

## Chapter 29: Fiscal Policy

### The Federal Budget

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

The federal budget has two purposes:

1. To finance the activities of the federal government
2. To achieve macroeconomic objectives

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

## Highlights of the 2013 Budget

The projected fiscal 2013 federal budget has revenues of \$262 billion, outlays of \$276 billion, and a projected deficit of \$14 billion.

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

Personal income taxes are the largest revenue source.

Outlays are transfer payments, expenditure on goods and services, and debt interest.

Transfer payments are the largest item of outlays.

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**TABLE 29.1** Federal Budget in 2013

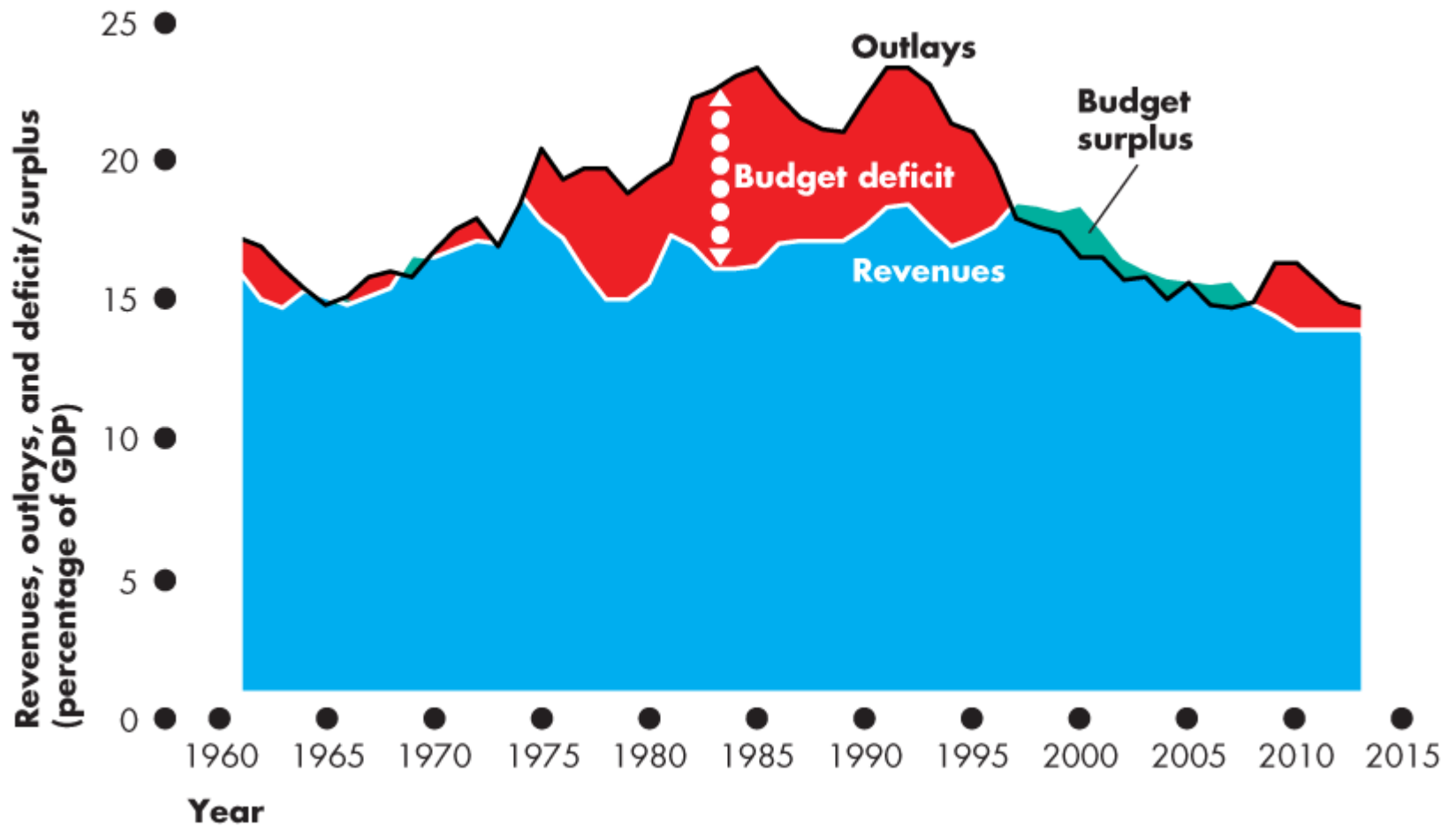
Item	Calendar year 2013 (billions of dollars)	
<hr/>		
<b>Revenues</b>	<b>262</b>	
Personal income taxes		130
Corporate income taxes		39
Indirect and other taxes		83
Investment income		10
<b>Outlays</b>	<b>276</b>	
Transfer payments		179
Expenditure on goods and services		71
Debt interest		26
<b>Deficit</b>	<b>14</b>	

*Source of data:* Statistics Canada, CANSIM Table 380-0080.

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# The Budget in Historical Perspective

## Budget Balance

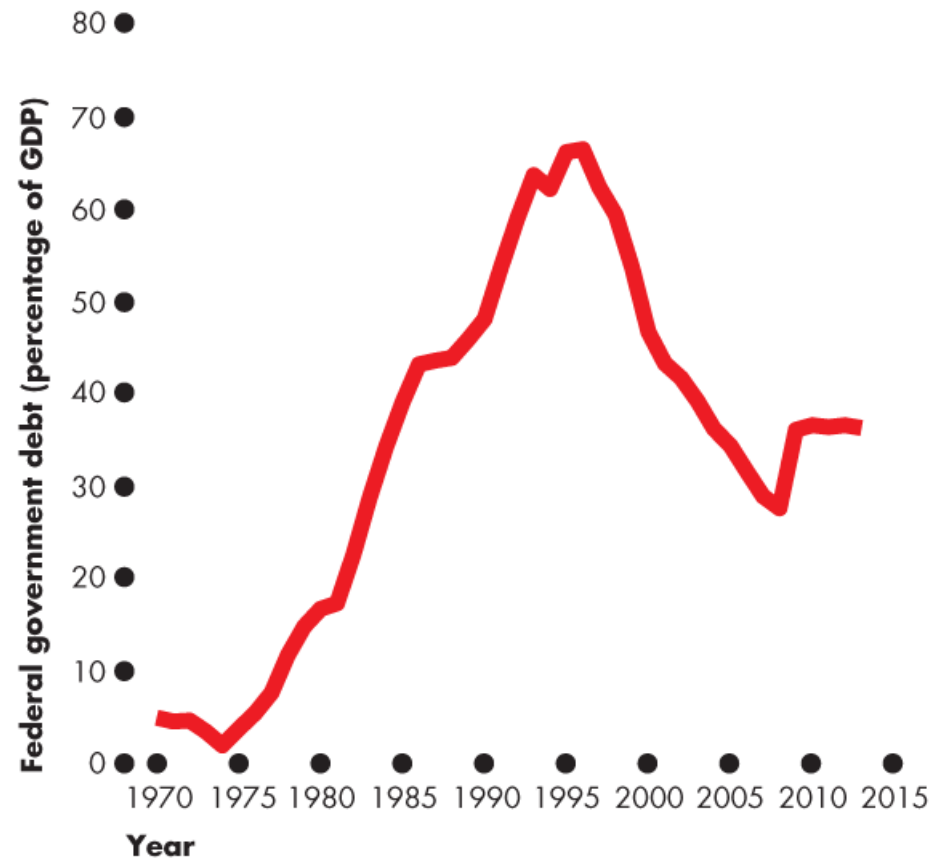


## Deficit and Debt

**Government debt** is the total amount that the government borrowing.

It is the sum of past deficits minus past surpluses.

The figure shows the federal government's debt as a percentage of GDP.



2015	Source : <a href="http://www.debtclock.ca/provincial-debtclocks/">http://www.debtclock.ca/provincial-debtclocks/</a>		
<b><u>Provinces</u></b>	<b><u>Net Debt (billion \$)</u></b>		<b><u>Net Debt Per Capita</u></b>
PEI			
Sask.			
Nfld.			
New Brunswick			
Nova Scotia			
Alberta			
Manitoba			
BC			
Quebec			
Ontario			

Provincial: <http://www.debtclock.ca/provincial-debtclocks/>

## **Supply-Side Effects of Fiscal Policy**

Fiscal policy has important effects on employment, potential GDP, and aggregate supply—called **supply-side effects**.

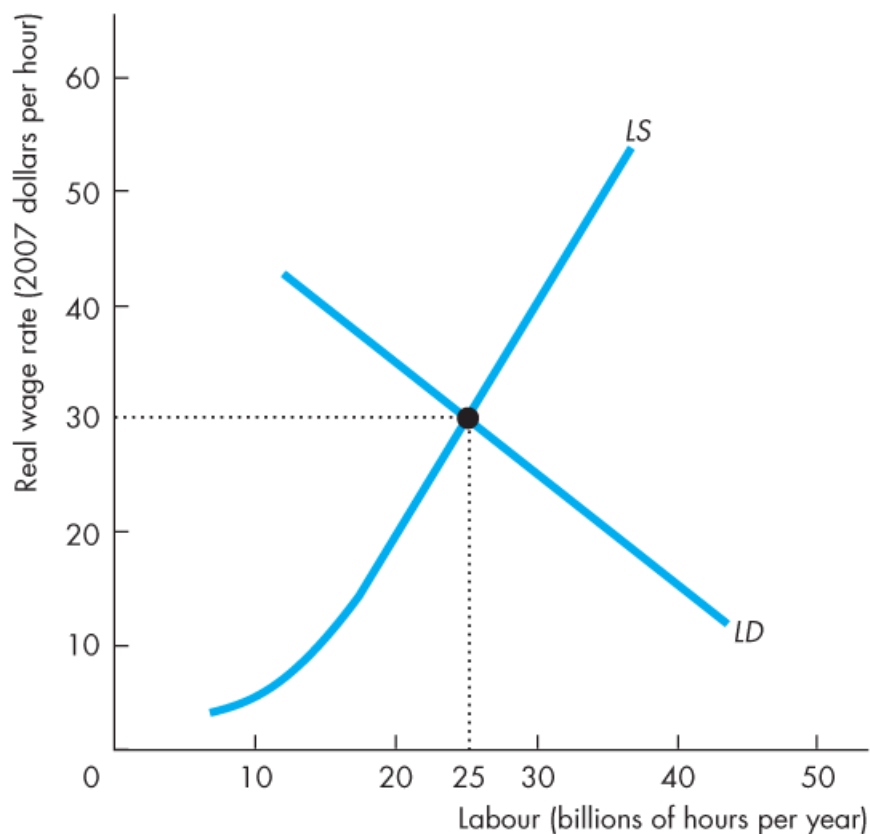
How do taxes on personal and corporate income affect real GDP and employment?

## Full Employment and Potential GDP

At full employment, the real wage rate adjusts to make the quantity of labor demanded equal to the quantity of labor supplied.

Potential GDP is the real GDP that the full employment quantity of labor produces.

Let's now see how an income tax changes potential GDP.

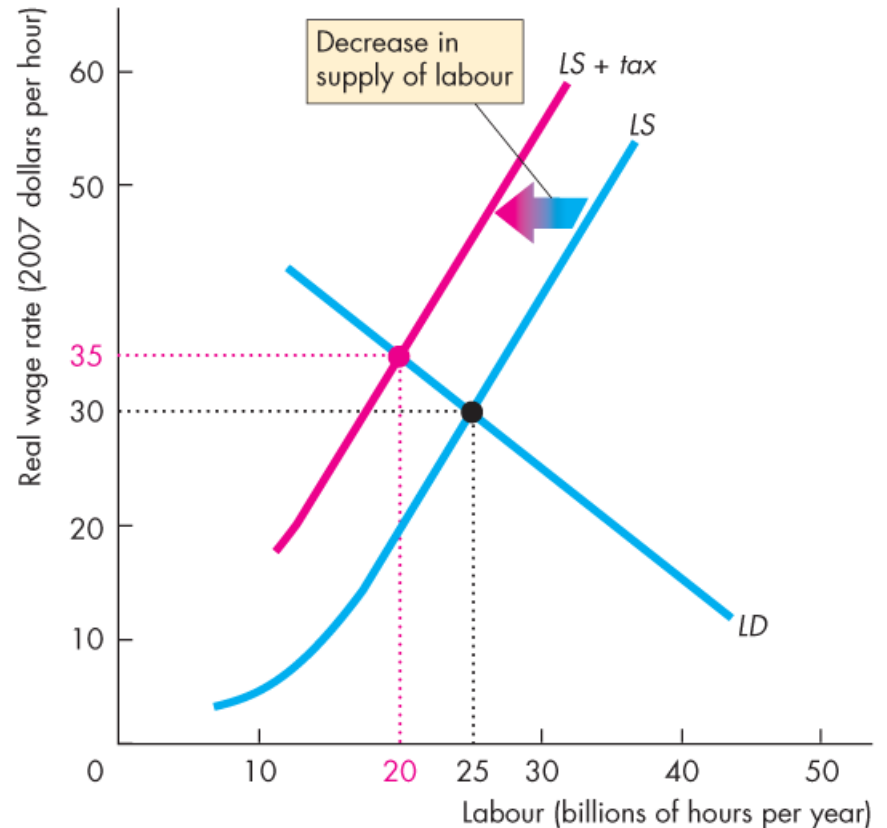


**(a) Income tax and the labour market**

## Effects of an income tax in the labour market.

An income tax weakens the incentive to work and decreases the supply of labor.

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



(a) Income tax and the labour market



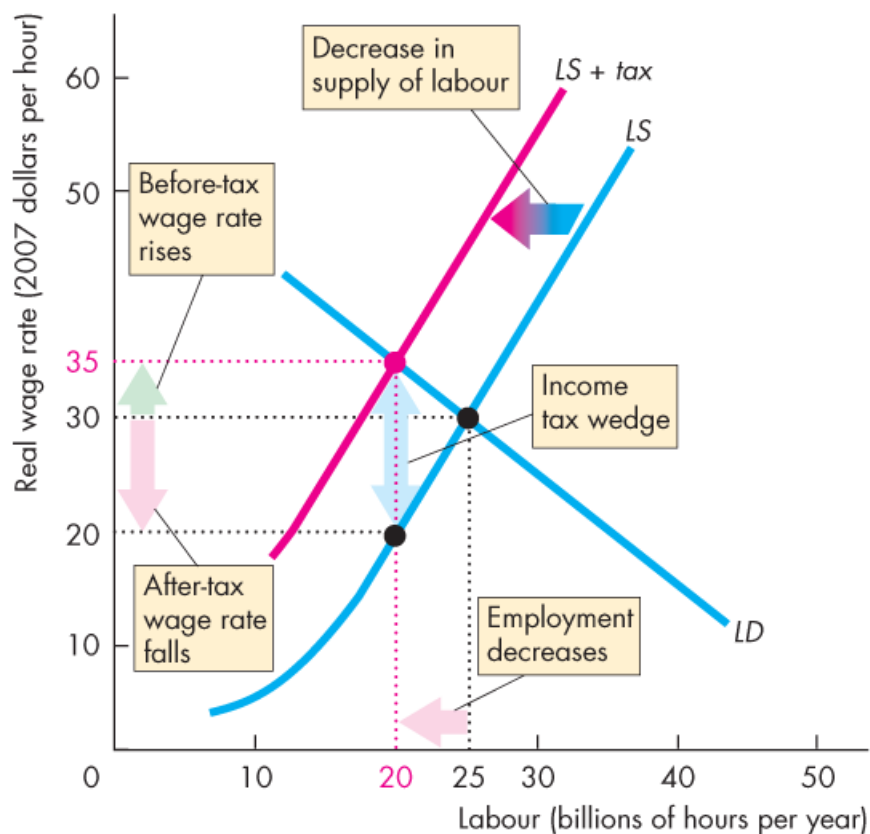
The vertical distance between the LS and the LS+tax curve measures the amount of income tax.

The before-tax real wage rate rises but the after-tax real wage rate falls.

The gap created between the before-tax and after-tax wage rates is called the **tax wedge**.

The quantity of labour employed decreases.

An income tax changes full employment and potential GDP.



(a) Income tax and the labour market

## Taxes on Expenditure and the Tax Wedge

- Taxes on consumption expenditure add to the tax wedge.
- The reason is that a tax on consumption raises the prices paid for consumption goods and services and is equivalent to a cut in the real wage rate.
- If the income tax rate is 25 percent and the tax rate on consumption expenditure is 10 percent, a dollar earned buys only 65 cents worth of goods and services.
- The tax wedge is 35 percent.

## Taxes and the Incentive to Save and Invest

- A tax on interest income weakens the incentive to save and drives a wedge between the after-tax interest rate earned by savers and the interest rate paid by firms.
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### *Effect of Tax Rate on Real Interest Rate*

- The interest rate that influences investment and saving plans is the real after-tax interest rate.

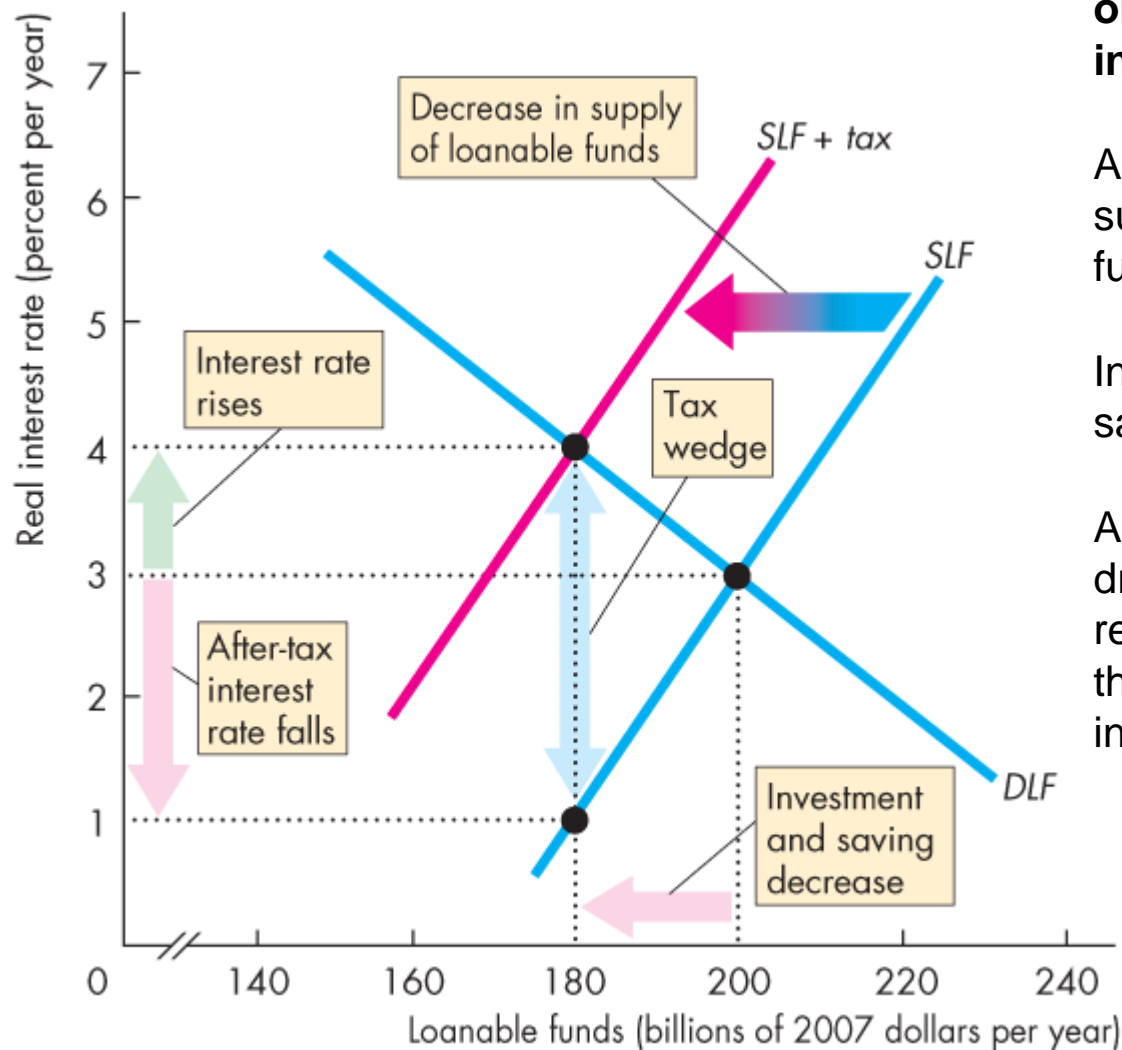
$$\text{real after-tax interest rate} = \text{real before-tax interest rate} - \text{income tax rate}$$

- But the taxes depend on the nominal interest rate, not the real interest rate.
- So the higher the inflation rate, the higher is the true tax rate on interest income.

Example:

*Effect of Income Tax on Saving and Investment (see next figure)*

- Initially, there are no taxes, the government has a balanced budget, the demand for loanable funds curve is also the investment demand curve, DLF.
- The supply of loanable funds curve is SLF, the equilibrium interest rate is 3% a year, and the quantity of funds borrowed and lent is \$200 billion.



## Effects of tax rate on saving and investment

A tax decreases the supply of loanable funds.

Investment and saving decrease.

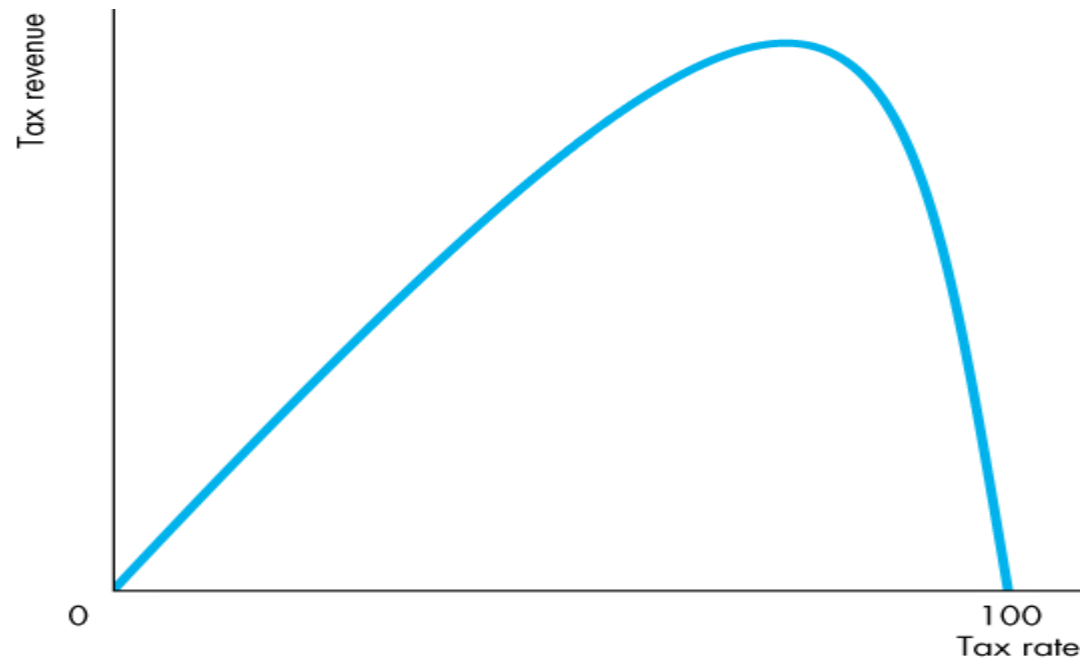
A tax wedge is driven between the real interest rate and the real after-tax interest rate.

## The Laffer Curve

It is named after economist Arthur Laffer and it illustrates the relationship between tax rates and tax revenue.

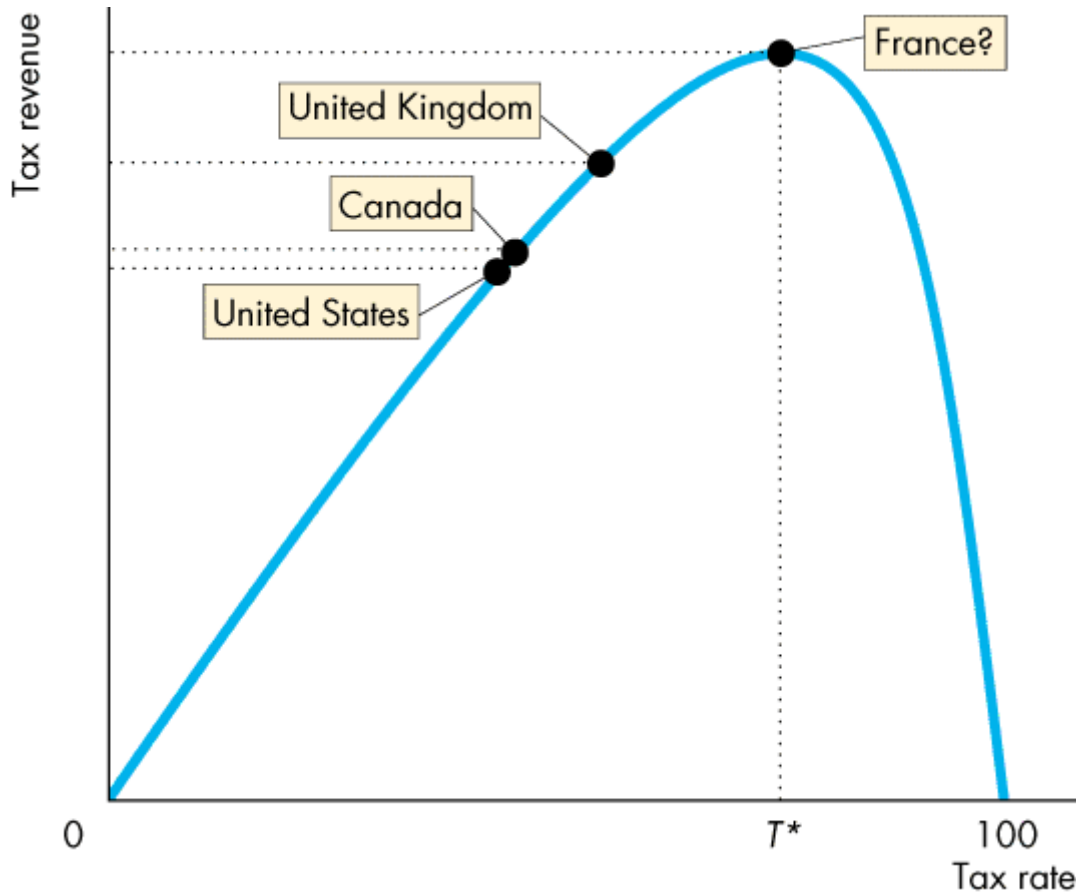
Total income tax revenue depends on the level of income and the tax rate:

$$\text{Income Tax Revenue} = \text{tax rate} \times \text{income}$$



## Tax Revenues and the Laffer Curve

The relationship between the tax rate and the amount of tax revenue collected is called the **Laffer curve**.



At the tax rate  $T^*$ , tax revenue is maximized.

For a tax rate below  $T^*$ , a rise in the tax rate increases tax revenue.

For a tax rate above  $T^*$ , a rise in the tax rate decreases tax revenue.