that anytime there is a deficit of more than 3% of GDP, all sitting members of Congress are ineligible for re-election.

The 26th amendment (granting the right to vote for 18 year-olds) took only 3 months & 8 days to be ratified! Why? Simple! The people demanded it. That was in 1971 - before computers, e-mail, cell phones, etc.

Of the 27 amendments to the Constitution, seven (7) took one (1) year or less to become the law of the land - all because of public pressure.

Warren Buffet is asking each addressee to forward this email to a minimum of twenty people on their address list; in turn ask each of those to do likewise.

In three days, most people in The United States of America will have the message. This is one idea that really should be passed around.

_ *Congressional Reform Act of 2013*

1. No Tenure / No Pension.

A Congressman/woman collects a salary while in office and receives no pay when they're out of office.

2. Congress (past, present & future) participates in Social Security.

All funds in the Congressional retirement fund move to the Social Security system immediately. All future funds flow into the Social Security system, and Congress participates with the American people. It may not be used for any other purpose.

3. Congress can purchase their own retirement plan, just as all Americans do.

4. Congress will no longer vote themselves a pay raise. Congressional pay will rise by the lower of CPI or 3%.

5. Congress loses their current health care system and

participates in the same health care system as the American people.

6. Congress must equally abide by all laws they impose on the American people.

7. All contracts with past and present Congressmen/women are void effective 1/1/13. The American people did not make this contract with Congressmen/women.

Congressmen/women made all these contracts for themselves. Serving in Congress is an honor, not a career. The Founding Fathers envisioned citizen legislators, so ours should serve their term(s), then go home and back to work.

If each person contacts a minimum of twenty people then it will only take three days for most people (in the U.S.) to receive the message. Don't you think it's time?

THIS IS HOW YOU FIX CONGRESS!

Maybe this would help: A proposed 28th Amendment to the U.S. Constitution:

“Congress shall make no law that applies to the citizens of the United States that does not apply equally to the Senators and/or Representatives; and, Congress shall make no law that applies to the Senators and/or Representatives that does not apply equally to the citizens of the United States.”

-Money →

-Four Functions that Money HAS to have:

1. A medium of exchange
2. A store of value
3. A measure of value
4. A standard of deferred payment

-Characteristics that We Like Money to have:

1. Portable
2. Durable
3. Divisible
4. Recognizable
5. Uniform
6. Hard to Duplicate
7. Stable in value

**** What is a full body coin? ****

Full body coin is a coin in which the metal value (intrinsic value) itself is what makes the coin valuable. The last of these coins were made in 1964. A way that you tell the token coins from the full body coins is they feel different but also the edges are different: copper edge is fake, silver edge is real/full body coin.

-Gresham's Law →

Bad money drives out good money

<u>Measure</u>	<u>Components</u>
M1	~\$2.228 trillion Currency in circulation outside of bank vaults (52%) Demand deposits at commercial banks (24%) Credits union share drafts Demand deposits at mutual savings bank = (24%) Travelers' Checks (less than .7%)
M2	~\$9766 trillion M1 plus: Savings account Time deposits of less than \$100,000 Money market mutual funds
M3	M2 plus: Time deposits larger than \$100,000 Repurchase agreements Overnight Eurodollars
L	M3 plus other liquid assets, for example: Treasury bills U.S. savings bonds Banker's acceptances Term Eurodollars Commercial paper

-Liquidity→ how fast you can turn assets into cash (as you go down from M1 to L you get less liquid; as you go up from L to M1 you get more liquid)

** If you go to an ATM machine and push "cash from savings account" (\$20), what would happen to M1 and M2 in so far as increase/decrease? **

M1 increases by \$20

M2 stays the same/constant (M2 includes M1 plus other components)

BANKING:

-What is a Bank→

The essential functions of a bank are to:

1. Accept deposits
2. Make loans
3. Offer check-writing privileges

Commercial Banks →

-Provide a full range of banking services, including savings, “time deposits” (Certificates of Deposit), checking accounts and loans for all purposes

-Hold nearly all demand deposits and nearly half of total saving deposits

Savings & Loans →

-Took in deposits and lent money for long-term (20, 25, 30 years) mortgages

Credit Unions →

-A cooperative society formed by individuals bound by some COMMON TIE, such as a common employer or labor union

-Typically, credit unions hold members’ saving accounts and enjoy access to the pooled saving of all members (tend to be very small)

-Although there are close to 22,000 credit unions in the U.S., they hold less than 5% of total savings deposits

- Credit Unions can usually PAY you MORE interest on your money and CHARGE you LESS interest to borrow money. (They have lower operating costs and they pay no taxes.) Bankers hate this!

Brokerage Firms →

-Buy and sell stocks and bonds

BUT: Since the 1980 Depository Institutions Deregulation and Monetary Control Act, it all has become pretty much “one-stop” shopping (or banking).

NOTE: Beware of “non-bank” financial intermediaries: (loan companies, “quick money” loan places, etc.)

---Example: “Holder-in-due-Course.”

-Bankers make money by lending money out:

FOR EXAMPLE:

-Reserve Ratio (RR) $\rightarrow .20$

-Initial Deposit $\times (1/rr) = \text{Money Multiplier}$

$$\$100 \times (1/.20) = \$500$$

	Chg. in Dep.	Chg. in rr.	Chg. in excess reserves
If \$100 in cash is deposited into Bank A:	\$100	\$20	\$80
\$80 loan deposited into Bank B:	\$80	\$16	\$64
\$64 loan deposited into Bank C:	\$64	\$12.80	\$51.20
If this continues, the cumulative effect will be:	\$500	\$100	\$100

Note: The \$500 is the new TOTAL MONEY, but \$400 would be the NEW MONEY CREATED by the lending process.

-In the real world, real reserve ratio is $.03 \rightarrow 1/.03 (rr) + .30 (\text{cash}) + .01 (\text{vault cash-certain amount of money the tellers have to pay out}) \approx 2.94$ is the multiplier.

REAL WORLD:

<u>Transaction Account Amount</u>	<u>Reserve Requirement (%)</u>
\$0 to 10.3 million	0%
\$10.3 to 44.4 million	3%
>\$44.4 million	10%

IN SUMMARY:

TOTAL DEPOSITS (reserves) – REQUIRED RESERVES = EXCESS RESERVES

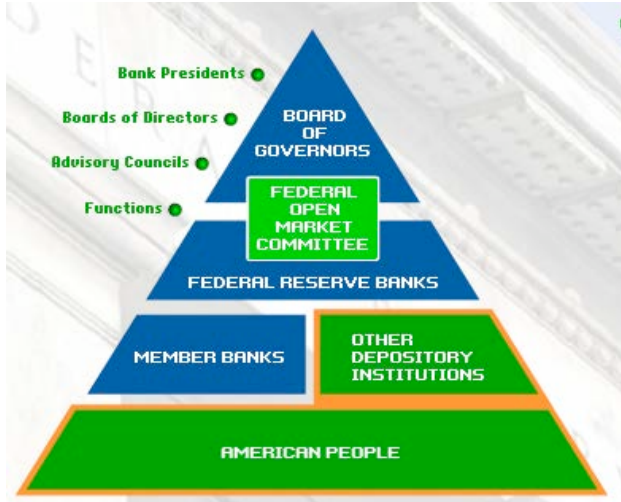
(Banks like to lend out the excess reserves because that is how they make money!)

-THE FEDERAL RESERVE SYSTEM → consists of 12 banks representing the nation's 12 Federal Reserve districts. The 12 banks manage the day-to-day needs of the banking system by maintaining a stable flow of money

What the FED does:

- Acts as lender of last resort to banks, savings associations and credit unions in trouble
- Keeps reserves deposited depository institutions
- Supplies currency and coins to banks
- Destroys worn-out bills, coin
- Serves as fiscal agent for the U.S. Treasury
- Conducts domestic and foreign monetary operations through the New York Federal Reserve Bank as agent for the Federal open Market Committee

-Structure of the FED



-Board of Governors

- 7 Members
- Presidential Appointment with Senate Approval
- Staggered Terms
- Chairman

** Why is the board of governors sworn in every 14 years? To be above political considerations **

-Federal Open Market Committee

- 12 Members
- 7 Governors plus 5 Reserve Bank Presidents
- Sets Course for **Monetary Policy!**

-Monetary Policy→

To Fight Unemployment:

Expansionary Monetary Policy

“Loose”

1. Lower Reserve Ratio
2. Lower Discount Rate
3. OMO → Buy Bonds
4. Lower Federal Funds Rate

To Fight Inflation:

Contractionary Monetary Policy

“Tight”

1. Increase Reserve Ratio
2. Increase Discount Rate
3. OMO → Sell Bonds
4. Increase Federal Funds Rate

-Discount Rate → rate of interest that the FED charges banks; if a bank wants to borrow money from the FED, the FED will charge a **discount rate**

-Prime Rate → rate of interest a bank would charge its **best** customers

-Federal Funds Rate → the amount banks charge **each other** for short-term loans

-Open Market Operations → the buying and selling of government bonds by the FED; the treasury issues the bonds but the FED buys them

-Which of the above is used most often? 1) OMO 2) Federal Funds Rate
3) Discount Rate 4) Reserve Ratio

Monetary Policy

Counter-Cyclical Monetary Policy	<i>Restrictive Monetary Policy is invoked in an attempt to “cool down” the economy during an expansion. Why? To stop the economy from encountering inflationary problems.</i>	<i>Expansionary Monetary Policy is invoked in an attempt to boost the economy during a contraction. Why? To stop the economy from encountering unemployment problems.</i>
Open Market Operations	The FED sells bonds from their portfolio. Bond buyers write checks to the FED pulling money out of the economy.	The FED buys bonds from their portfolio. The FED writes checks to bond sellers injecting money into the economy.
The Discount Rate	Raise the discount rate.	Lower the discount rate.
Reserve Requirements	Raise Reserve Requirements.	Lower Reserve Requirements.

-Monetary policy works great fighting against inflation using contractionary monetary policy, but it doesn't work so well for fighting unemployment using expansionary monetary policy (used the analogy of the FED pushing on a string/leash trying to get the economy/dog to move faster→doesn't work!)

-Liquidity Trap→ interest rates can go so low that the FED can no longer entice you to borrow money or to save money; you want people to borrow money=lower money supply, want people to save more money=increase rates

"Quantitative Easing"= The Fed buys securities like mad in order to REALLY increase the money supply. Some economists liken this to "printing press" money used by Germany in 1923 and by various "Banana Republics" in the past; they caution that it can lead to very high inflation. Some economists claim that it is a last-ditch effort by the Fed to get the banks to LEND money to individuals and businesses.

[Show "The Crisis of Credit" here.]

- Monetarists → they believe in the equation of exchange → $M*V=P*Q$
 - Price X Quantity = Money Supply (M1) X Velocity (how many times does a dollar spend/turn over in a years time, which about 10)
 - GDP = M1 X Velocity
 - Velocity = GDP/M1 \$15.066 trillion/\$2.228 trillion= Velocity is ~6.76

(See RSI #11-22)

-Monetarists believe that Quantity is fixed/stable/not very fast; they also believe that Velocity doesn't change much/not very fast → if these two variables are fixed, the only way you can get inflation is to have the money supply increase faster than the economy is growing

-The economy grows about 3-5%/year; therefore, increase the money supply 3-5%/year- the only reason you would need to keep increasing the money supply is that interest rates would go so high that it would "choke out" the economy

-How do you fight unemployment? –Same way as above. If you keep increasing the money supply, eventually interest rates will get so low that people are "bound" to start borrowing money.

Question to ask a Monetarist; "What's money?" → M1?

- How do you define M1? –This is what we would ask today.
- Keynesians believe that Velocity can change; it's not fixed.
- “Stop-Go” → Federal reserve tightens up the money supply when there's inflation (“STOP”) and then loosens the money supply if/when unemployment returns. (“GO”)

A Monetarist would say to increase the money supply steadily, like a car on cruise control.

BONDS:

-How do Bonds work?

-A bond is an IOU; have a secondary market

P = Price

Y = Yield

D = Dividend

-A certificate of deposit →

P = Principal

R = Rate

I = Interest

- $Y = D/P$

-** $P = D/Y$ **

1. When Interest Rates go up the Price (Value) of *Existing* Bonds go down

-ie: Interest is \$100, Principal/Price is \$1000 → $100/1000 = 10\%$ Yield

Dividend ALWAYS on top

-ie: Dividend is \$100, Yield is 12% → $100/.12 = \$833.33$ Principal/Price

MACRO POLICY: WHAT HAVE WE LEARNED?

Areas of Agreement:

1. It is difficult to time changes in monetary and fiscal policy correctly, and therefore constant policy swings are likely to do more harm than good. ("See the 4 "lags" above.)
2. Expansionary policies that generate strong demand and inflation will not reduce the rate of unemployment below the "natural rate"—at least not for long.
3. Price stability is the proper goal of monetary policy.

Areas of Continued Debate:

1. Do fiscal policy measures really exert much impact on aggregate demand?
2. During a severe recession, will an increase in government spending be more effective than a reduction in taxes as a tool to promote recovery?
3. Is economic instability the result of the natural tendencies of a market economy or the errors of policy makers?

One more sample problem: ☺

$C_a = \$1000$ billion

$MPC = 2/3$

$T = \$600$

$I = \$200$

$G = \$400$

$Y_f = \$3,900$

1. How much would GS have to increase/decrease in order to bring the economy to the desired level?
2. How much would TAXES have to increase/ decrease in order to bring the economy to the desired level?

WHAT IF THE GOVERNMENT WANTED TO INCREASE Y_f to only \$3690, not \$3900?

What if they increased GS by \$90 AND raised TAXES \$90 to pay for the increase in spending? What would be the NEW Y_f ? (This is known as the BALANCED BUDGET MULTIPLIER APPROACH.)