Chapter 8: Macroeconomic management

International Economics

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Outline

- Monetary policy
- Exchange rate policy
- Fiscal policy

Macroeconomic management

- Macroeconomic stability is an essential prerequisite for development

- Key areas of macroeconomic managements
  - Monetary policy
  - Exchange rate policy
  - Fiscal policy

Monetary policy

- **Purpose** of monetary policy: manage the level of prices in the economy and to encourage (or discourage) economic expansion

- Inflation control !

Inflation

- Inflation = the rate of growth of (consumer) prices
- Inflation is important
  - as it gives information on the purchasing power of households
  - because some wages, pensions, interest rates, etc. are (at least partially) indexed on inflation
  - to make international comparisons (see real (effective) exchange rates, next week)
- Fighting inflation has become obvious
- The fear of insufficient inflation has been widespread

Why fight inflation?

- Inflation has costs
  - Shoe-leather costs, menu costs (related to hyperinflations)
  - Tax distortions (when taxes are set in nominal, not real, terms. Ex.: taxes on capital gains)
  - Increased variability in relative prices (the cost of unexpected inflation), related to staggered contracts
  - Inflation illusion (1.03^{40} implies that price are multiplied by 3.26 in 40 years), related to the ability of planning future expenses well
  - Lower competitiveness in a globalized world

Why fear the lack of inflation?

- Lack of demand for goods and services
- Fear of deflation and vicious loop
- Secular stagnation: another vicious loop
  - Under low inflation, the real interest rate can be above the natural rate of interest à la Wicksell
  - The lower bound of the real interest rate depends on the lower bound of the nominal interest rate and on the upper bound of the inflation rate
  - Example:

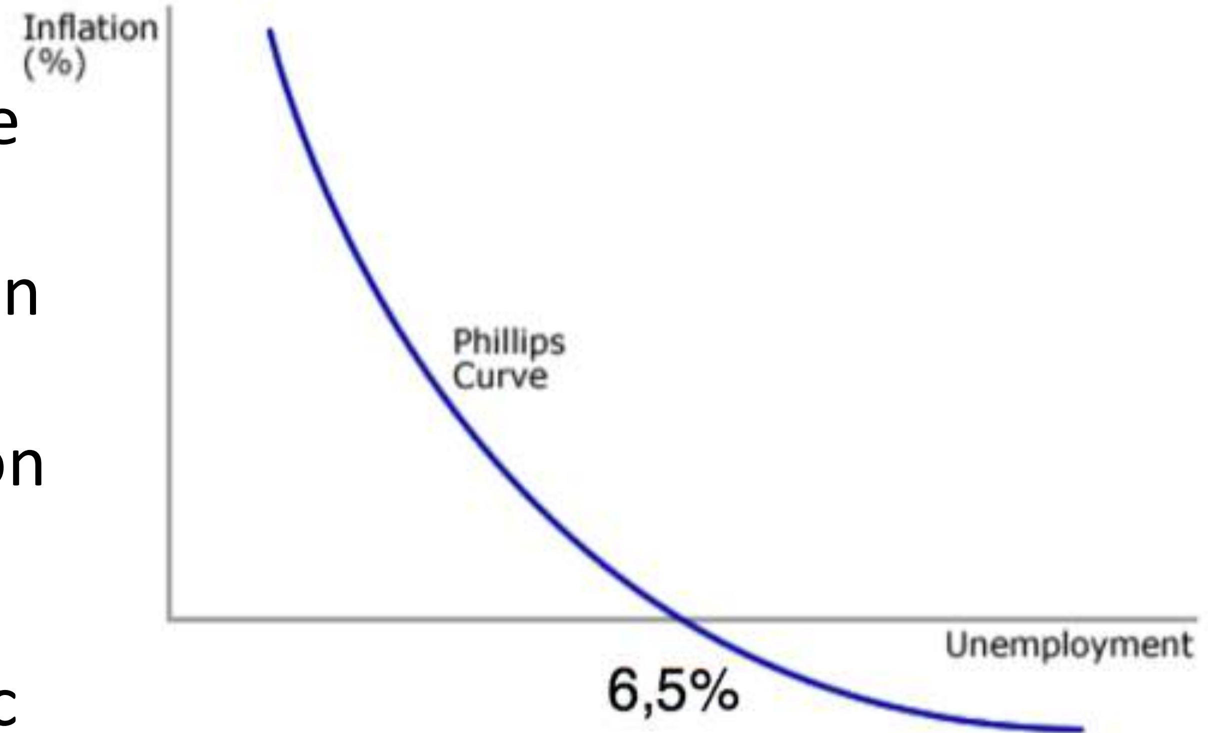
    When the economy hits the zero-lower bound (ZLB) and the inflation rate is zero, the real rate is zero

    Under secular stagnation, there is an excess of savings over investment. It entails a negative natural rate

Secular-stagnation theory originated with Alvin Hansen, a Keynesian economist, in the 1930s. Countries suffering from the stagnation bug are burdened with **too much saving** and **too little investment**. Hansen reckoned the slumping economies of the 1930s were doomed to stagnation by poor growth prospects, a product of slowing innovation and ageing populations.

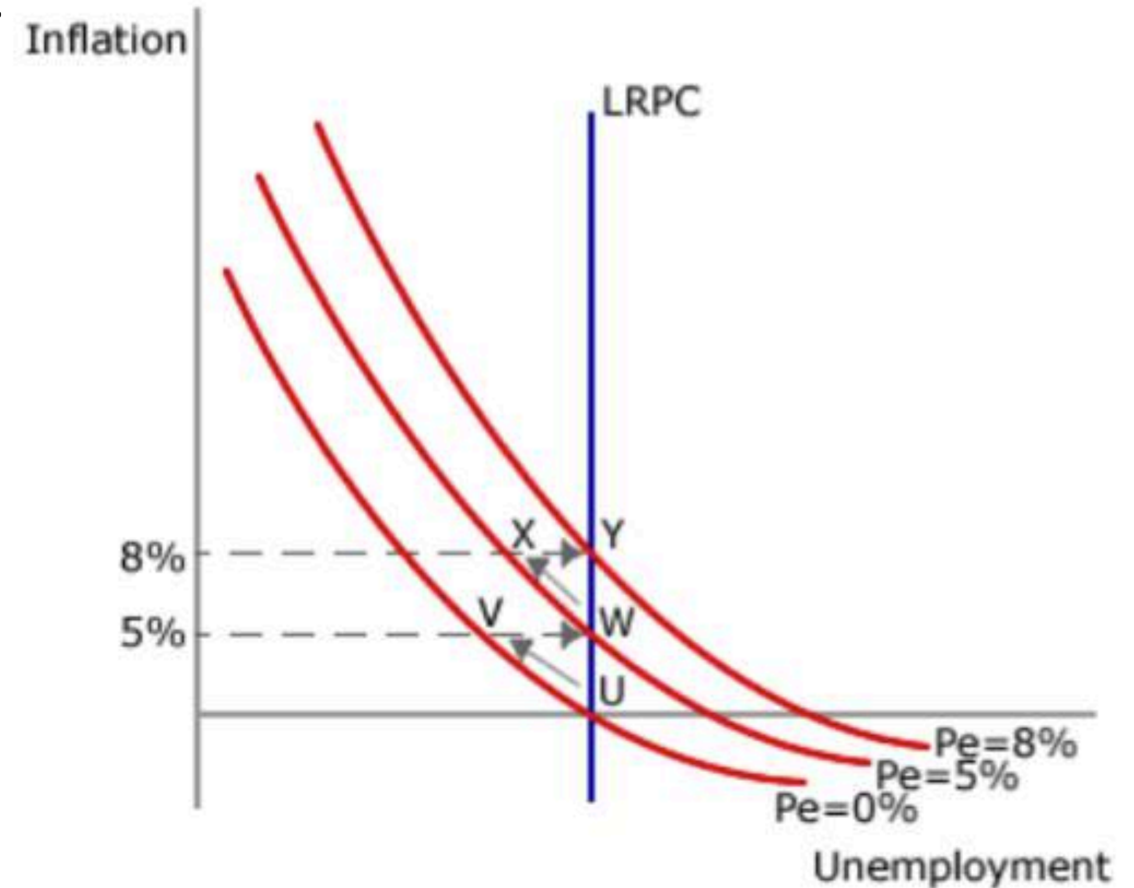
Trade-off between economic activity and inflation? The short-run Phillips curve

- There is an equilibrium rate of unemployment (here at 6.5% of the workforce) with inflation at zero.
- Below this equilibrium rate, inflation accelerates.
- Above this equilibrium rate, inflation declines gradually.
- Okun's law states that there is a negative relationship btw economic activity and unemployment.
- Okun's law + the Phillips curve indicate a positive relationship between economic activity and inflation.



The long-run Phillips curve: expectations matter!

- If the equilibrium rate of unemployment is achieved, the economy is at point U
- Moving from U to V requires that inflation increases (from 0 to 5%)
- At constant inflation *expectations*, nominal wage is constant, but the real wage declines, hence unemployment decreases
- Once inflation reaches 5%, inflation expectations move to 5% and the nominal wage is set 5% above its initial value: the real wage is constant, hence unemployment goes back to its equilibrium rate, at point W



Monetary policy (cont.)

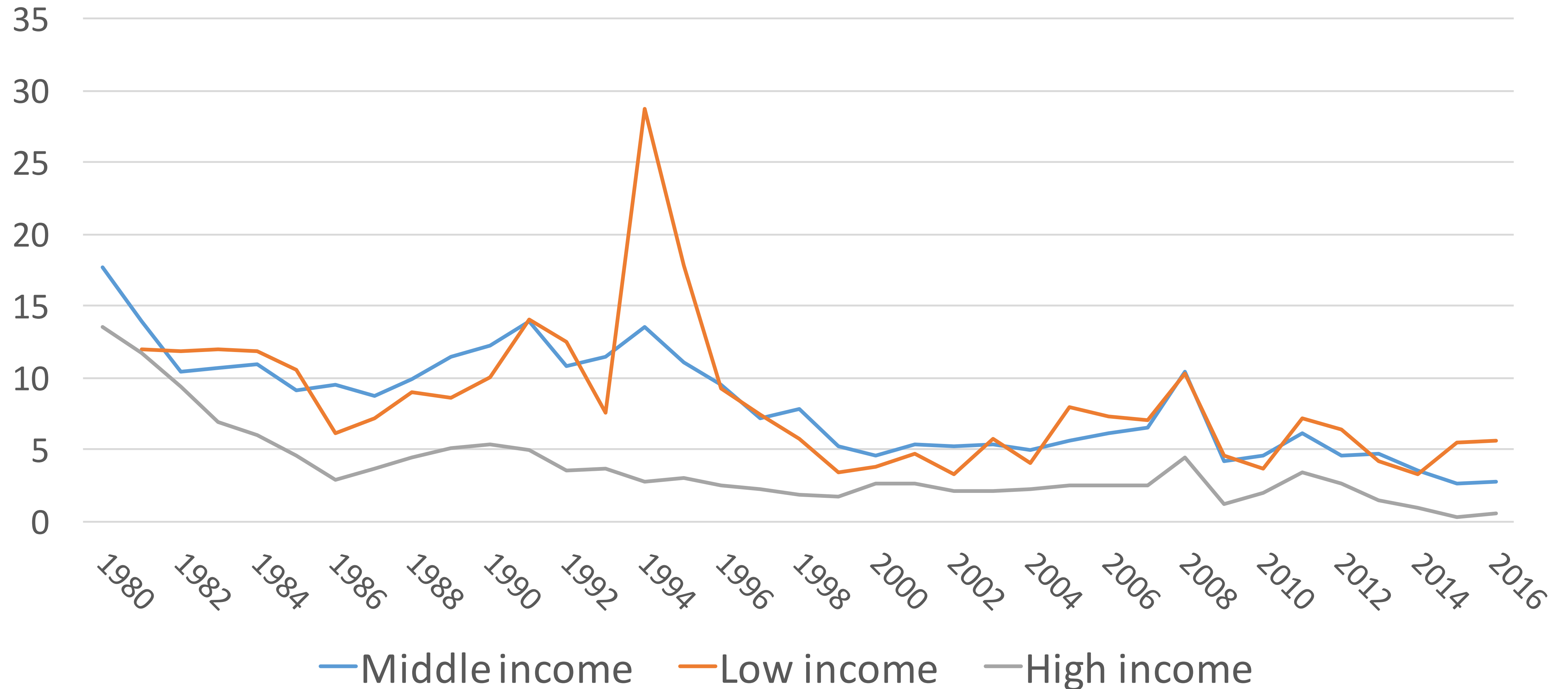
- A key to stability is control of the rate of **inflation**:
  - From late 1970s to early 1980s: the monetarist prescription of controlling money supply as a means of holding down the inflation
    this approach was even less successful in developing countries (generally been abandoned)

  - More recently: giving central banks independence in setting the **interest rates** (targeting the inflation itself)
    This approach was demonstrated by UK in 1997, the Bank of England Monetary Policy Committee (MPC) was given the independence to set the interest rate in order to target the inflation rate set by UK Treasury : when inflation is too high the MPC should raise the interest rate to reduce it.

- If inflation appears to be above the target, the bank is likely to raise interest rates. This usually (but not always) has the effect over time of cooling the economy and bringing down inflation

- If inflation appears to be below the target, the bank is likely to lower interest rates. This usually (again, not always) has the effect over time of accelerating the economy and raising inflation

Success in inflation control



- Primary **tool** to control inflation: **interest rate** that can be raised or lowered:

  - Directly: through the rate at which financial institutions can access central market funds

  - Indirectly: through ‘open market operations’, where central bank issues or buys government debt

Monetary and exchange policy

- The ability of countries to operate an independent monetary policy is dependent upon many factors, the most important one: exchange rate policy

- Basic task on monetary policy: alter the supply of money in the economy in response to domestic economic condition (economic booms → higher interest rates and a squeeze on money supply)

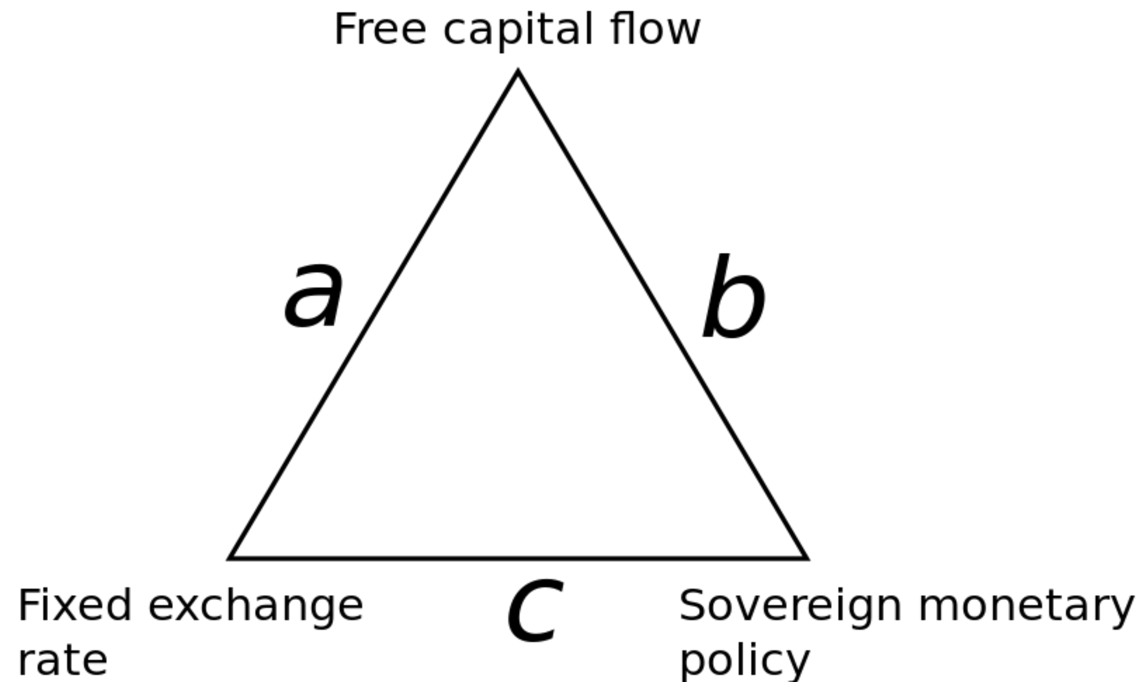
Monetary and exchange policy (cont.)

- In order to maintain an exchange rate peg, the central bank must intervene continually in the foreign exchange market and the buying or selling of foreign exchange directly affect the size of money supply in the domestic economy.
  E.g. to prevent an appreciation central bank buys foreign exchange, increasing the money supply

- Under a fixed exchange rate regime, the activities of the central bank with respect to money supply are no longer solely governed by concerns over the domestic economy, they are driven by the need to maintain a certain exchange rate

The impossible trinity

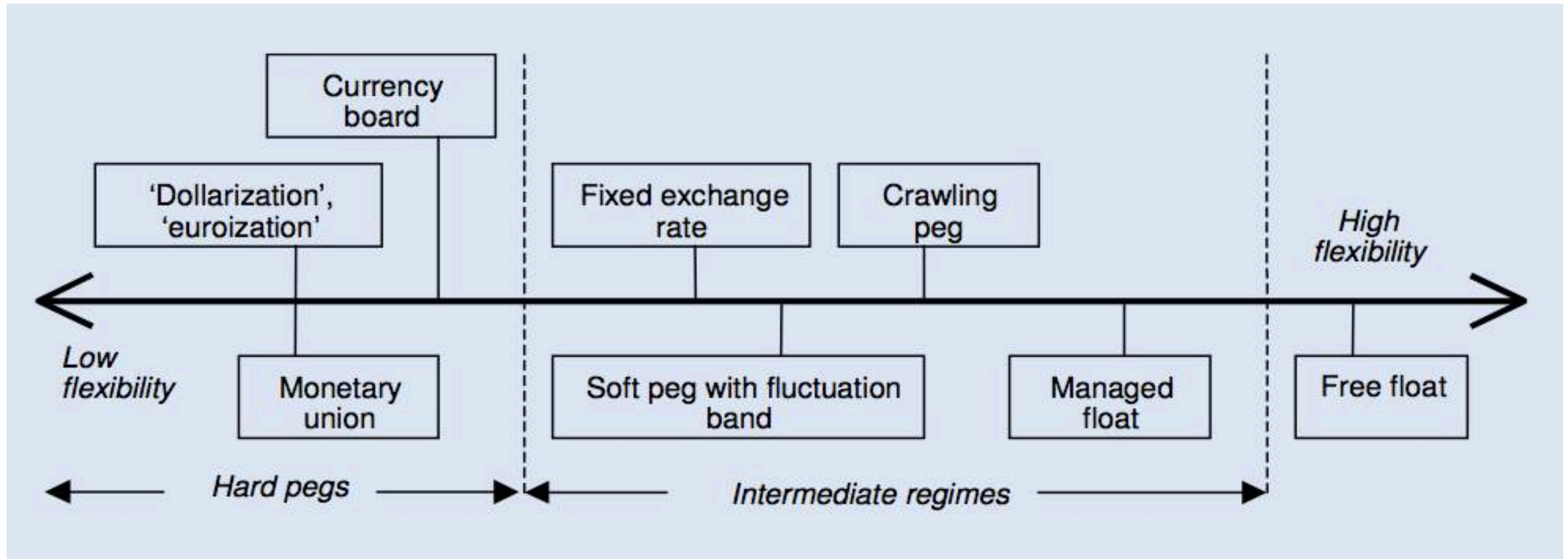
- Based on Mundell Fleming model: It is not possible to have a fixed exchange rate, an independent monetary policy and free movement of capital



Monetary and exchange policy (cont.)

- Since the collapse of the Bretton Woods:
  - Many developing countries maintained fixed exchange rates (for developing Asia the figure dropped sharply compared to prior to the Asian crisis with 90% of countries adopting peg)
  - Developed countries mostly adopted floating exchange rate regimes (with the exception of Monetary union in Europe)

Different exchange rate regime choices and their flexibility level



Monetary and exchange policy (cont.)

- Why countries practice peg?
  - In countries with poor record of inflation control, a credible fixed exchange rate over long term → convergence of the inflation rate with one of the country to which the currency is pegged (the ‘outsourcing’ the monetary policy may be desirable)
  - Maintaining a fixed exchange rate, particularly with respect to a county’s main trading partner → beneficial for the stability of international trade and ensures that the exchange rate does not become uncompetitive through appreciation
  - Under a peg regime, the exchange rate provides an ‘anchor’ for prices

Monetary and exchange policy (cont.)

- Shortcomings of a peg:

  - If the fixed exchange rate accompanied by fiscal and monetary mismanagement leading to high inflation, the real exchange rate will progressively rise → uncompetitive export and speculative attack on foreign exchange reserves (Currency crisis)

Monetary and exchange policy (cont.)

- Developed countries: floating regime
  → the need to search the price stability elsewhere

  - Monetary policy: controlling the money supply, in practice it was much more difficult than theory and by 1980s, very few countries still directly targeted the money supply, most countries preferred to target prices directly

  - Because of lack of the credibility of the central bank's commitment to hit its inflation target

  - Inflationary **expectations** have powerful effect on the outcome

Monetary policy

- The solution: make central banks independent and give them the complete control over the monetary policy
- The majority of developing countries have not adopted a system of inflation targeting

- <u>Preconditions for inflation targeting to be effective</u>:
  1. Inflation forecasting need to be accurate and well-developed
  2. CB must be independent, or effectively autonomous
  3. The monetary authorities have to be free of pressure to finance the fiscal deficit.

Monetary policy (cont.)

- Masson (2006) described 4 channels through which monetary policy is transmitted:
    1. Direct interest rate effects, which influence investment decisions and the choice between consuming now and consuming later
    2. Indirect effects via other asset prices, such as prices of bonds, equities and real estate, which will influence spending through balance sheet and cash flow effects

3. Exchange rate effects, which will change effective relative prices of domestic and foreign goods, influencing net imports, and also the value of foreign currency denominated assets, with resulting balance sheet effects

4. Credit availability effect, which may include credit rationing if there are binding ceilings on interest rates.

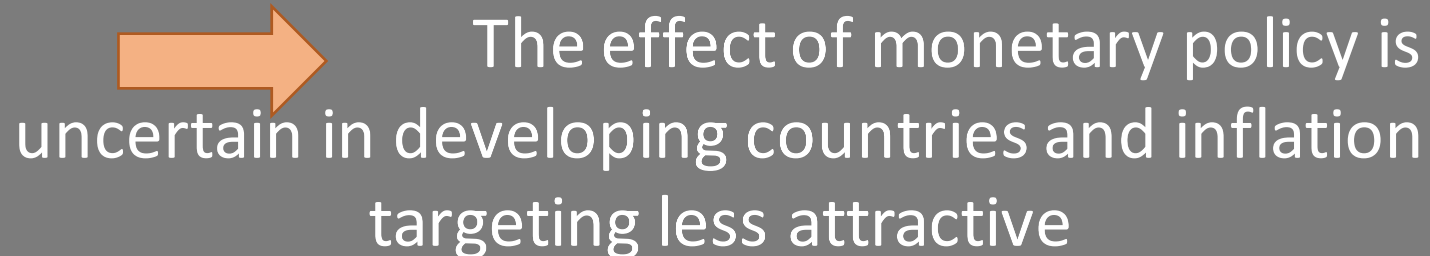
‘Credit rationing’ refers to any situation in which lenders are unwilling to advance additional funds to a borrower even at a higher interest rate.

When demand for loans exceeds the supply of these loans at a specific rate

<u>**Reasons**</u>: this situation arises because of market imperfection or market failure as in spite of a demand for funds at a current rate the lender is not either **willing to loan more funds** or **increase the interest rates** (asymmetric information and/or central limitations in financial markets).

Monetary policy and interest rate

- People in developing courtiers are less sensitive to changes in interest rates than are those in developed countries
- Informal credit systems and microfinance institutions reduce the extent at which the monetary policy is transmitted



- In developing countries: despite the financial liberalization, governments still have some control over the interest rate

Monetary and exchange policy

- The third channel: exchange rate → only relevant in a situation of flexible exchange rates
  Not really the case in many developing countries, even those countries who claim to have a float regime manage their exchange rates closely.
  Even after the Asian crisis many countries abandoned fixed exchange rates, the number of countries with truly floating regimes in developing world is low

- Many countries show both a 'fear of float' and a 'fear of fixing'

Monetary and exchange policy (cont.)

- Fixed exchange rate is by definition stable but it is viable only over long-term hard pegs (otherwise: speculative attack)
- Currency board: when the authorities forsake the power to issue money → brings stability and credibility
  They are very effective to reduce inflation
  (Example of Argentina)
- Monetary union: success of the euro due to international credibility ECB and strong anti-inflation reputation.

No monetary or exchange rate policy is successful unless fiscal policy is well-managed

Fiscal policy

- The aim of all policy is to assumed to maximize social welfare, which is measured by economic (growth, inflation, employment, …) and social (life expectancy, crime rates, …) indicators
- Policy-makers use particular instruments to affect these indicators → social welfare
- Choice of the most efficient instrument

Different forms of taxation
Different forms of expenditure

Why do we need fiscal balance: https://www.youtube.com/watch?v=1qhJPqyJRo8

Fiscal policy (cont.)

- An optimal fiscal policy system should incorporate both efficiency (minimal distortion) and equity (distributional)

- It is important to analyze both the revenue raising and expenditure aspect of fiscal policy simultaneously

Fiscal reforms in practice: increasing tax revenues

- Increasing revenues from tax is extremely difficult:
  - Large number of complicated taxes
  - Tax evasion
  - Poorly trained taxed collectors with limited resources
  - …

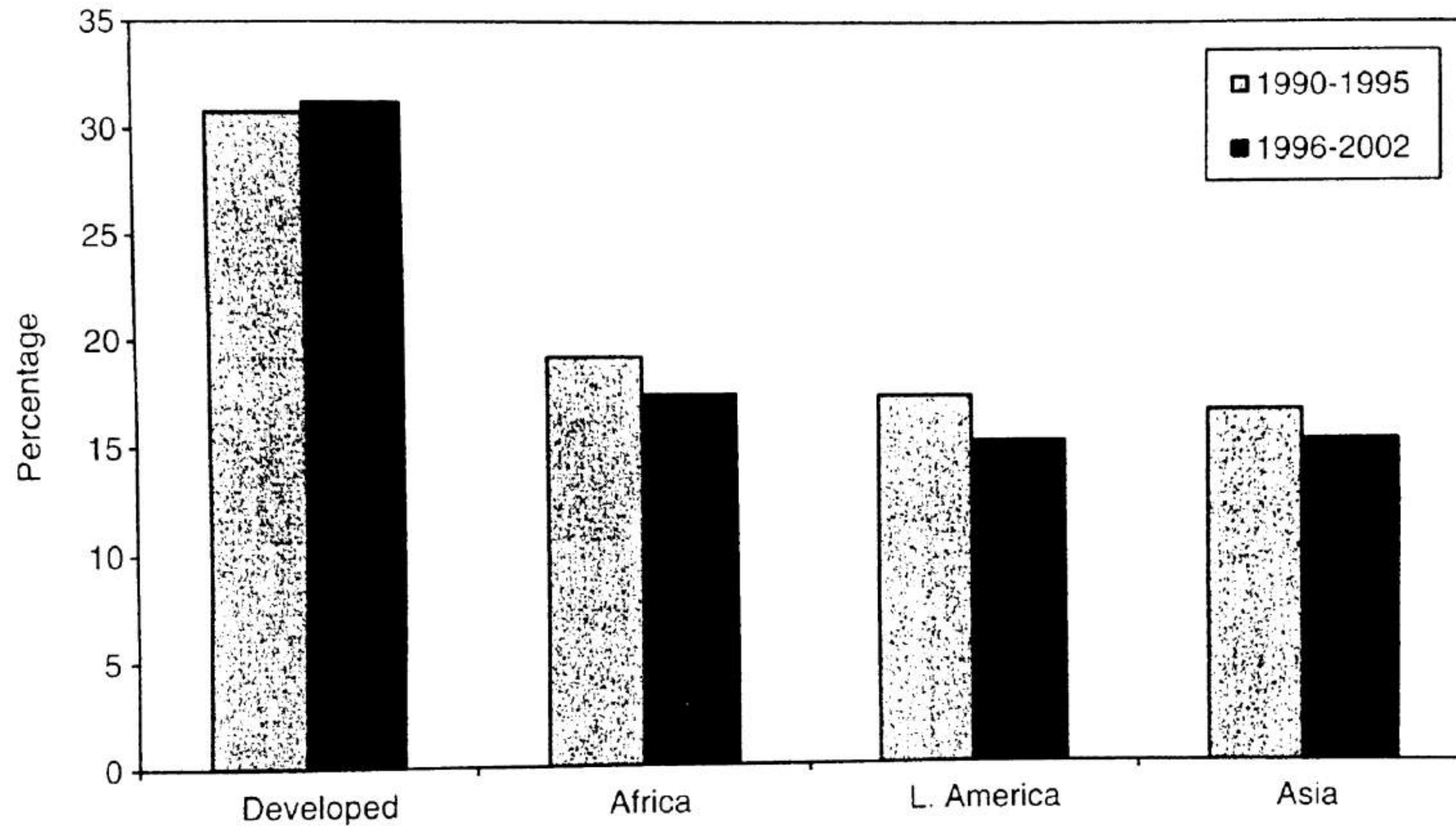


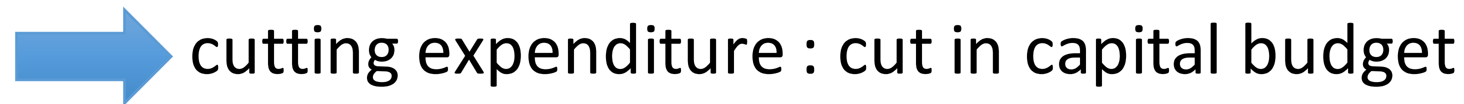
Figure 5.1 Regional tax revenues as percentage of GDP, 1990–1995 vs. 1996–2002.

Source: UNPAN.

Central government tax revenues fall in all developing regions!

Fiscal reforms in practice: cutting expenditure

- Also difficult to implement
- Goal : reduce current spending rather than capital expenditure
- In practice it is politically difficult to be done



in the case of inefficient state enterprises (good), but there are also cuts in areas such as infrastructure, investment, social services (health and education)

Tax reforms

- Why tax reforms are necessary in developing countries?
  - Relatively low tax take (%GDP) → in order to achieve development objectives while holding down fiscal deficit, they should raise tax take
  - Tax system in developing countries are often regressive in nature → disproportionate tax burden falling on the poor
  - Poorly designed tax system cause distortions in the economy → low growth levels

Designing a tax system

- Tax revenues rise as the national income rises
- Difference between countries in terms of tax structure (depend also on national income level): trade taxes are highly important for low-income countries
- Importance of direct taxes and consumption taxes (such as VAT), rise as the national income rises.
- Importance of VAT is growing everywhere regardless of countries income level

- Objectives of a tax policy
  - Revenue raising
  - Efficiency
  - Equity
  - Feasibility

The objectives of a tax policy: revenue raising

- Primary aim of taxation is to raise revenue to enable the government to spend on its priorities without generating fiscal deficit
- The relationship between tax revenues and growth → elasticity of tax yield

Elasticity of tax yield: the change in tax revenue associated with a given change in GDP

- If a 1% change in GDP → 1.5% change in tax : the tax system is **elastic**
- If 1% change in GDP → 0.75% change in tax: the tax system is **inelastic**

The objectives of a tax policy: revenue raising (cont.)

- Elasticity is affected by the efficiency of tax collection and level of tax evasion in the economy
- Elasticity increases during economic booms and declines during economic contractions
- Countries with diverse range of taxes in place benefit from lower revenue volatility than countries that rely on a narrower range of taxes. (developing countries are more likely to be in the latter group)

The objectives of a tax policy: efficiency

- Taxes can produce economic costs and an efficient system is designed to minimize these costs:

  - On average in developed countries, tax collection costs 1% of revenue raised (this figure is higher in developing world)
  - Administrative or accounting /auditing requirement (UK example of moving to personal assessment of income tax)
  - All taxes are distortionary but some are even more than others: alter financial incentives and influence behavior

The objectives of a tax policy: efficiency (cont.)

- Tax policy advice to developing countries:
  - Introducing VAT: non-distortionary if implemented uniformly, relative costs are low
  - Simplifying import tariffs: trade taxes are highly distortionary, encourage an inefficient allocation of resources
  - Tax rates should be kept as low as possible: to minimize the distortionary effect of the change in relative prices
  - ‘Competitive’ tax systems are important in attracting international investment

The objectives of a tax policy: equity

- Notion of fairness or equity vary from one person to another
- Economist distinguish 2 forms of equity with regard to tax:
  - Horizontal equity: those with equal ability should pay equal amounts irrespective of where they live or what influence they may have
  - Vertical equity: those with different abilities should pay different amounts in proportion to their abilities (progressive taxes)

    e.g. Uniform VAT is regressive

The objectives of a tax policy: equity (cont.)

- Address equity issues:
  - Government expenditure targeting spending on the poor
  - Redistribution via tax system

Economist who are concerned over the economic impact of the tax system think that the first cannel is the best. Because of historical difficulty that developing countries have had in implementing progressive system of income tax.

The objectives of a tax policy: feasibility

- No point in having a good tax system if taxes cannot be collected!

The design in developing countries is strongly influenced by economic structure. Many developing countries have a large traditional agricultural sector that is not easily taxed.

Many transitional and developing economies have a significant informal sector that is largely outside the formal tax structure.

The objectives of a tax policy: feasibility (cont.)

- Three essential factors for an effective tax administration:
  - The *political will* to administrate the tax system effectively
  - A *clear strategy* for achieving this goal
  - Adequate *resources* for the task

- There is no tax system that is optimal for all countries
- The economic structure of developed countries is different from the one of the developing world, so it is normal that the tax system should be also different
- The feasibility of any form of tax should be carefully studied before its implication

Tax evasion

- Result: effective tax base is much smaller than the potential tax base

➢ In developing countries due to administrative deficiencies in terms of tax identification and collection

➢ Smuggling good or under-invoicing

Tax avoidance

- Tax evasion ≠ tax avoidance

  Tax evasion → illegal & criminal penalties apply
  Tax avoidance → the legal utilization of the tax regime to one's own advantage to reduce the amount of payable tax

- Issues related to the taxation of transnational corporations (TNCs):

  - Engaging in "transfer pricing"
  - Choosing a "source" tax base

- **Transfer pricing** refers to the pricing set between two related companies in intra-company transactions or trading. The latter can involve buying and selling of goods, patents or services between a parent company and a subsidiary, or between two subsidiaries controlled by a common parent, etc.
  Theoretically, TNCs must price such intra-firm transactions at market value. But clearly, subsidiaries and affiliates of TNCs can manipulate their intra-company transaction accounts by selling to each other at prices higher or lower than the market prices, such that profits from a company in one country can be transferred to another country with lower tax rates. I

- Income or profits which result from international activities such as cross-border investment may be taxed where the income is earned (the source country), or where the person who receives it is normally based (the country of residence)

- To prevent double taxation → Treaties that led to the current set of over 2,500 bilateral income tax treaties, which provide the framework of the international tax regime.

  (Some rights to tax are given to the source, and the residence country is required to relieve double taxation either by giving a credit for such source taxes paid, or by exempting the relevant income from its taxes.)

- **“Source” tax base**: taxes are due in the territorial region where the taxable activity takes place. TNCs may prefer a ‘residence’ tax base, where they are taxed on their worldwide income.

- the distinction between residence and source is very hard to apply to businesses that operate in an internationally- integrated manner, as with most TNCs

- The TNC can set up a network of intermediary subsidiary companies, formed in convenient jurisdictions, especially to manage its assets and financial flows.

- Many of these involve passive or fictional business functions, such as providing insurance, raising finance by floating bonds and lending the proceeds, and owning physical assets (e.g. ships) or intellectual property (e.g. patents and trade-marks).

- The `active' business profits of the TNC's operating subsidiaries, taxable in source countries, will be reduced by fees and charges they must pay for these inputs. Yet such income flows need not be returned to the ultimate parent company unless and until they are needed to fund dividends to its shareholders.

- This enables TNCs legitimately to minimize taxation of their retained earnings, and to benefit from a reduced cost of capital compared to purely national firms.

Discussion

- Should we fight tax avoidance?
- Why is it important?
- How?