The AD-AS Model and Fiscal Policy

Chapter 10

Introduction

- The AE model highlights the role of aggregate demand management policies.
- These include monetary policy and fiscal policy.

Introduction

- ***Fiscal policy*** – the deliberate change in either government spending or taxes to stimulate or slow down the economy.
- ***Expansionary fiscal policy*** involves decreasing taxes or increasing government spending.
- ***Contractionary fiscal policy*** involves increasing taxes or decreasing government spending.

The Story of Fiscal Policy

- An economy needs a countershock to get out of a deep recession.
- ***Countershock*** – a jolt in the opposite direction of the shift in aggregate demand to get the multiplier working in reverse.

Story of Fiscal Policy

- Individuals, as individuals, are often not prepared to increase their spending during a recession.
- Collective action may be needed.

Story of Fiscal Policy

- With fiscal policy, government could provide the needed increased spending by decreasing taxes, increasing government spending, or both.
- The multiplier would then take over and expand the effect of the initial spending.

Aggregate Demand Management

- ***Aggregate demand management*** is government's attempt to control the aggregate level of spending in the economy.

Aggregate Demand Management

- Demand management is necessary because the effects are significantly different when one person does something rather than everyone doing the same thing.
- Keynesians argued that, in times of recession, spending is a public good that benefits everyone.

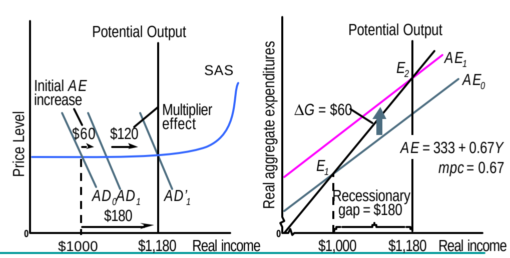
Fighting Recession: Expansionary Fiscal Policy

- The economy is below potential income during a recession.
- There is a ***recessionary gap*** – the difference between equilibrium income and potential income when potential income exceeds equilibrium income.

Fighting Recession: Expansionary Fiscal Policy

- Fighting recession requires expansionary fiscal policy.
- Assuming that government knows the value of the multiplier, the right amount of spending could be injected into the economy to close the recessionary gap.

Fighting a Recession



Fighting Inflation: Contractionary Fiscal Policy

- When inflation begins to accelerate beyond potential output, fiscal policy works in reverse by decreasing expenditures that are too high.
- Fighting inflation requires contractionary fiscal policy.

Fighting Inflation: Contractionary Fiscal Policy

- If the quantity of aggregate demand exceeds potential income at that price level, there will be excess demand and pressures for inflation.

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Fighting Inflation: Contractionary Fiscal Policy

- Output may temporarily exceed potential output because firms and workers may be slow to raise prices and wages.
- Soon shortages and accelerating inflation will drive the economy back to its potential income.

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Fighting Inflation: Contractionary Fiscal Policy

- Government should decrease its expenditures by an amount that reflects the magnitude of the multiplier.
- This expenditure reduction would remove the ***inflationary gap*** – the difference between equilibrium income and potential income when equilibrium income exceeds potential income.

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Effectiveness of Fiscal Policy

- There are two ways to think about the effectiveness of fiscal policy – in the model and in reality.
- If the model is correct in describing the economy, and if government acts quickly enough in a countercyclical way, depressions can be avoided.

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Problem of Estimating Potential Output

- Unfortunately, the target rate of unemployment fluctuates and is difficult to predict.
- For example, we don't know if we are dealing with structural or cyclical unemployment.

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Effectiveness of Fiscal Policy

- ***Countercyclical fiscal policy*** – fiscal policy in which the government offsets any change in aggregate expenditures that would create a business cycle.

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Effectiveness of Fiscal Policy

- Fine tuning is the term used to describe a fiscal policy designed to keep the economy always at its target or potential level of income.
- ***Fine tuning*** – fiscal policy designed to keep the economy always at its target or potential level of income.

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Effectiveness of Fiscal Policy

- All economists now recognize that the dynamic adjustment in the economy is extraordinarily complicated, especially when taking into account reasonable expectations of future policy.

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Alternatives to Fiscal Policy

- Changes in autonomous C, I, G, X, or IM can achieve the same results as fiscal policy.
- Any policy that can change autonomous expenditures without having offsetting effects on other expenditures can be used to influence the direction and movement of aggregate income.

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Alternatives to Fiscal Policy

- There are three alternatives to fiscal policy:
  - Directed investment policies.
  - Trade policies.
  - Autonomous consumption policies.

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Directed Investment Policies

- ***Directed investment policies*** are those affecting expectations to increase investment.

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Directed Investment Policies

- A numerical example:
  By how much must autonomous investment increase, if income is $400 less than desired and the *mpc* is 0.5?
- Working backward, the multiplier is 2, so autonomous investment must increase by $200.

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Rosy Scenario: Talking the Economy into Fiscal Health

- Gloomy government pronouncements may affect expectations and decrease investment and consumption spending.
- ***Rosy scenario*** – government policy of making optimistic predictions and never making gloomy predictions.

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Financial Guarantees

- Another way to influence investment is to protect the financial system by government guarantees or promises of guarantees.
- An example would be a government policy preventing bank failures.

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Trade Policy and Export-Led Growth

- Any governmental policy that increases autonomous exports and decreases autonomous imports will also have multiplied effects on income.
- These policies are called ***export-led growth policies.***

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Trade Policy and Export-Led Growth

- ***Export-led growth policies*** – policies designed to stimulate exports and increase aggregate expenditures on Canadian goods.
- Any policy that restricts imports, such as increased tariffs, will have the same effect on the economy.

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Interdependencies in the Global Economy

- Any time a nation attempts to restrict imports, it is equivalent to getting another country to suffer an import-led decline of its economy.
- As a consequence, many economists support free trade agreements such as NAFTA (North American Free Trade Agreement).

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Exchange Rate Policies

- ***Exchange rate policy*** – a policy of deliberately affecting a country's exchange rate in order to affect its trade balance.
- A low value of a country's currency relative to other currencies encourages exports and discourages imports, and vice versa.

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Autonomous Consumption Policy

- Autonomous consumption policy is a third alternative.
- Increasing the availability of consumer credit to individuals increases consumption.

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Real World Examples

- The effect of wartime spending in the 1930s and 1940s and the prolonged expansion of the mid-1990s to early 2000s illustrate how fiscal policies work.

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Fiscal Policy in World War II

- Taxes rose during World War II, but government expenditures rose much more.
- The deficit increased and real income rose by more than the increase in the deficit.

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Fiscal Policy in World War II

- But where is the price-level increase one would expect?
- One would normally expect a huge inflation.
- The wartime expansion was accompanied by wage and price controls and rationing.

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Fiscal Policy in World War II

- Although World War II expanded the economy, that doesn't mean wars are good for the economy.
  - The production of military goods increased, but the production of consumer goods decreased.
  - Many people were killed or permanently disabled.

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War Finance: Expansionary Fiscal Policy

Year	GNP (billions of 1971 dollars)	Federal deficit (millions of dollars)	Unemployment rate
1937	16.4	17	9.0
1938	16.6	51	11.4
1939	17.8	119	11.4
1940	20.3	378	9.2
1941	23.2	396	4.4
1942	27.5	2137	3.0
1943	28.6	2557	1.7
1944	29.8	2559	1.4
1945	29.1	2123	1.6
1946	28.3	374	2.6

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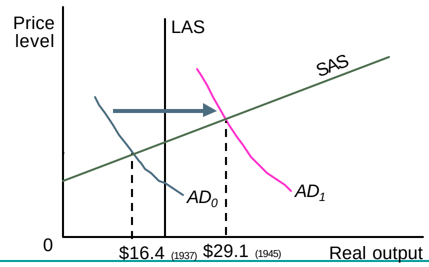
War Finance: Expansionary Fiscal Policy



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Recent Fiscal Policy

- The deficit picture in the 1990s changed from a large deficit to a large surplus.
- Economic theory would predict a slow down in the economy – but the economy boomed in the mid-1990s.
- There are two explanations for this seeming paradox.

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Recent Fiscal Policy

- The contractionary effect of the surplus was offset by booms in consumer and investment spending.
- Much of the surplus resulted from an increase in income in a booming economy, not from discretionary fiscal policy.

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Recent Fiscal Policy

- The economy exceeded economists' estimate of potential income, without generating inflation, by far more than anyone thought.
- Economists began revising their estimates of Canada's potential income.

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Problems with Fiscal and Other Activist Policies

- Activist government policy seems so simple:
  - If the economy contracts, the government uses expansionary fiscal policy.
  - If there's inflation, the government uses contractionary fiscal policy.

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Problems with Fiscal and Other Activist Policies

- In real life, that is not the way it is.
- That does not necessarily mean the model is wrong.
- The model must be modified for it to work in the real world.

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Problems with Fiscal Policy

- Six assumptions of the *AD-AS* model lead to problems with fiscal policy:
  - Financing the deficit doesn't have any offsetting effects.
  - The government knows what the situation is.
  - The government knows the economy's potential income level.

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Problems with Fiscal Policy

- Six assumptions of the *AD-AS* model lead to problems with fiscal policy:
  - The government has flexibility in changing spending and taxes.
  - The size of the government debt doesn't matter.
  - Fiscal policy doesn't negatively affect other government goals.

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Offsetting Effects

- Some economists believe that government financing of deficit spending offsets the deficit's expansionary effect.
- They believe that government borrowing increases interest rates and crowds out private investment.
- ***Crowding out*** is a change in government expenditures that is offset by a change in private expenditures in the opposite direction.

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Offsetting Effects

- Some economists argue that the effect of government expenditures is negative.
- They consider private spending to be more productive than government spending.

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Offsetting Effects

- Crowding out also works in reverse in contractionary fiscal policy.
  - When the government runs a surplus, it buys back bonds.
  - Interest rates will drop, stimulating investment.

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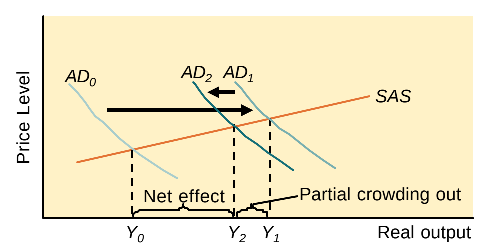
Partial Crowding Out



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Knowing What the Situation Is

- Data problems limit the use of fiscal policy for fine tuning.
- Getting reliable numbers on the economy takes time.
- We may be in the middle of a recession and not know it.

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Knowing What the Situation Is

- The government has large econometric models and leading indicators to predict where the economy will be in the near future.
- Economic forecasting is still very much an art and not a science.

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Knowing the Level of Potential Income

- No one knows for sure the level of potential income.
- Potential income has been called the ***full-employment level of income***.
- Differences in estimates of potential income often lead to different policy recommendations.

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Knowing the Level of Potential Income

- Economists use ***Okun's rule of thumb*** to translate changes in the unemployment rate into changes in income.
- According to Okun's rule, a 1% fall in the unemployment rate is associated with a 2% increase in income.

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Government's Flexibility in Changing Taxes and Spending

- Putting fiscal policy into place takes time and has serious implementation problems.
- Numerous political and institutional realities make it difficult to implement fiscal policy.

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Size of the Government Debt

- These is no inherent reason why the adoption of activist policies should cause high government deficits year after year.

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Size of the Government Debt

- Activist policy has led to an increase in government debt because:
  - Early activists favoured large increases in government spending as well as favouring the government using fiscal policy.
  - Politically, it is much easier for government to increase spending and decrease taxes than vice versa.

Size of the Government Debt

- If one believes that debt is harmful, then there might be a reason not to conduct expansionary fiscal policy, even when the economy calls for it.

Other Government Goals

- An economy has many goals– achieving potential income is only one of those goals.
- National economic goals often conflict.

Summary of the Problems

- While the six problems listed above do not necessarily eliminate fiscal policy altogether, they severely restrict it.
- Fiscal policy is a sledgehammer, not an instrument for fine-tuning.

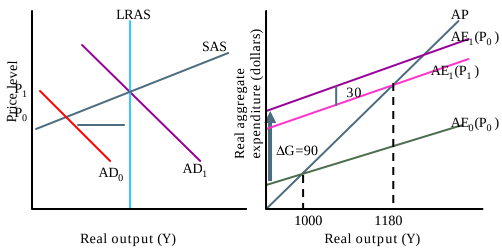
Fiscal Policy With a Flexible Price Level

- With flexible prices, the short run supply curve is upward sloping.
- A change in government spending will shift aggregate demand, and therefore, both income and prices will be affected.
- Changes in the price level will affect aggregate expenditure.

Eliminating a Recessionary Gap When Price Level is Flexible

- Output is below potential.
- Government adopts expansionary fiscal policy.
- AD shifts rightwards.
- But, because the price level is flexible, aggregate expenditure will be reduced somewhat.

Eliminating a Recessionary Gap When Price Level is Flexible



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Eliminating an Inflationary Gap When Price Level is Flexible

- Output is above potential.
- Government adopts contractionary fiscal policy.
- AD shifts leftwards.
- But, because the price level falls, aggregate expenditure will increase.

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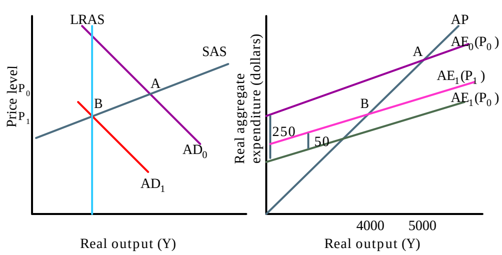
Eliminating an Inflationary Gap When Price Level is Flexible



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Building Fiscal Policies Into Institutions

- Economists were quick to realize the political realities of fiscal policy so they attempted to create built-in fiscal policies.

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Building Fiscal Policies Into Institutions

- ***Automatic stabilizers*** – any government program or policy that counteracts the business cycle without any new government action.
- Automatic stabilizers include welfare payments, employment insurance, and the income tax system.

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How Automatic Stabilizers Work

- When the economy is in a recession, the unemployment rate rises.
- Unemployment benefits are automatically paid out to the unemployed, offsetting some of the drop in income.

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How Automatic Stabilizers Work

- When the economy expands, incomes rise, and tax revenues rise, slowing the economy.
- When the economy contracts, incomes fall, and tax revenues decline, lessening the decline in the economy.

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Negative Side of Automatic Stabilizers

- Automatic stabilizers have their problems.
- When the economy first starts climbing out of a recession, automatic stabilizers may slow down the process.

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Building Fiscal Policies Into Institutions

- Despite these problems, most economists believe automatic stabilizers have played an important role in reducing fluctuations in the economy.

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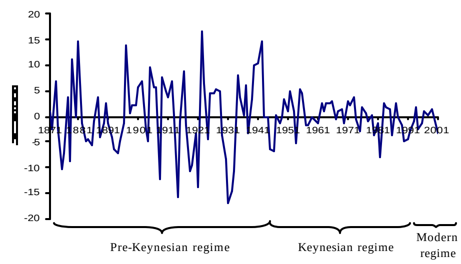
Decrease in Fluctuations



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End of Chapter 10