

Chapter 7: Macroeconomic management

Financial Markets, Money and Banking

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Outline

1. Introduction
2. Macroeconomic management
 1. Monetary policy
 2. Exchange rate policy
 3. Fiscal policy
3. Tax reforms
4. Reform of the banking sector
5. Capital market development

Introduction

- Though there is disagreement on the best way to develop different components of the financial system
- Agreement: Macroeconomic stability is an essential prerequisite for financial sector 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
- 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 interest rate that is compatible with a stable price level)
 - 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:

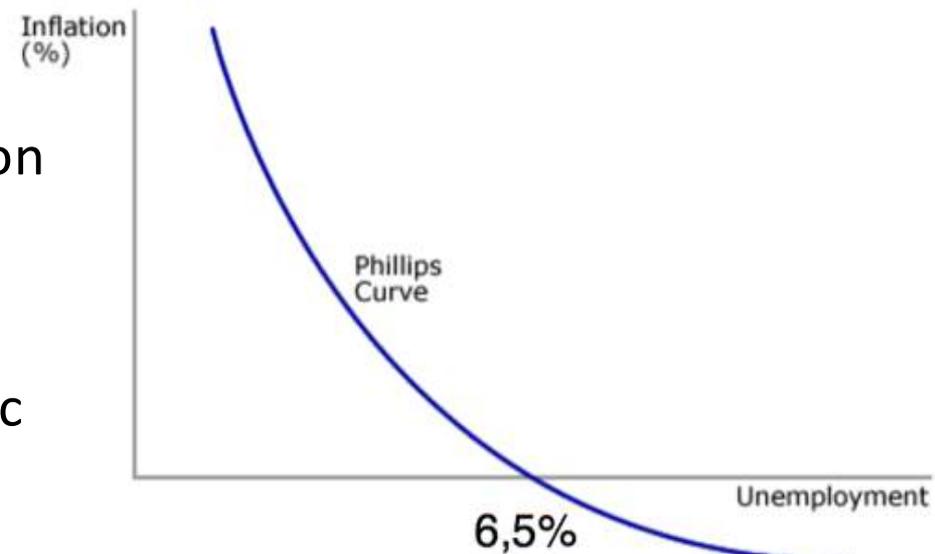
When the economy hits the zero-lower bound (ZLB) and the inflation rate is zero, the real rate is zero

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.

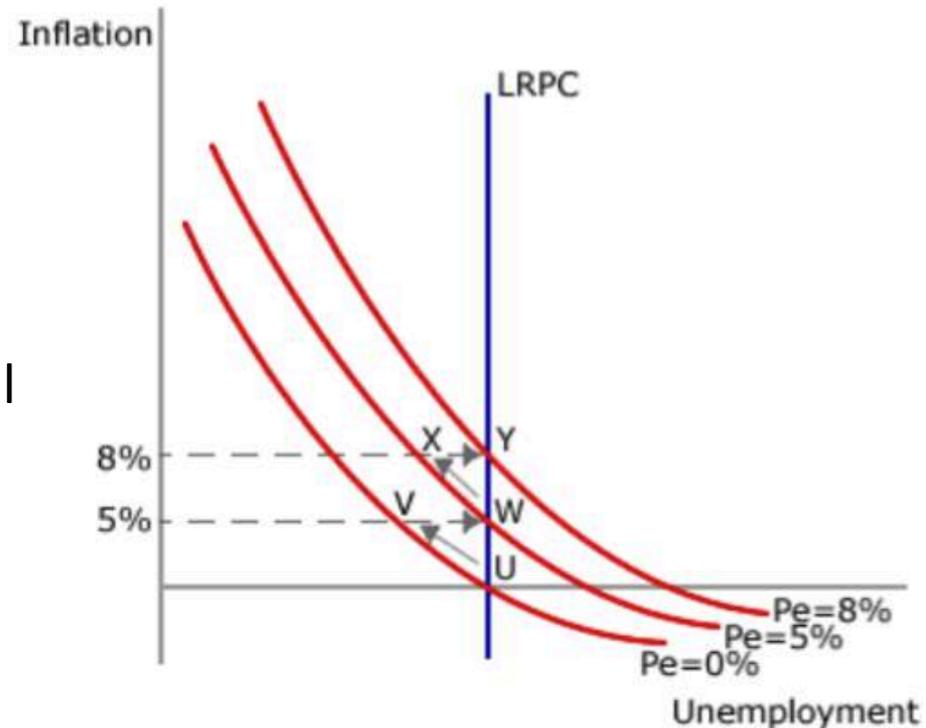
Trade-off between economic activity and inflation? The short-run Phillips curve

- 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

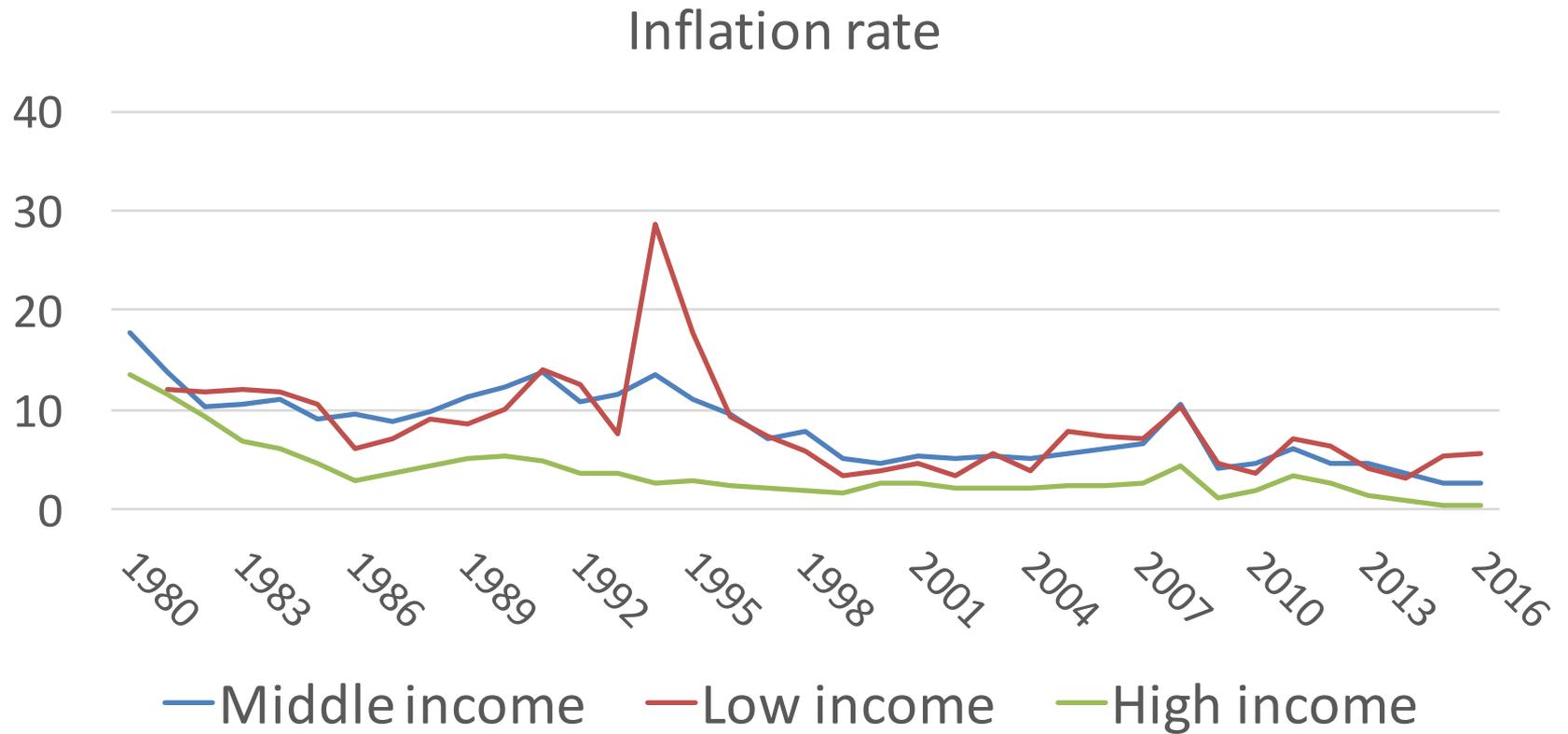


Monetary policy (cont.)

- 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

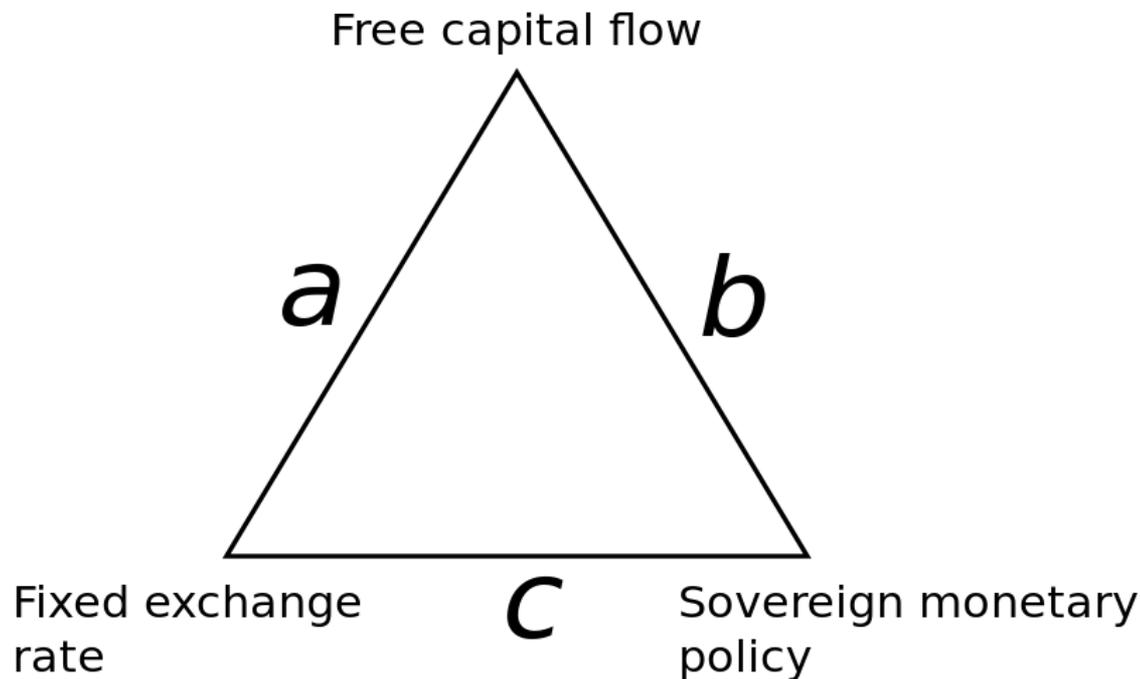
- The ability of countries to operate an independent monetary policy is dependent upon many factors, the most important one: exchange rate policy
- Basic task on monetary policy: alter the supply of money in the economy in response to domestic economic condition (economic booms → higher interest rates 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

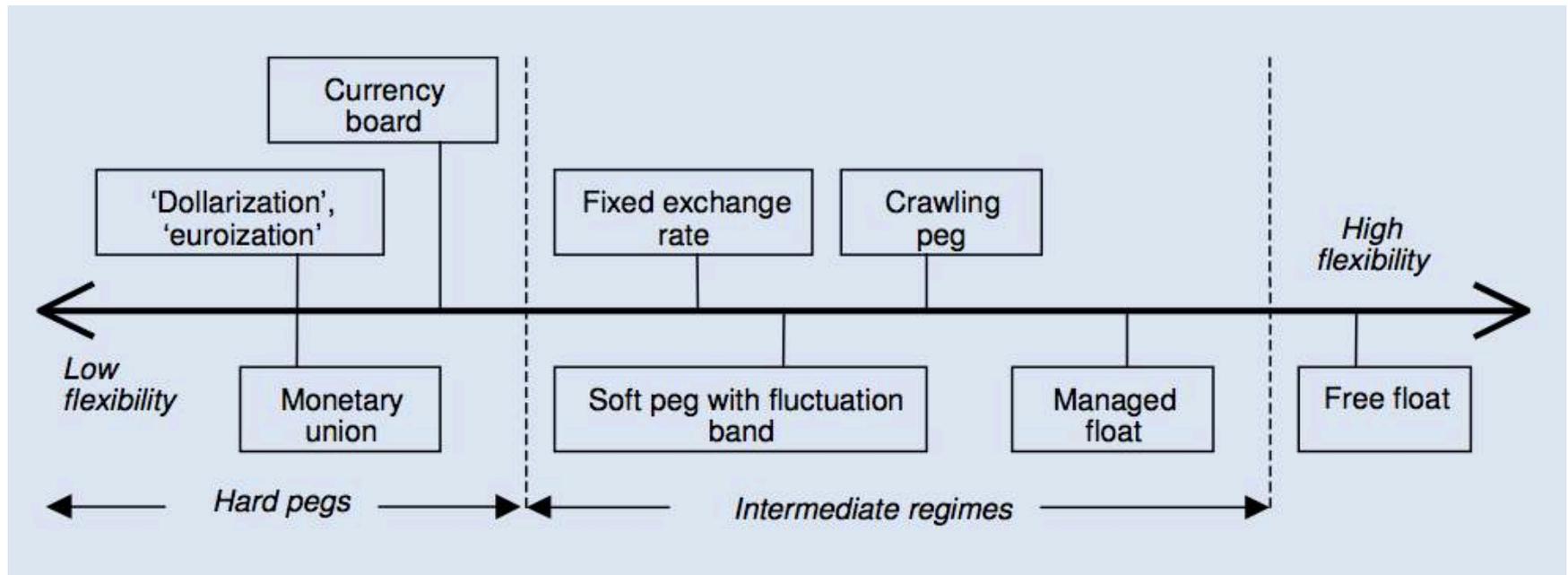
- Based on Mundell Fleming model: It is not possible to have a fixed exchange rate, an independent monetary policy and free movement of capital



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**)



Today's Presentation

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



Why?

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
- Preconditions for inflation targeting to be effective:
 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.



Not the case in the majority of developing countries

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.

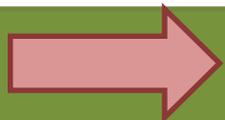
‘Credit rationing’ refers to any situation in which lenders are unwilling to advance additional funds to a borrower even at a higher interest rate.

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

Reasons: 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 countries 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



The effect of monetary policy is uncertain in developing countries and inflation targeting less attractive

- 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

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 tax collectors with limited resources
 - ...

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
-  cutting expenditure : cut in capital budget

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

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

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- **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.

Stability vs. growth

- Stabilization programs in developing countries → remarkably successful: average inflation fallen from more than 50% in the 80s to about 5% in 2006, fiscal balance improvements
- Question: Does this stability cause growth?

Stability vs. growth (cont.)

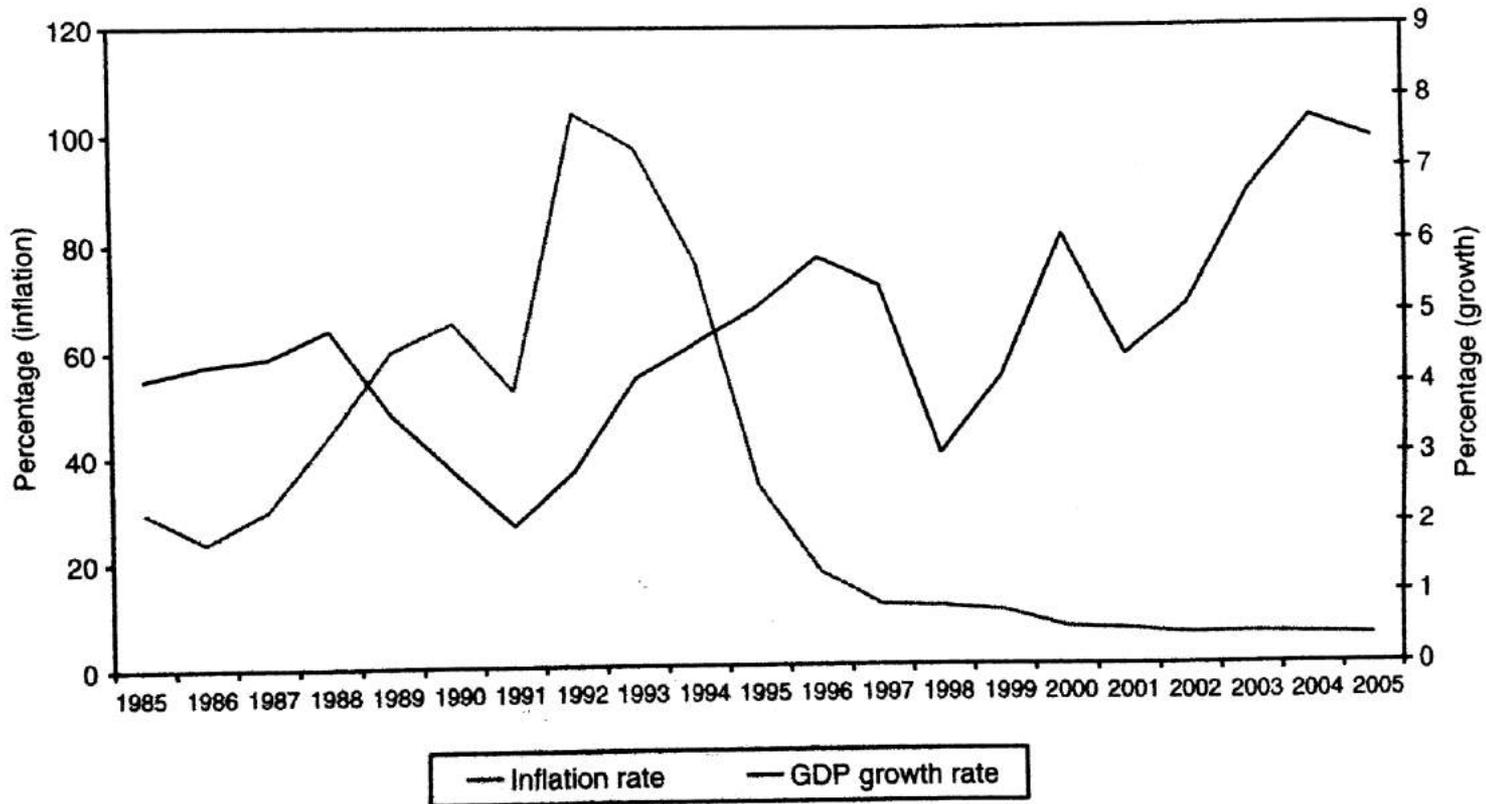


Figure 5.3 Developing world inflation vs. growth, 1985–2005.

Stability vs. growth (cont.)

- Large proportion of this growth has been concentrated in particular regions: China & India
- Decline in inflation was almost uniform among developing countries, but the growth rates are not!

While macroeconomic stability may be a necessary (pre)condition for growth, it is far from being sufficient to generate growth by itself

Reforms of the banking sector

- Financial system in developing countries is dominated by the banking sector
- Even in market-based financial systems the role of the banks remain crucial

Key weaknesses of banking sector in developing countries

1. High concentration in the banking sector (the sector is often dominated by a few large banks) → uncompetitive situation that leads to high costs
2. Large degree of state ownership → reduce the efficiency of the system and restrict the entry of foreign banks
3. Lack of integration in the international financial system → restrict bank's access to international finance, particularly long-term finance in favorable terms

Key weaknesses of banking sector in developing countries (cont.)

4. Private sector banks are often owned by family and/or business groups that engage in 'connected-lending' (lending to other parts of the family or business empire) → lending on non-commercial terms increases the quantity of non-performing loans

5. General lack of capital market development → corporate borrowers often rely on the banking system to finance → lack of risk-sharing and dependence on debt-financing → increase the chance of systemic risk

Keynes: 'if you owe your bank a hundred pounds, you have a problem, but if you owe millions, it has'

Key weaknesses of banking sector in developing countries (cont.)

6. Higher information asymmetries + lack of shareholder control due to weak equity markets → little or no monitoring of banks to prevent excessive risk taking

Moral hazard issue: if the bank's bet comes off it gains; if it doesn't the depositor loses

The situation is even worse: banks in trouble will be rescued by the state due to their importance to the financial system

In a more balanced system the behavior of banks is monitored by institutional shareholders

Key weaknesses of banking sector in developing countries (cont.)

7. Poor quality human resources →

- Technical mismanagement: lack of technocratic banking skills → inefficient internal controls, inadequate analysis of credit worthiness, political pressure ...
- Cosmetic mismanagement: banks attempt to hide or disguise losses. Ex: they may keep dividend payments high despite losses → worsening an already difficult situation
- Desperate mismanagement: when losses are too large bankers may 'gamble for survival': lend to very risky projects at high rates of interest or speculating
- Fraud: senior managers may be tempted to grant themselves loans that they will not have to repay

Key weaknesses of banking sector in developing countries (cont.)

8. **'Credit rationing'**: banks cannot easily determine which borrowers have higher probability of default (due to asymmetric information), if banks raise interest rates, they may simply encourage borrowers to switch to riskier projects + problem of **adverse selection** (borrowers who do not intend to repay their loans are those who are willing to accept very high interest rates)



profit-maximizing rational banks will not raise interest rates to market clearing level but instead will 'ration credit', when faced with excess demand for loans.

Some sectors may be entirely excluded because monitoring their activities is particularly difficult, such as small farmers

Reforms of the banking sector (cont.)

Key aim of regulation and supervision of the banking system: ensure **the solvency of banks**

Basel Capital Accord

- Concerns on the solvency of banks → Basel Capital Accord
- The Basel Accords is a set of recommendations for regulations in the banking industry

- Prior to 1998 banks were largely free to choose how much capital they should set aside to protect themselves from future losses.
- International competition in the banking sector → concerns about systemic risk to the banking system
- Regulators decided to act → Basel Capital Accord of 1998 demands that banks hold a minimum amount for their loans

Basel Capital Accord (cont.)

- In 1988, the Basel I Capital Accord was created. The general purpose was to:
 1. Strengthen the stability of international banking system.
 2. Set up a fair and a consistent international banking system in order to decrease competitive inequality among international banks.

Basel Capital Accord (cont.)

- Basel Capital Accord: established a minimum '**capital adequacy ratio**': is the ratio of a bank's capital to its risk.

Different types of risks:

- Credit Risk
- Market Risk
 - Interest Rate Risk
 - Foreign Exchange Risk
 - Commodity Price Risk etc.
- Operational Risk

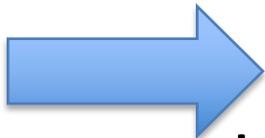
- By the end of 1990s more than 93% of countries claim to adjust capital ratios for risk

Basel Capital Accord (cont.)

- The committee does not have the authority to enforce recommendations, although most member countries as well as some other countries tend to implement the Committee's policies. This means that recommendations are enforced through national laws and regulations.
- 2004 → Basel II
- 2010-2011 → Basel III

Pension reform

- Financial sector development is influenced by the growth of the contractual savings institutions
- Development of stock markets: providing the supply of equity assets + corresponding rise in **demand** for these asset



The development of deep pension sector becomes fundamental to these efforts

Forms of national pension systems

1) Pay as you go (PAYG)/ unfunded scheme/ defined benefit schemes:

Workers make contributions of a certain proportion of their salaries into state pension funds, and the state uses this fund to provide payments to retired workers (proportional to the worker's final salary and number of years worked).

- Today's workers provide the financing to fund pensions for today's retired
- There are no savings built up to provide a pension (workers have a claim on a collective fund)
- The pension the retiree receive may be fixed in relation to their previous salary, which is termed a '*defined benefit*'

Forms of national pension systems (cont.)

2) Funded scheme/ fully funded/ defined contribution:

The government could oblige workers to buy individual pensions from private pension funds, *each worker would accumulate his or her own fund.*

The contribution rate (the percentage of salary that workers set aside) would be set by legislation and could also include an employer's contribution. Payments would be in form of annuity that provides a fixed income stream for the period of retirement.

Size of the pension fund depends on the performance of the stock market and the size of the resulting pension depend on the size of the pension fund at retirement.

Forms of national pension systems (cont.)

3) Hybrid system

It is possible to have a mix system, where a defined benefit scheme may be 'funded', or a defined contribution scheme may operate like a PAYG scheme as it only invests in a limited range of instruments, such as government bonds

Pension reform (cont.)

- Great majority of developed and developing countries went for PAYG option after the Second World War
- By 1980 PAYG system were facing difficulties:
 - Increasing life expectancy
 - Falling birth rates

Altered the demographic structure of many countries (developed and Latin America) → **old age dependency ratio** increased → additional burden on today's workers (funding the pension of increasing number of retirees)

Old age dependency ratio: the ratio of older dependents (people older than 64) to the working-age population(those ages 15-64)

Pension reform (cont.)

- A rising old-age dependency ratio, is ultimately unsustainable and can be fiscally damaging if government has to make up the deficit in the scheme
- In order to make the PAYG sustainable governments have 2 options (politically unpopular):
 - Raise the workers' contribution rates
 - Cut pension benefits

Pension reform in practice

- In 1981, Chile established the world's first funded pension scheme, starting a fashion which spread to other countries in Latin America and also to European transition economies in the 1990s.

Pension reform in Chile

- In 1980 the government implemented a system of 'personal retirement accounts' (a system of 'defined contributions' rather than defined benefit)
- Members of the existing PAYG system were given the option of joining the new system and the majority did so

Pension reform in Chile (cont.)

Logic:

- A fully funded scheme is by definition affordable
- By linking ultimate pensions to contributions, a strong incentive to work and increase income is created
- Establishment of private pension funds encourages the development of domestic capital market particularly if the pension funds are required to invest a significant proportion of their assets in the local equity market.

Pension reform in Chile (cont.)

Outcomes:

- The cost of transition are significant. (why?)
On current projections, the transition cost will not fall to zero until after 2030.
- There has been a huge financial deepening in Chile
- The administration costs account for 20% of the total amount
- By 2003, only 62% of those employed were regular contributors to the scheme, and minimum requirement to receive the scheme is 20 years of full contribution → many will not receive sufficient benefit on retirement to keep them above poverty levels

Individual schemes benefit upper middle income class and harm the poorest members of the society

Pension reforms

- There is a considerable fiscal cost of transition from PAYG to funded schemes
- Some argue: if output is rising, a PAYG system can remain balanced despite the rise in the old-age dependency ratio, but if output is static, a PAYG system will become bankrupt unless major sacrifices are made → the success or failure of the reform agenda is likely to be determined by the vibrancy and growth of the economy
- Privately managed, defined contribution schemes do have advantages, but so do PAYG schemes

conclusion

- There is no model that is applicable for all countries
- One country may benefit more from autonomy over monetary policy while another may benefit from a fixed exchange rate and an 'outsourced' monetary policy
- While a stable fiscal position is essential, the pattern of tax and expenditure policies is not fixed
- Stability does not equal development
A rigorous monetary and fiscal regime with low inflation and balanced budget is a necessary prerequisite for development, it is far from being sufficient

References

- “Development Finance debates dogmas and new directions”- Stephen Spratt (2009)