DEPARTMENT OF FINANCE
University Of Dar Es Salaam Business School

FN 101: Principles of Macroeconomics

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Lecture 1:
Introduction to Macroeconomics

Meaning of Economics

- **Scarcity (No-Free-Lunch) Principle:** we have limited resources relative to boundless needs and wants.
- **Opportunity Cost:** having one thing means having less of another.
- Therefore choices have to be made wisely.
- **Cost-Benefit Principle:** make choices when extra benefits exceed extra costs, and rank them in preference scale (prioritizing).

Meaning of Economics

- **Economics:** a study of choice in the world of scarcity, and of the results of those choices for society.
- Its a study of the best ways of doing things (optimizing).

Core Economic Questions

- Economics is faced with three core issues to resolve.
- **What to Produce:** specific mix of output (millions points on the PPF).
- As directed by prices, central plans or both?
- **How to Produce:** production techniques or methods to use (capital intensive, labour intensive, or technology intensive?)
- **For Whom to Produce:** who gets output?

Core Economic Questions

- Willing and able to pay price (market), or allocated by government (central plans) or both?

Ten Economic Principles

- **Principle 1: People Face Tradeoffs**
- To get one involves giving up the other.
- There is no free lunch.
- Economic growth and high employment comes at expense of inflation.
- Trade off: military vs. food (North Korea)

Ten Economic Principles

- **Principle 2: The Cost of Something is What You Give Up to Get It.**
- Decisions require comparing costs and benefits.
- What you give up to obtain something is called **opportunity cost**.

Ten Economic Principles

- **Principle 3: Rational people think at the margin.**
- Marginal changes are small, incremental adjustments to existing plan of action.
- People make decisions by comparing costs and benefits at the margin.

Ten Economic Principles

- **Principle 4: People Respond to Incentives.**
- Marginal changes in costs and benefits motivate people to respond.
- Decision to choose alternatives occurs when marginal benefits > marginal costs.

Ten Economic Principles

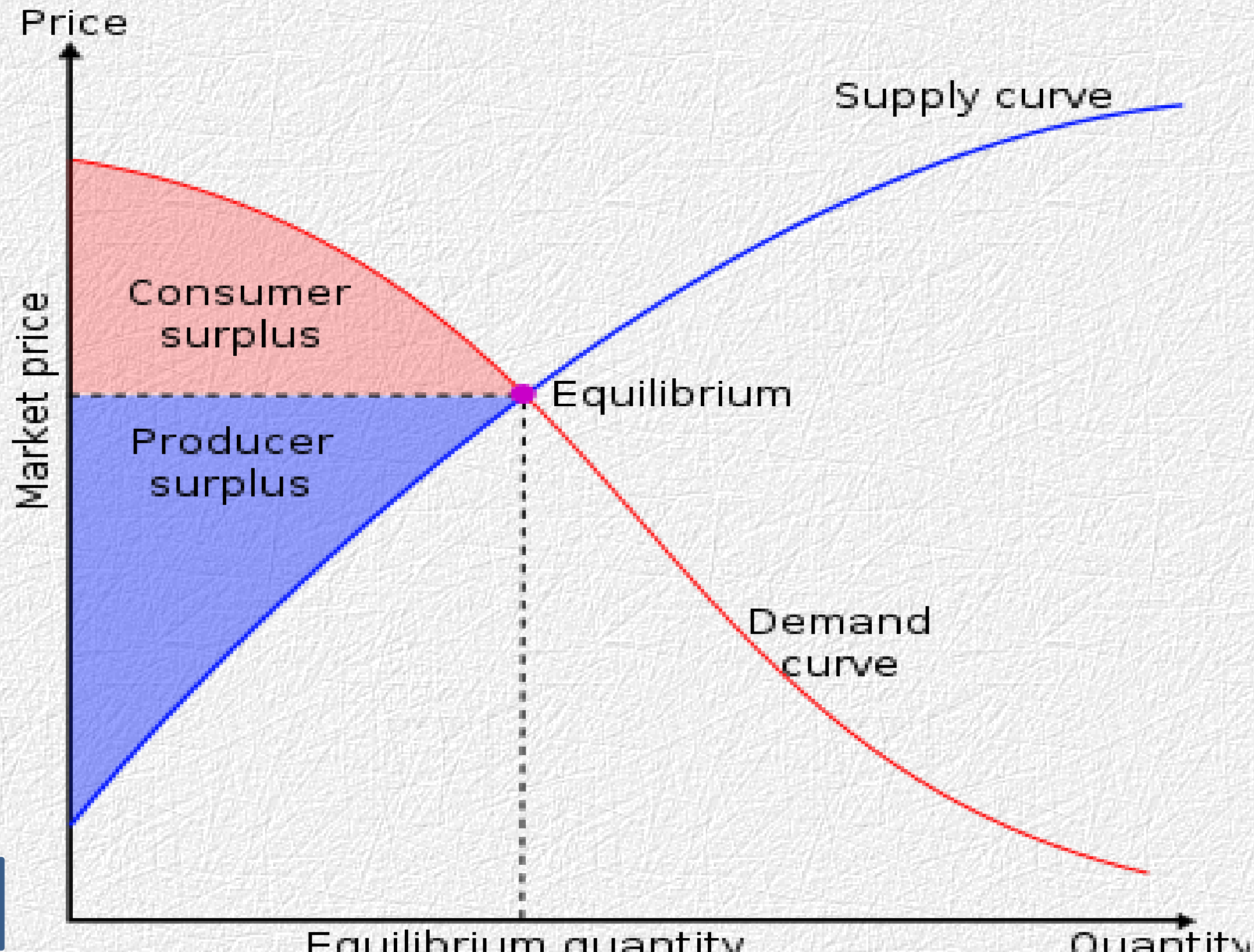
- **Principle 5: Trade Can Make Everyone Better Off.**
- Trade allows specialization.
- Competition drives innovation, risk taking, initiative, and creativity.
- Results are decline in costs and prices, new and better products and services in the market.

Ten Economic Principles

- **Principle 6: Markets are Usually a Good Way to Organize Economic Activity.**
- Markets organized economic activity through decentralized system of demand and supply forces, and prices.
- Markets create competition and freedom of choice, and people own their efforts/sweat.
- Prices signal profits (producers) and quality (consumers).

Ten Economic Principles

- Welfare of a society (**total surplus**) as a whole is maximized.



Ten Economic Principles

- **Principle 7: Governments Can Sometimes Improve Market Outcomes.**
- Market failures occur when markets fail to allocate resources efficiently, as a result of:
- 1. Externality – environment pollution.
- 2. Market Power – exploitation.
- Governments can intervene to promote efficiency and equity using taxes, legislation and macroeconomic policies.

Ten Economic Principles

- **Principle 8: Standard of Living Depends on the Level of Production.**
- Standard of living depends on level of income, GDP, GDP per capita, income distribution, and productivity.
- **Productivity** – level of production per hour of worker's effort.

Ten Economic Principles

- **Principle 9: Prices Rise When Too Much Money is Printed.**
- When money supply increases, value of money falls, products are sold at higher price (inflation).
- Proposed by **Milton Friedman** – inflation is anywhere and everywhere a monetary phenomenon.

Ten Economic Principles

- **Principle 10: Society Faces a Short Run Trade-off between Inflation & Unemployment.**
- **Phillips Curve:** efforts to increase economic growth, to reduce unemployment creates with it inflationary pressures.
- ⇩Unemployment ⇨ ⇧Inflation

Common Fallacies in Economics

- **Fallacy** – illogical way of reasoning.
- Flaw in the line of reasoning.
- Arises because economic relationships are complex and many variables are studied.
- **Fallacy of Association:** Variables moving together does not mean causing each other.
- Don't confuse correlation with causation.
- E.g. Inflation and unemployment in Phillips relation.

Common Fallacies in Economics

- **Post Hoc Ergo Propter Hoc Fallacy (After this, therefore, because of this):** If one event occurred before another, it does not mean it caused it occurrence.
- Problem of inferring causation.
- E.g. Sales may increase after hiring a new secretary.
- Is it the cause then?

Common Fallacies in Economics

- **Failure to Hold Other Things Constant:** Failure to hold other things when analyzing an issue.
- E.g. Will tax cuts increase government revenue?
- What if incomes are rising?

Challenges of Using Cost-Benefit Principle

- Rational people apply cost-benefit principle, though in intuitive and approximate way.
- However, certain pitfalls arise.
- **Pitfall of measuring costs/benefits proportionally:** Absolute shilling amounts not proportions should be used.
- **Pitfall of Ignoring Opportunity Cost:** All relevant opportunity costs should be considered.

Challenges of Using Cost-Benefit Principle

- **Pitfall of Not Ignoring Sunk Costs:** Should be ignored.
- Cannot be avoided even if action won't be taken. E.g. bought a ticket for concert.
- **Pitfall of Using Average Instead of Marginal Costs and Benefits:** Increase activity if marginal benefits > marginal costs.

Micro and Macroeconomics

- Adam Smith is founder and father of microeconomics (1776).
- Microeconomics: Branch of economics concerned with behaviour of individual entities (markets, firms, households, government).
- Smith analyzed prices, inherent strength of market mechanism, and power of self-interested actions.
- John Keynes is founder and father of macroeconomics (1936).

Micro and Macroeconomics

- **Macroeconomics:** Branch of economics concerned with overall performance of economy.
- It studies total investment, consumption, management of money and interest rates, business cycles and financial crises, economic growth and development, problems of inflation and unemployment, etc.
- Micro and macro are very interdependent and no one is superior to the other.

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Micro and Macroeconomics

- Microeconomics forms foundation for macroeconomics, e.g. national output (macro) is derived from aggregation of individual production functions of firms (micro).
- Macroeconomic variables (interest rate, inflation, unemployment, money supply, exchange rate) trickle down their effects to micro agents.

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How to Study Economics

- Economists use tools of economic analysis to develop theories/models that explain economic choices and working of economy.
- **Theory/Model:** A simplification of economic reality used to make predictions about real world.
- Presented orally, graphically, or mathematically.
- **Roles:** focus on main elements, develop analytical framework, make prediction, and foundation for policy formulation.

How to Study Economics

- To study economic problems, a **scientific method** is employment.
- A process of theoretical investigation involving four steps.
- **1. Specify assumptions** – lay framework for theory, e.g. ceteris paribus and rationality.
- Flexible if they change.
- **2. Identify and define key variables relevant to economic problem.**
- **Variable** – a measure that takes different possible values.

How to Study Economics

- *Independent variables* – act as cause.
- *Dependent variables* – receive the effect.
- **3. Formulate Hypothesis** – theory about how key variables relate to each other.
- A prediction of what happens to dependent variable when independent variables change.
- **4. Test validity of theory** – predictions confronts evidence.
- Focus attention on key variables and control others.

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How to Study Economics

- Conclusion: reject theory as inconsistent or continue using it.

Birth of Macroeconomics

- Lessons from Great Depression (1929-33).
- Most terrible economic event the 20th century.
- Economies shrank drastically, factories and mines closed, sales decline sharply, production rates cut by 31%, layoffs tripled, financial markets crushed.
- Public and policy makers expected economy to recover automatically (self-adjustment and market clearance).
- As it did in 1921-22 recession.

Birth of Macroeconomics

- It tried in 1931, **Pres. Herbert Hoover** – prosperity is just around the corner.
- However, it stopped and drug into deeper recession and Great Depression.
- Causes: Wild speculation in Wall Street (stock market crush).
- Unstable free market economies – long periods of low production and high unemployment.
- Poor economic policies.
- Lack of understanding how the economy worked.

Birth of Macroeconomics

- **Benefit:** Forced economists and policymakers to recognize major gaps in understanding on how economy works.
- That markets fail to adjust and a need of government intervention to stimulate economic activity.
- A brilliant economist provided a solution.
- **John Maynard Keynes (Cambridge economist)** – insufficient aggregate spending leads to recession and government policies help restore full employment.

Key Macroeconomic Issues and Policies

- **Economic growth and living standards** – increase in overall real output, real income, and economic welfare.
- What causes economic growth, measures to promote it.
- **Productivity** – output per employed worker.
- It determines level of production, real income, and living standards.
- What causes productivity growth or declines?
- **Business cycles** – periods of slower growth (recession) and rapid growth (expansion).

Key Macroeconomic Issues and Policies

- Sources and government policies to stabilize economy.
- **Unemployment** – wanting to work and can't find jobs.
- It is waste of resources; causes misery and wider social problems.
- What causes and how to address unemployment?
- **Inflation** – a rise in general price level.

Key Macroeconomic Issues and Policies

- Extent to which it becomes harmful, its cumulative nature, its offsetting effect on employment.
- Why it arises, its trade off with employment and how to address it.
- **Economic interdependence among nations** – desirability of free trade agreements, trade imbalances, international financial flows.
- To achieve macroeconomic goals, government uses **macroeconomic policy**.

Key Macroeconomic Issues and Policies

- **Macroeconomic Policy** – instruments (economic variables) under control of government used to affect macroeconomic goals, avoid worst excesses of business cycle or increase growth rate of output.
- **Fiscal policy** – use of taxes and government expenditure to affect economic activities.
- G affects overall level of spending (relative size of public and private sectors) and GDP.

Key Macroeconomic Issues and Policies

- Taxes affect disposable income and level of consumption and saving, which affects GDP and level of investment.
- Taxes affect prices of goods and factors of production affecting demand and supply.
- **Monetary Policy** – management of nation's money, credit and banking system.
- Money supply has critical relationship with financial (interest rates, stock prices, housing prices, exchange rates) and real variables (consumption, investment, GDP, price levels)

Key Macroeconomic Issues and Policies

- Expansion of money supply drives down interest rates, increase investment, causing a rise in GDP and inflation.

Key Macroeconomic Variables

- **Macroeconomic variables:** characteristics that describe a macroeconomy.
- **Most important four variables:** aggregate output or income; unemployment rate; inflation rate; and interest rate.
- **Others:** balance of payments, exchange rates, money supply, GDP per capita, etc.
- **Output/Income:** measures economy's overall level activity.
- GDP commonly used.

Key Macroeconomic Variables

- **GDP** is market value of all final goods and services produced within geographical boundaries of an economy in a given period of time.
- Quoted in nominal or real terms.
- **Unemployment:** quoted using **unemployment rate** (the fraction of labour force not working, but actively seeking employment).

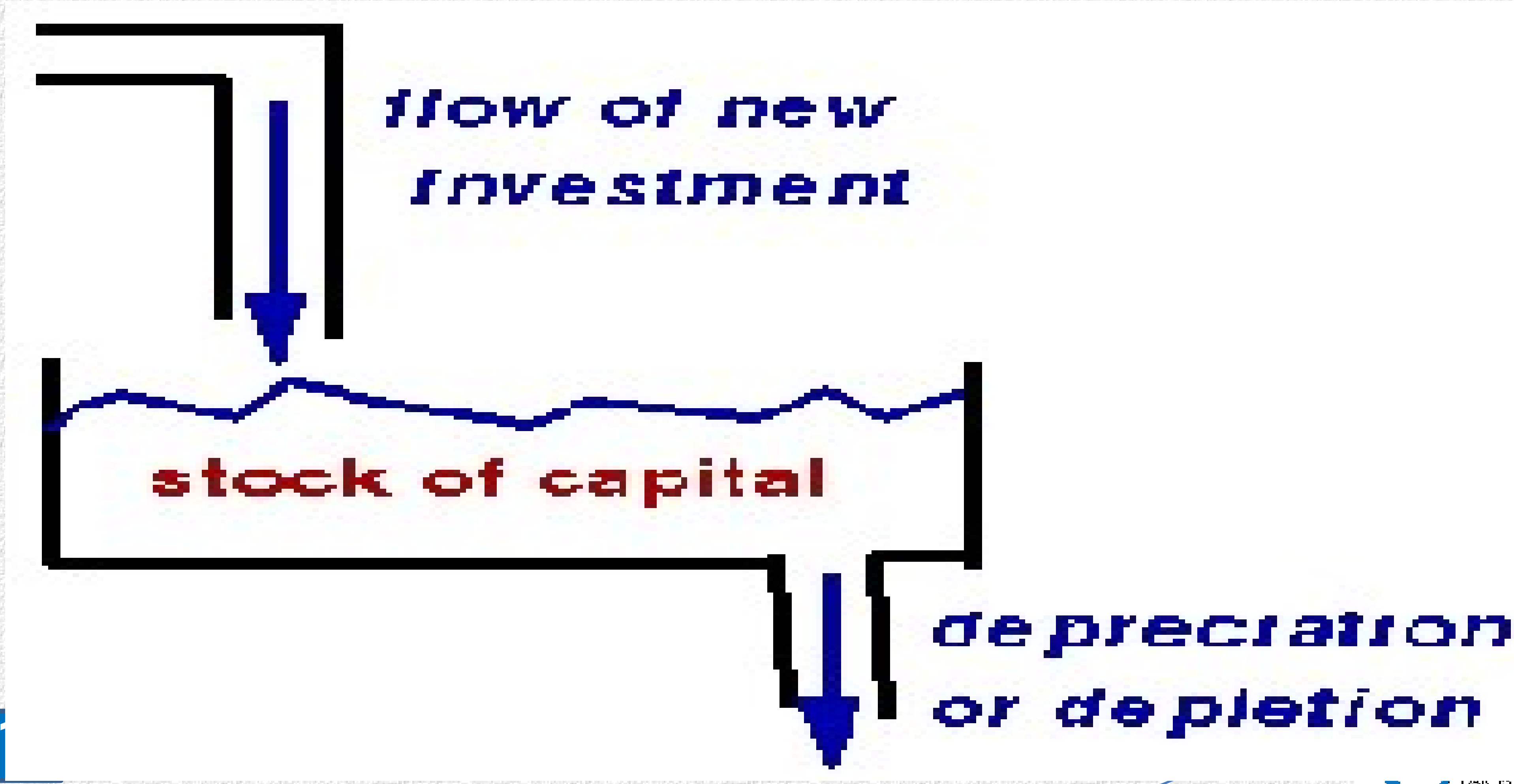
- **Inflation Rate:** the rate of change of general price level. It is an important measure of the cost of living.

Key Macroeconomic Variables

- Inflation rate is measured as a percentage change in consumer price index (**CPI**).
- **Interest Rate:** the price of money, and indicates the health of the financial system, and the economy in general, and forms the basis of pricing financial assets.
- ***Stock vs. Flow Concept:***
- Economic variables are either stocks or flows.
- **Stock Variable:** measured at one specific time, representing a quantity existing at that point in time.

Key Macroeconomic Variables

- **Flow Variable:** measured over an interval of time.



Key Macroeconomic Variables

- A **stock** is accumulated over time by inflows and depleted by outflows of **flows**.
- A flow changes a stock over time. For example:
- Capital is a stock that is built by new investments or depleted by depreciation (flows).
- Government debt is increased by budget deficits, and depleted by budget surplus.
- Cash is increased by income and depleted by spending.

Theory and Reality

- Who is to blame when things don't work.
- **Goal Conflicts** – policies to create jobs (increased public spending and middle-class tax cut) contradicted a promise to reduce budget deficit (Bill Clinton)
- Low unemployment comes at expense of high inflation.
- **Measurement problems** – problems of inflation and unemployment are not clearly visible in time.

Theory and Reality

- Data collection, assembly and dissemination take time.
- Problems of making forecasts, and designing macro models that work precisely.
- **Design Problems** – crafting policies that also foretell how economic agents are going to respond is a critical challenge.

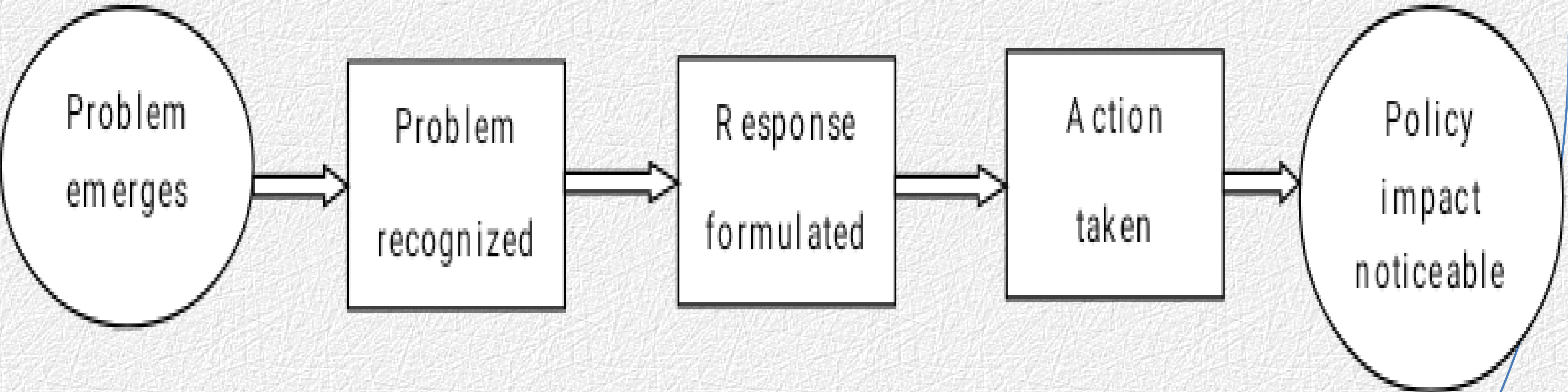
Theory and Reality

- **Implementation Problems** – making budget changes requires approval of parliament.
- When implemented, no assurance it will take effect at the right time.
- Time lags are experienced when problem emerges, recognition, formulating response, taking action, and action effect on the economy.

Time Lags

- **Data lag:** the time needed to gather data on economic variables.
- **Recognition lag:** the substantial amount of time that may be needed to analyze the trends suggested by the economic variables.
- **Legislative lag:** fiscal policies require legislative action.
- **Implementation lag:** time to put tax and expenditure policy into effect.
- **Impact lag:** time for the policy to take effect on the economy after it is finally implemented.

Time Lags


Problem emerges
Problem recognized
Response formulated
Action taken
Policy impact noticeable