



### Objectives

**After studying this chapter, you will be able to**

- Describe how federal and provincial budgets are created
- Describe the recent history of federal and provincial expenditures, tax revenues, and the budget deficit
- Distinguish between automatic and discretionary fiscal policy
- Define and explain the fiscal policy multipliers
- Explain the effects of fiscal policy in both the short run and the long run
- Distinguish between and explain the demand-side and supply-side effects of fiscal policy

### Balancing Acts on Parliament Hill

In 2001, the federal government spent 15 cents out of each dollar earned in Canada, and collected 17 cents per dollar in taxes.

How does that affect the economy?

For most of the 1980s and 1990s, the government ran deficits, to the extent that the national debt is now about \$20,000 per person.

What are its effects, and how can deficits be avoided?

© Pearson Education Canada, 2003

### Government Budgets

The **federal budget** is the annual statement of the federal government's expenditures and tax revenues.

A **provincial budget** is the annual statement of a provincial government's expenditures and tax revenues.

**Fiscal policy** is the use of the federal budget to achieve macroeconomic objectives, such as full employment, sustained long-term economic growth, and price level stability.

© Pearson Education Canada, 2003

### Government Budgets

#### Budget Making

The federal government and Parliament make fiscal policy.

The budget process begins with long drawn-out meetings between the Minister of Finance, Department of Finance officials, provincial government, business, labour, and consumer groups.

A budget plan is presented to Parliament, which Parliament eventually approves and passes.

© Pearson Education Canada, 2003

### Government Budgets

#### Highlights of the 2002 Budget

The projected fiscal 2002 Federal Budget has revenues of \$174 billion, expenditures of \$171 billion, and a projected surplus of \$3 billion.

Revenues come from personal income taxes, corporate income taxes, indirect taxes, and investment income.

Personal income taxes are the largest revenue source.

Expenditures are transfer payments, expenditures on goods and services, and debt interest.

Transfer payments are the largest expenditure item.

© Pearson Education Canada, 2003

## Government Budgets

The federal government's budget balance equals tax revenue minus expenditure.

If tax revenues exceed expenditures, the government has a **budget surplus**.

If expenditures exceed tax revenues, the government has a **budget deficit**.

If tax revenues equal expenditures, the government has a **balanced budget**.

© Pearson Education Canada, 2003

## Government Budgets

### The Budget in Historical Perspective

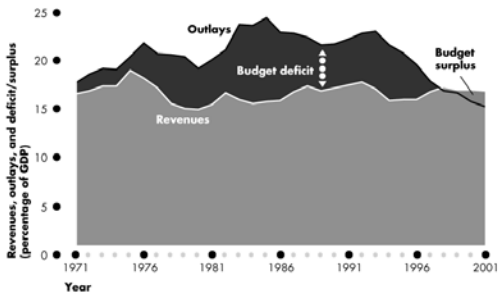
Figure 24.1 on the next slide shows the government's tax revenues, expenditures, and budget surplus or deficit as a percentage of GDP for the period 1971–2001.

The government deficit peaked at 8.6 percent of GDP in 1985.

The deficit declined and after 1997, the government had a surplus.

© Pearson Education Canada, 2003

## Government Budgets

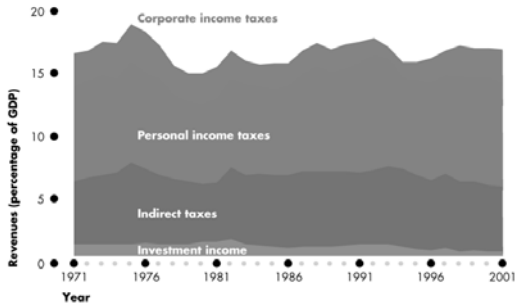
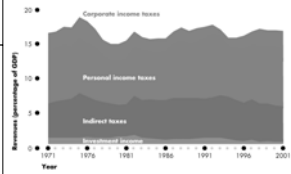


## Government Budgets

Figure 24.2 shows tax revenues as a percentage of GDP between 1971 and 2001.

Revenues from personal income taxes decreased during the late 1970s but trended upward during the 1980s and 1990s.

Corporate income taxes decreased slightly.

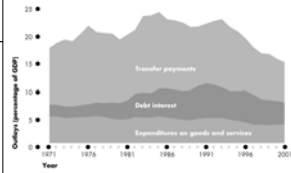


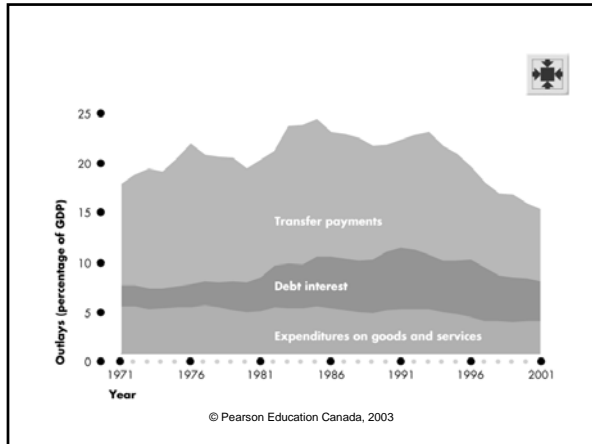
## Government Budgets

Figure 24.3 shows expenditures as a percentage of GDP between 1971 and 2001.

Transfer payments increased in the 1970s and early 1980s and decreased in the 1990s.

Debt interest increased in the 1980s and decreased in the late 1990s.



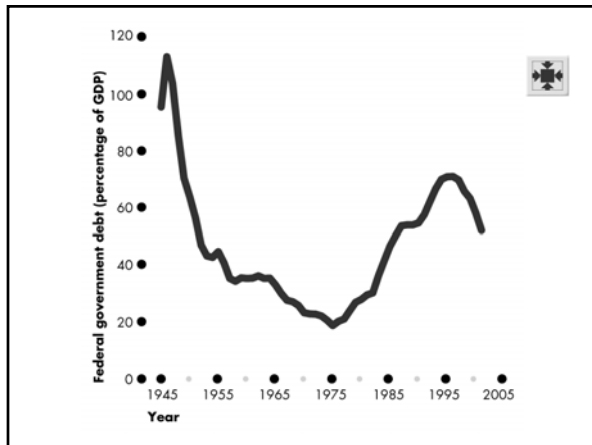


### Government Budgets

**Government debt** is the total amount that the government has borrowed—that the government owes. It is the accumulation of all past deficits.

Figure 24.4 shows the evolution of the debt as a percentage of GDP since 1946.

© Pearson Education Canada, 2003



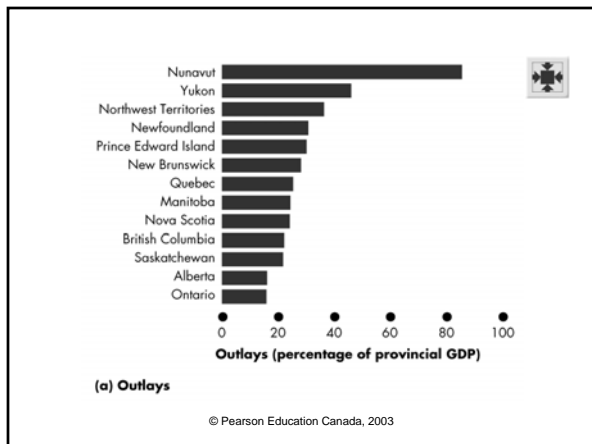
### Government Budgets

#### Provincial and Local Government Budgets

Figure 24.5(a) shows the range of variation in the size of the provincial budgets as percentages of provincial GDP.

They range from Nunavut at more than 80 percent to Alberta and Ontario at less than 20 percent.

© Pearson Education Canada, 2003



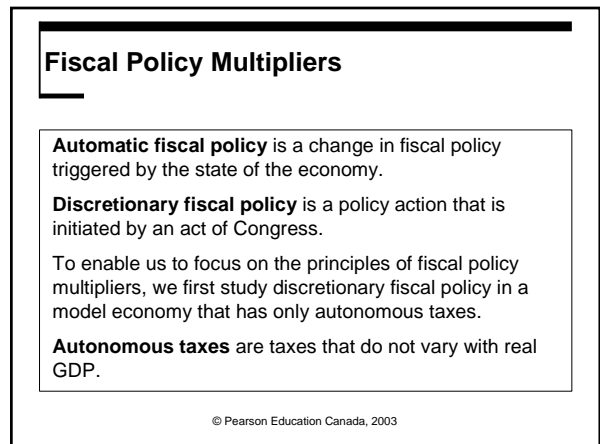
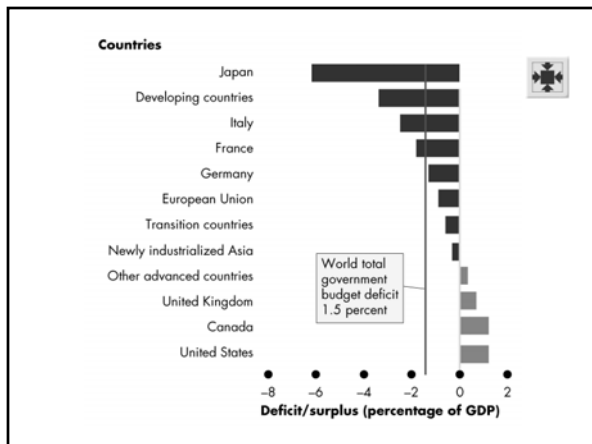
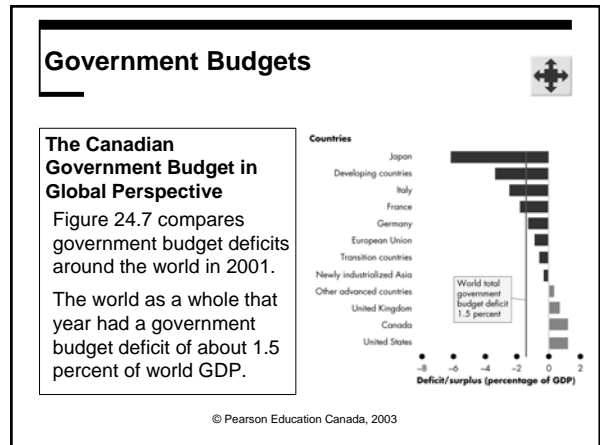
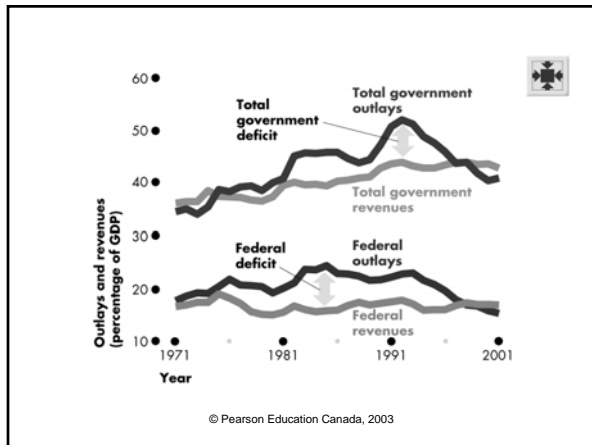
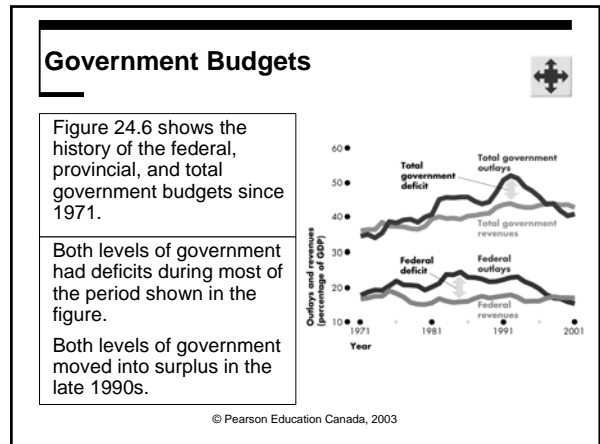
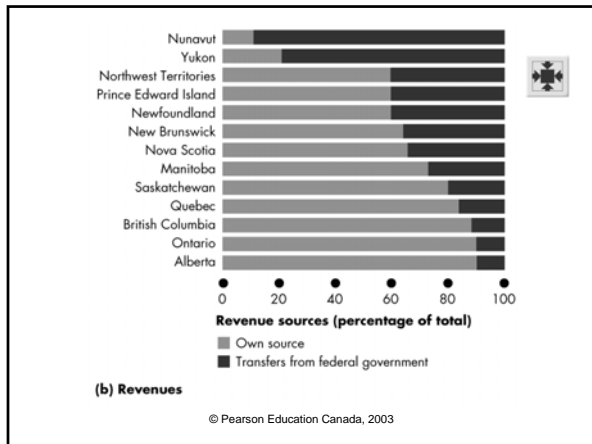
### Government Budgets

Figure 24.5(b) shows that the provinces don't raise all their own revenues from provincial taxes.

Nunavut gets most of its revenue from Ottawa while Alberta and Ontario get more than 90 percent of their revenue from their own taxes.

(b) Revenues

© Pearson Education Canada, 2003



## Fiscal Policy Multipliers

### The Government Purchases Multiplier

The **government purchases multiplier** is the magnification effect of a change in government purchases of goods and services on equilibrium aggregate expenditure and real GDP.

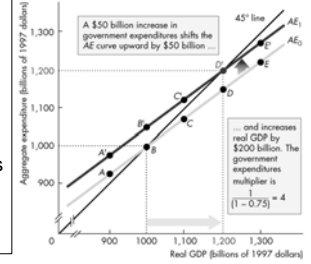
A multiplier exists because government purchases are a component of aggregate expenditure; an increase in government purchases increases aggregate income, which induces additional consumption expenditure.

© Pearson Education Canada, 2003

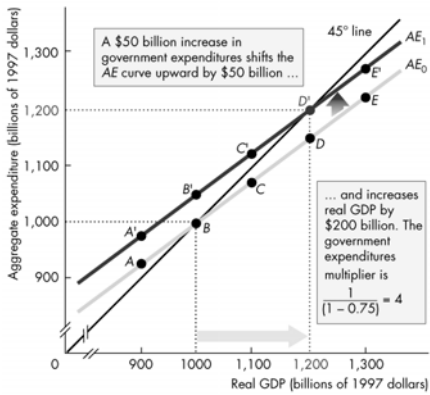
## Fiscal Policy Multipliers

Figure 24.8 illustrates the government purchases multiplier in the aggregate expenditure diagram.

The government purchases multiplier is  $1/(1 - MPC)$  where  $MPC$  is the marginal propensity to consume (absent induced taxes and imports).



© Pearson Education Canada, 2003



## Fiscal Policy Multipliers

### The Autonomous Tax Multiplier

The **autonomous tax multiplier** is the magnification effect a change in autonomous taxes on equilibrium aggregate expenditure and real GDP.

An increase in autonomous taxes decreases disposable income, which decreases consumption expenditure and decreases aggregate expenditure and real GDP.

© Pearson Education Canada, 2003

## Fiscal Policy Multipliers

The amount by which a tax increase lowers consumption expenditure is determined by the  $MPC$ .

\$1 tax increase lowers consumption expenditure by  $\$1 \times MPC$ , and this amount gets multiplied by the standard autonomous expenditures multiplier.

The autonomous tax multiplier is  $-MPC/(1 - MPC)$

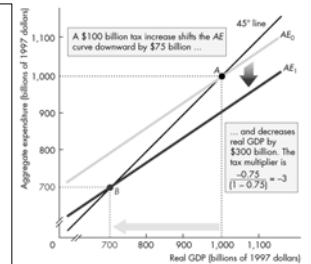
It is negative because an increase in autonomous taxes decreases equilibrium expenditure.

© Pearson Education Canada, 2003

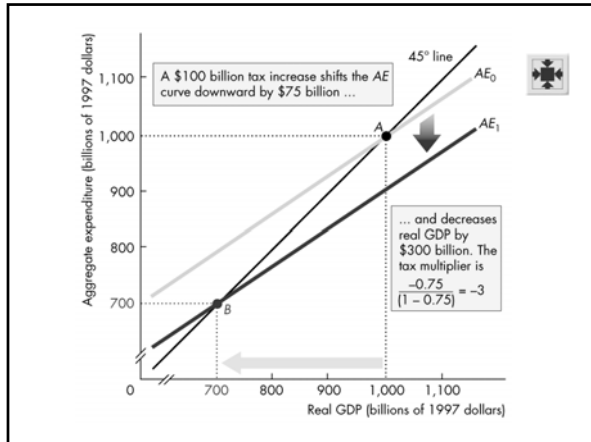
## Fiscal Policy Multipliers

Figure 24.9 illustrates the effect of an increase in autonomous taxes.

The lump-sum transfer payments multiplier and the autonomous tax multiplier are the same except for their signs—the transfer payments multiplier is positive.



© Pearson Education Canada, 2003



## Fiscal Policy Multipliers

### Induced Taxes and Entitlement Spending

Taxes that vary with real GDP are called **induced taxes**.

Most transfer payments are **entitlement spending**, which also vary with real GDP.

During a recession, induced taxes fall and entitlement spending rises; and during an expansion, induced taxes rise and entitlement spending falls.

Both effects diminish the size of the government purchases and autonomous tax multipliers.

© Pearson Education Canada, 2003

## Fiscal Policy Multipliers

The extent to which induced taxes and entitlement spending decrease the multiplier depends on the marginal tax rate, which is the fraction of an additional dollar of real GDP that flows to the government in net taxes.

The higher the marginal tax rate, the larger is the fraction of an additional dollar of income that flows to the government and the smaller is the induced change in consumption expenditure.

The smaller the induced change in consumption expenditure the smaller are the government purchases and autonomous tax multipliers.

© Pearson Education Canada, 2003

## Fiscal Policy Multipliers

### International Trade and Fiscal Policy Multipliers

Imports decrease the fiscal policy multipliers.

The larger the marginal propensity to import, the smaller is the magnitude of the government purchases and autonomous tax multipliers.

© Pearson Education Canada, 2003

## Fiscal Policy Multipliers

### Automatic Stabilizers

**Automatic stabilizers** are mechanisms that stabilize real GDP without explicit action by the government.

Income taxes and transfer payments are automatic stabilizers.

Because income taxes and transfer payments change with the business cycle, the government's budget deficit also varies with this cycle.

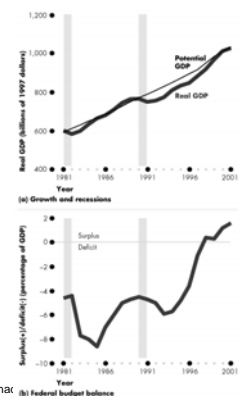
In a recession, taxes fall, transfer payments rise, and the deficit grows; in an expansion, taxes rise, transfers fall, and deficit shrinks.

© Pearson Education Canada, 2003

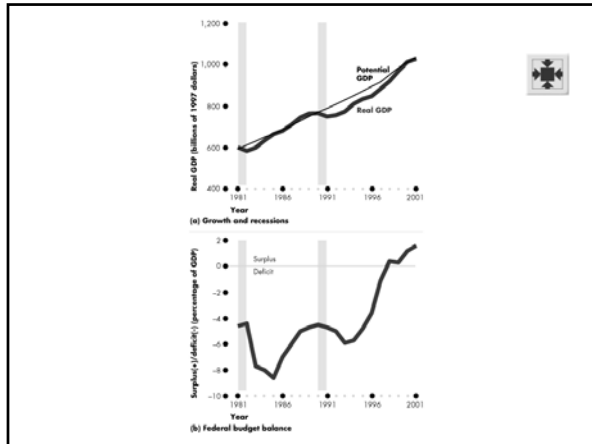
## Fiscal Policy Multipliers

Figure 24.10 shows the budget deficit over the business cycle for 1981–2001.

Recessions are highlighted.



© Pearson Education Canada



## Fiscal Policy Multipliers

The **structural surplus or deficit** is the surplus or deficit that would occur if the economy were at full employment and real GDP were equal to potential GDP.

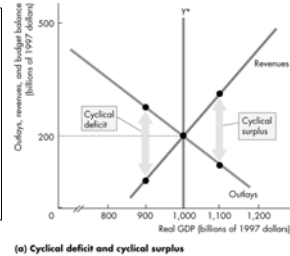
The **cyclical surplus or deficit** is the actual surplus or deficit minus the structural surplus or deficit; that is, it is the surplus or deficit that occurs purely because real GDP does not equal potential GDP.

© Pearson Education Canada, 2003

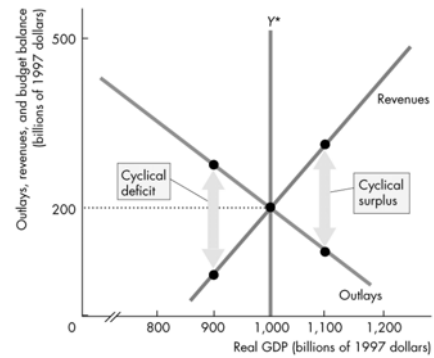
## Fiscal Policy Multipliers

Figure 24.11 illustrates the distinction between a structural and cyclical surplus and deficit.

In part (a), as real GDP fluctuates around potential GDP, a cyclical deficit or surplus arises.

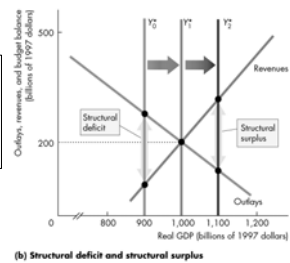


© Pearson Education Canada, 2003

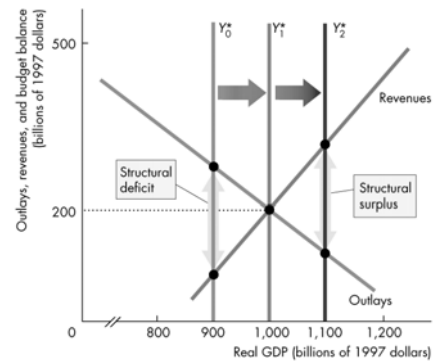


## Fiscal Policy Multipliers

In part (b), as potential GDP grows, a structural deficit becomes a structural surplus.



© Pearson Education Canada, 2003

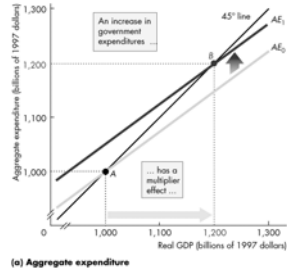


## Fiscal Policy Multipliers and the Price Level

### Fiscal Policy and Aggregate Demand

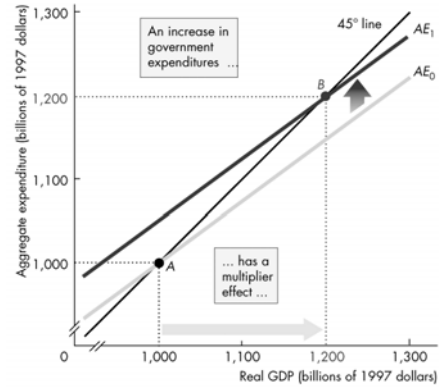
Figure 24.12 illustrates the effects of fiscal policy on aggregate demand.

An increase in government purchases shifts the AE curve upward ...



(a) Aggregate expenditure

© Pearson Education Canada, 2003



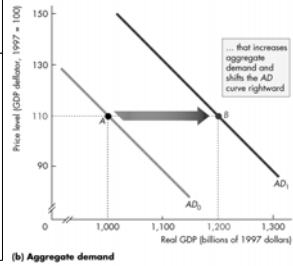
(a) Aggregate expenditure

## Fiscal Policy Multipliers and the Price Level

... and shifts the AD curve rightward.

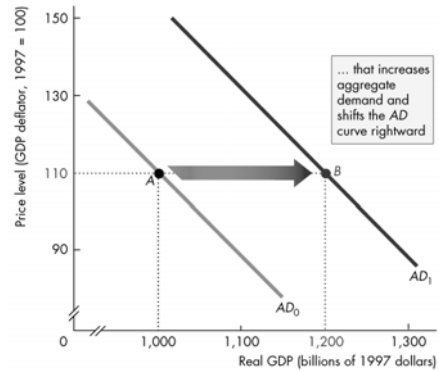
The magnitude of the shift in the AD curve equals the government purchases multiplier times the increase in government purchases.

(A cut in autonomous taxes has a similar effect.)



(b) Aggregate demand

© Pearson Education Canada, 2003



(b) Aggregate demand

## Fiscal Policy Multipliers and the Price Level

**Expansionary fiscal policy**, an increase in government expenditures or a decrease in tax revenues, shifts the AD curve rightward.

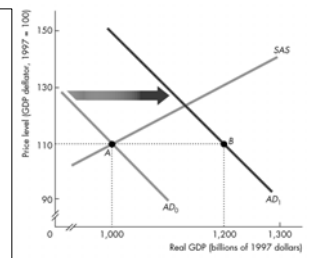
**Contractionary fiscal policy**, a decrease in government expenditures or an increase in tax revenues, shifts the AD curve leftward.

© Pearson Education Canada, 2003

## Fiscal Policy Multipliers and the Price Level

Figure 24.13(a) illustrates the effect of an expansionary fiscal policy on real GDP and the price level when real GDP is below potential GDP.

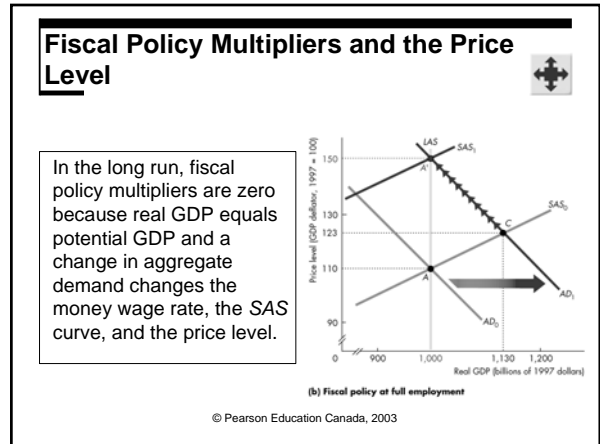
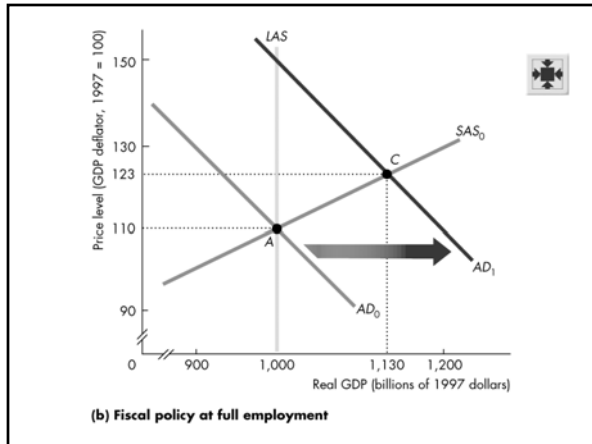
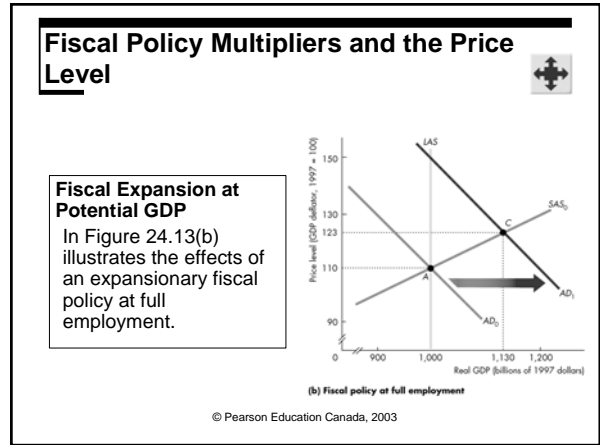
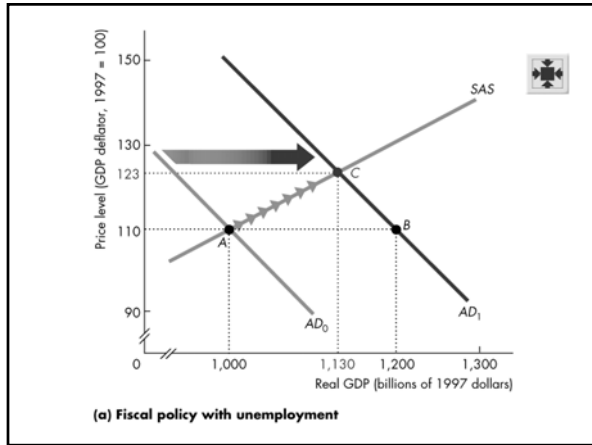
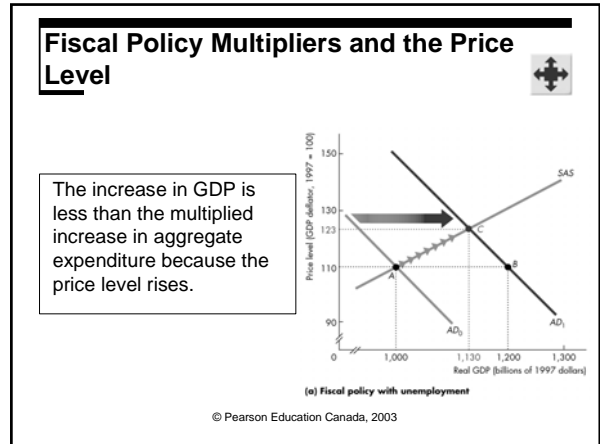
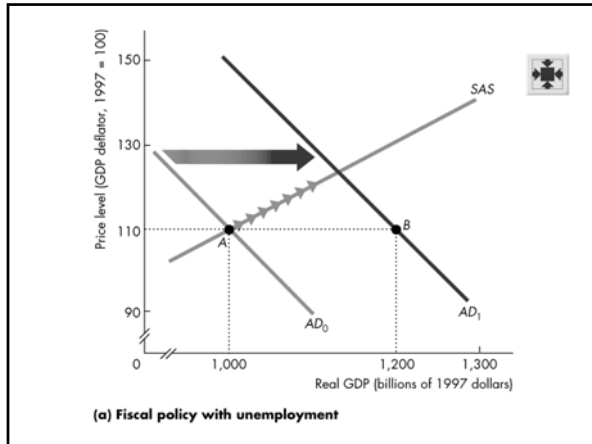
The rightward shift in the AD curve equals the multiplied increase in aggregate expenditure.

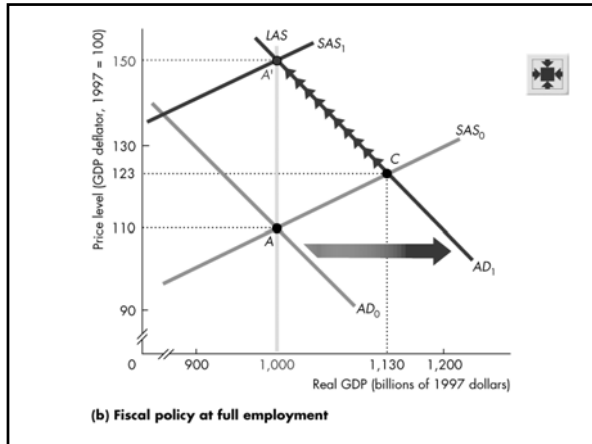


(a) Fiscal policy with unemployment

© Pearson Education Canada, 2003







## Fiscal Policy Multipliers and the Price Level

### Limitations of Fiscal Policy

Because the short-run fiscal policy multipliers are not zero, fiscal policy can be used to help stabilize the economy.

But in practice, fiscal policy is hard to use because:

The legislative process is too slow to permit policy actions to be implemented when they are needed.

Potential GDP is hard to estimate, so too much fiscal stimulation might be applied too close to full employment.

© Pearson Education Canada, 2003

## Supply Side Effects of Fiscal Policy

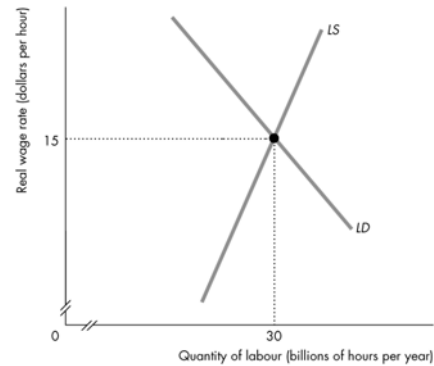
### Fiscal Policy and Potential GDP

Potential GDP depends on the full-employment quantity of labour, which in turn is influenced by taxes.

Figure 24.14(a) illustrates the effects of taxes in the labour market.



© Pearson Education Canada, 2003



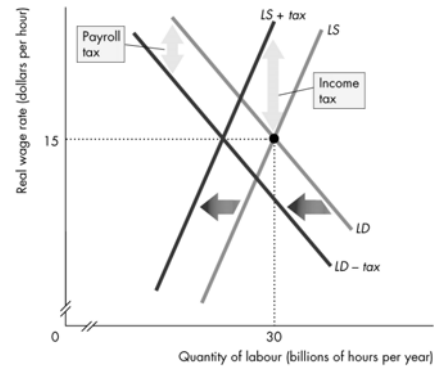
## Supply Side Effects of Fiscal Policy

The income tax decreases the supply of labour because it decreases the after-tax wage rate.

Payroll taxes decrease the demand for labour because they increase the total cost of hiring labour.



© Pearson Education Canada, 2003



## Supply Side Effects of Fiscal Policy

The equilibrium wage rate might rise, fall, or remain the same—here remains the same.

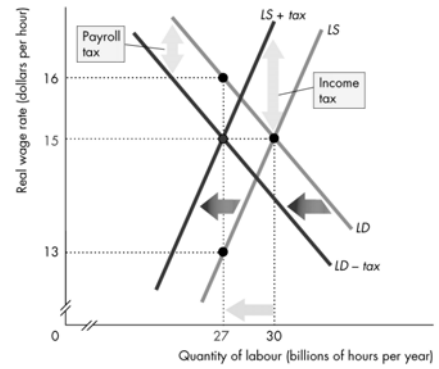
The cost of labour rises, ...  
... and the after-tax wage rate falls.

The quantity of labour employed decreases.

Potential GDP decreases.



(a) The labour market  
© Pearson Education Canada, 2003



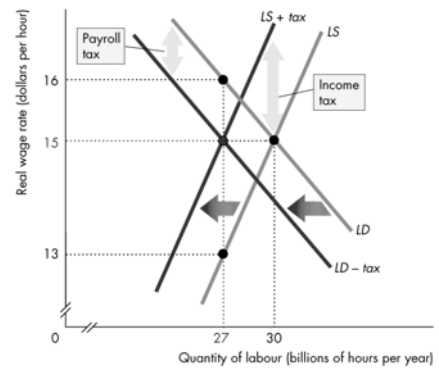
(a) The labour market

## Supply Side Effects of Fiscal Policy

This supply-side effect of the income tax means that a cut in the income tax rate increases potential GDP and increases aggregate supply.



(a) The labour market  
© Pearson Education Canada, 2003

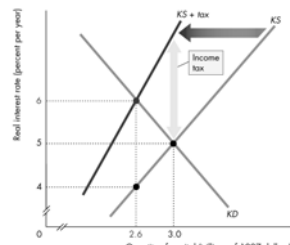


(a) The labour market

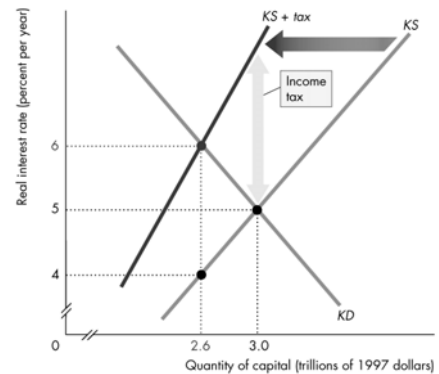
## Supply Side Effects of Fiscal Policy

Figure 24.14(b) illustrates the effect of the income tax in the capital market.

The income tax decreases the supply of capital because it decreases the after-tax interest rate.



(b) The capital market  
© Pearson Education Canada, 2003

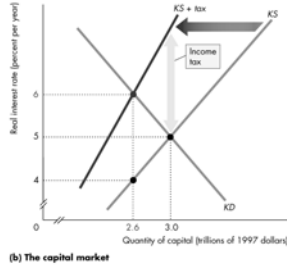


(b) The capital market

## Supply Side Effects of Fiscal Policy

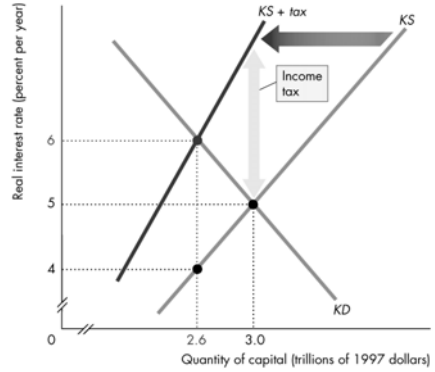
Because the income tax decreases the supply of capital, it raises the equilibrium interest rate, decreases capital, and decreases potential GDP.

This supply-side effect of the income tax means that a cut in the income tax rate increases potential GDP and increases aggregate supply.



(b) The capital market

© Pearson Education Canada, 2003

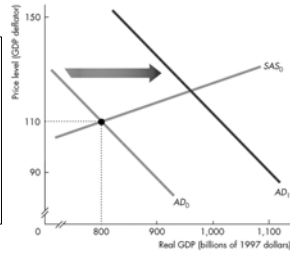


(b) The capital market

## Supply Side Effects of Fiscal Policy

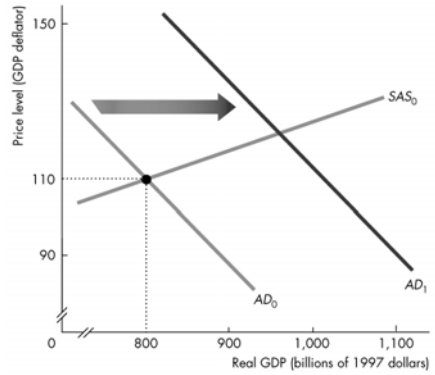
Figure 24.15 illustrates two views about the effects of a tax cut on real GDP and the price level.

A tax cut increases aggregate demand and the AD curve shifts rightward.



(a) The traditional view

© Pearson Education Canada, 2003

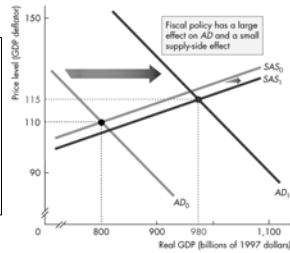


(a) The traditional view

## Supply Side Effects of Fiscal Policy

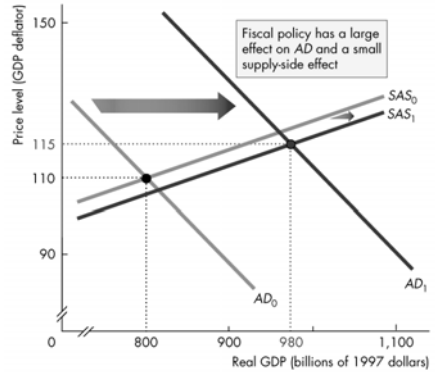
Most economists believe that a tax cut has a small effect on aggregate supply.

So GDP increases and the price level rises.



(a) The traditional view

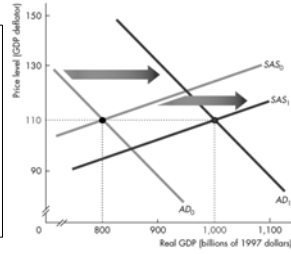
© Pearson Education Canada, 2003



(a) The traditional view

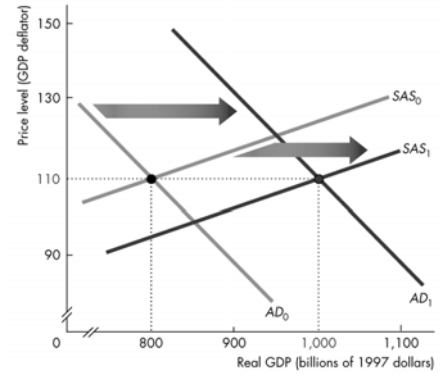
## Supply Side Effects of Fiscal Policy

Supply-side economists think that a tax cut increases aggregate supply by a large amount so that GDP increases and the price level does not change (or might even fall).



(b) The supply-side view

© Pearson Education Canada, 2003



(b) The supply-side view

