INTERNATIONAL ECONOMICS

COURSE CODE: B21EC05DE
Discipline Specific Elective Course
Undergraduate Programme in Economics
Self Learning Material

SREENARAYANAGURU
OPEN UNIVERSITY

SREENARAYANAGURU OPEN UNIVERSITY
The State University for Education, Training and Research in Blended Format, Kerala

SREENARAYANAGURU OPEN UNIVERSITY

Vision

To increase access of potential learners of all categories to higher education, research and training, and ensure equity through delivery of high quality processes and outcomes fostering inclusive educational empowerment for social advancement.

Mission

To be benchmarked as a model for conservation and dissemination of knowledge and skill on blended and virtual mode in education, training and research for normal, continuing, and adult learners.

Pathway

Access and Quality define Equity.

International Economics

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Semester - V

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(With Model Question Paper Sets)

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Edition
August 2025

ISBN 978-81-988746-5-8

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MESSAGE FROM VICE CHANCELLOR

Dear learner,

I extend my heartfelt greetings and profound enthusiasm as I warmly welcome you to Sreenarayanaguru Open University. Established in September 2020 as a state-led endeavour to promote higher education through open and distance learning modes, our institution was shaped by the guiding principle that access and quality are the cornerstones of equity. We have firmly resolved to uphold the highest standards of education, setting the benchmark and charting the course.

The courses offered by the Sreenarayanaguru Open University aim to strike a quality balance, ensuring students are equipped for both personal growth and professional excellence. The University embraces the widely acclaimed "blended format," a practical framework that harmoniously integrates Self-Learning Materials, Classroom Counseling, and Virtual modes, fostering a dynamic and enriching experience for both learners and instructors.

The university aims to offer you an engaging and thought-provoking educational journey. The undergraduate programme in Economics is designed to be on par with the high-quality academic programmes offered at state universities throughout the country. The curriculum incorporates the latest methodologies for presenting economic ideas and concepts. It stimulates students' interest in developing a deeper comprehension of the discipline. The curriculum encompasses both theoretical concepts and historical evidence. Suitable emphasis is placed on India's experiences with economic transformation. This would aid learners in preparing for competitive examinations, should they choose to take them. Upon successfully completing the programme, we anticipate that students will be well-equipped to handle key areas within the economics discipline. The Self-Learning Material has been meticulously crafted, incorporating relevant examples to facilitate better comprehension.

Rest assured, the university's student support services will be at your disposal throughout your academic journey, readily available to address any concerns or grievances you may encounter. We encourage you to reach out to us freely regarding any matter about your academic programme. It is our sincere wish that you achieve the utmost success.

Regards,
Dr. Jagathy Raj V. P.

01-08-2025

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BLOCK

Introduction to International Economics

UNIT 1

Meaning and Scope of International Economics

Learning Outcomes

After completing this unit, the learner will be able to:

- understand the fundamental concepts of international economics
- discuss the scope and components of international economics
- know the significance of international trade

Prerequisites

In today's globalised world, no country can exist in isolation. Nations buy and sell goods, invest in one another, and borrow across borders to meet domestic needs and promote economic growth. This growing interdependence among countries makes it essential to have effective trade policies. Some countries are rich in natural resources, skilled labour, or advanced technology, while others benefit from low-cost labour or large consumer markets. As a result, countries engage in international trade to access goods and services not available domestically, specialise in the production of goods they can produce more efficiently, achieve higher standards of living, create employment opportunities, and promote overall economic development. However, no country can produce all goods efficiently or in sufficient quantity. Therefore, maintaining strong trade relations becomes necessary, as they often lead to mutual benefits and healthier diplomatic ties. At the same time, economic fluctuations in one country can significantly affect its trading partners. This highlights the need for sound trade policies and the involvement of international institutions like the WTO, the IMF, and the World Bank. This is where the importance of International Economics arises - it helps us understand how and why trade takes place between nations, how to resolve trade-related issues, and how to promote balanced and sustainable development across the world.

Keywords

International Trade, Capital Mobility, Comparative Advantage, Terms of Trade, Trade Barriers

Discussion

1.1.1 International Economics

International economics is a branch of economics that focuses on the economic interactions between different nations, particularly the exchange of goods, services, and capital across national borders. International economics explores how global exchanges affect national economies, the global market, and consumer welfare. Since international trade involves multiple countries, it is governed by various rules, regulations, and institutions that ensure smooth functioning, making it a distinct branch of study.

1.1.1.1 Meaning of International Economics

According to Paul Samuelson, International Economics is concerned with the economic relations between countries, including the effects of international trade, investment, and monetary policies. Samuelson's definition emphasises the broad scope of International Economics, which includes not only the study of trade but also the investment and monetary policies. This definition highlights the importance of understanding how countries interact economically and how these interactions affect global wealth, income distribution, and overall economic development.

Jacob Viner defines International Economics as the branch of economics that analyses trade patterns between nations, the theory of international economic policy, and the impact of governmental trade policies.

Viner's definition emphasises the analytical nature of international economics, focusing not only on trade flows but also on government policies and their influence on the global economic system. His approach underscores the dual importance of understanding both the economic theory behind trade and the policy decisions that govern international economic relations. This includes the study of trade policies like tariffs, quotas, and subsidies, and how these policies affect both trade patterns and global welfare.

According to Robert Mundell (1960s), "International economics is the study of international monetary systems, the movement of capital, and how fiscal and monetary policies impact global economies."

Mundell's definition emphasises the monetary dimension of international economics, particularly focusing on the movement of capital across national borders and the interaction of fiscal and monetary policies in an open economy. His pioneering work laid the foundation for the Mundell-Fleming model, which analyses the relationship

between exchange rates, interest rates, monetary policy, and capital mobility in a globally connected economy.

1.1.1.2 Nature of International Economics

International Economics is characterised by its analytical depth, real-world relevance, and policy-oriented framework. It encompasses both theoretical and practical aspects of international trade and finance. The nature of this discipline can be understood through the following dimensions.

1. International Economics as a Normative and Positive Science

International economics is a comprehensive field of study that includes both the positive and normative dimensions of trade. Positive Economics focuses on explaining what is', for example, how trade flows are determined, how exchange rates fluctuate, and what the effects of tariffs are. It also incorporates the normative aspects of trade. Normative Economics prescribes 'what ought to be', such as the design of optimal trade policies, the role of subsidies, or the merits of free trade versus protectionism. This dual nature equips international economists not only to interpret real-world phenomena but also to guide the policy-making process. For example, while a positive analysis might demonstrate that imposing a tariff reduces the volume of imports, a normative analysis would engage in a debate over whether such a policy is economically or socially justifiable. Thus, the field balances empirical investigation with prescriptive evaluation, enhancing its relevance to both theory and practice.

2. **Interdisciplinary Nature of International Economics**

International economics possesses a distinctly interdisciplinary nature. It incorporates principles from microeconomics, such as consumer and producer behaviour in open markets, and from macroeconomics, which focuses on issues like inflation, employment, and output in the context of an open economy. Additionally, it engages with political science, particularly in areas such as trade negotiations, international relations, and geopolitical considerations. Furthermore, it relies heavily on finance, especially in analysing capital flows, foreign direct investment, and currency markets. This multidisciplinary integration enables a more comprehensive understanding of global economic interactions and their policy implications.

3. Dynamic and Global Context of International Economics

International economics functions within a highly dynamic and global context. The discipline continuously evolves in response to rapid technological advancements, shifting geopolitical alliances, policy reforms, and the increasing integration of world economies. Factors such as globalisation, the digital revolution, global supply chains, and emerging economic blocs significantly influence how nations interact economically. This dynamic environment requires economists to adapt their analyses and models to reflect current realities. For instance, events like the global financial crisis of 2008, the COVID-19 pandemic, or trade tensions between major economies such as the U.S. and China have reshaped trade patterns, capital flows, and monetary policy decisions.

As a result, international economics remains fluid and responsive, demanding ongoing research, updated policy frameworks, and a global perspective to address contemporary challenges.

4. Real and Monetary Sides of International Economics

International economics is traditionally divided into two fundamental components: the real side and the monetary side.

- The real side is concerned with the flow of goods and services across international borders. It encompasses key areas such as classical and modern trade theories, terms of trade, gains from trade, and the formulation of trade policies. This aspect focuses on questions like what determines a country's comparative advantage and how international trade influences domestic production and consumption patterns.
- The monetary side deals with the financial aspects of international economic activity. It includes the study of foreign exchange markets, balance of payments, exchange rate regimes, and the functioning of international monetary systems. The monetary dimension seeks to explain how countries finance trade imbalances, manage capital flows, and stabilise their currencies. It addresses critical questions such as the causes of currency depreciation and the methods for correcting balance of payments disequilibrium. Together, these two aspects provide a comprehensive understanding of the real and financial interactions that shape the global economy.

1.1.1.3 Scope of International Economics

1. International Trade Theories of Trade

One of the core areas within the scope of international economics is international trade. This branch examines the movement of goods and services across national borders and seeks to understand the principles governing such exchanges. It includes the study of both classical and modern trade theories, such as absolute advantage, comparative advantage, the Heckscher-Ohlin Theory, and the New Trade Theory, etc. Another key focus is on the gains from trade, which highlight how nations can benefit by specialising in the production of goods for which they have a comparative advantage and trading for others. The concept of terms of trade also plays a significant role in evaluating the benefits of international trade. Additionally, the study of trade barriers and protectionism explores the impact of tariffs, quotas, and non-tariff barriers on trade flows, efficiency, and welfare. By analysing these elements, the international trade theory provides the foundation for understanding global economic interdependence and the design of trade policy.

2. International Finance

International finance is another vital component within the scope of international economics, focusing on the monetary and financial transactions that occur across countries. A central area of study is the foreign exchange market, where currencies are traded and exchange rates are determined. Understanding how these markets function is essential for analysing currency fluctuations, arbitrage opportunities, and the impact of exchange rate movements on trade and investment. Closely related to this is the study

of exchange rate systems, which may be fixed, flexible (floating), or managed (hybrid). Each system has its implications for monetary policy, inflation control, and external stability. Another critical aspect is the balance of payments (BoP), a comprehensive record of a country's economic transactions with the rest of the world.

3. International Economic Policy

International economic policy is a critical area within the scope of international economics, focusing on the strategic decisions made by governments to manage their economic interactions with other countries. One key component is trade policy, which includes the formulation of rules and regulations governing international trade, such as the implementation of tariffs, quotas, and trade agreements. These policies aim to protect domestic industries, improve the terms of trade, and achieve broader economic goals. Exchange rate policy is another crucial aspect, dealing with the management of a country's currency in the global market. Governments and central banks adopt policies that either maintain a fixed exchange rate, allow a flexible exchange rate, or employ a managed float to stabilise their currencies and control inflation.

4. International Organisations and Agreements

International Organisations and Agreements play a crucial role in shaping global economic interactions and fostering international cooperation. Key institutions like the World Trade Organisation (WTO), the International Monetary Fund (IMF), and the World Bank are central to maintaining global economic stability and facilitating trade. The WTO is responsible for promoting free trade by regulating international trade agreements and resolving disputes between member countries. The IMF oversees the stability of the global monetary system, provides financial assistance to countries facing balance of payments crises, and offers policy advice. The World Bank focuses on providing financial and technical assistance to developing countries to support development projects and reduce poverty. In addition to these global institutions, Regional Trade Agreements (RTAs) such as the European Union (EU), Association of Southeast Asian Nations (ASEAN), and South Asian Association for Regional Cooperation (SAARC) play an essential role in fostering economic integration, reducing trade barriers, and enhancing cooperation among countries within specific geographic regions. These agreements facilitate deeper economic ties and offer opportunities for members to align their economic policies**.**

5. Globalisation and Economic Integration

Globalisation and economic integration are key themes in international economics, reflecting the growing interconnectedness of the world economy. Globalisation refers to the increasing movement of goods, services, capital, technology, and labour across borders, driven by advancements in transportation, communication, and trade liberalisation. It has led to greater economic interdependence, contributing to the spread of innovation, economic growth, and the reduction of poverty in many regions. Economic integration refers to the process through which countries reduce trade barriers and coordinate their economic policies to promote closer economic ties. There are various forms of economic integration, including Free Trade Areas (FTAs), where member countries agree to eliminate tariffs and other barriers on goods and services

traded between them. These forms of integration foster economic cooperation, enhance market access, and promote regional development.

1.1.2 International Trade

International trade refers to the exchange of goods, services, and capital across international borders or territories. It allows countries to specialise in the production of goods and services in which they have a comparative advantage, thereby enhancing overall global efficiency and welfare. Trade plays a crucial role in driving economic growth, creating employment opportunities, improving consumer choices, and fostering innovation through competition. It also facilitates the transfer of technology, skills, and investment flows across nations, contributing to global economic integration. However, international trade is not free from challenges such as trade imbalances, protectionism, and the impact of political and policy decisions.

1.1.2.1 Importance of International Trade

International trade is a fundamental aspect of the modern global economy. It plays a crucial role in the commercial world, as producers aim to expand their markets beyond their own countries and produce goods at lower costs in certain regions. Factors such as specialised industries, the availability of natural resources, and varying consumer preferences contribute to making profits.

1. Territorial Division of Labour and Specialisation

International trade results from the territorial division of labour and specialisation among countries. Each nation focuses on producing goods and services for which it has a comparative advantage, and trade enables them to exchange these goods and services.

2. Lower Production Costs in Developing Nations

One of the most controversial aspects of international trade is the ability of developing nations to produce goods at lower costs due to cheaper labour and resources. This gives them a competitive advantage in global markets, but also raises concerns in developed countries about job losses.

3. Specialised Industries and National Traditions

Certain countries specialise in specific industries based on national talent, tradition, or historical advantages. Examples include Swiss watches, French silks, and German engineering. This specialisation adds diversity and value to international trade.

4. Natural Resources and Raw Materials

Key components of international trade include natural resources such as oil, diamonds, wheat, and coal. Countries rich in these resources engage in trade to supply them to countries that lack these essential materials for their industries.

1.1.2.2 Features of International Trade

1. Immobility of Factors

Factors of production are more immobile between countries than within a country. For example, it is easier for someone to move from one city to another within the same country than it is to move from one country to another. This makes trade between countries more complicated because workers, money, and resources cannot flow as freely across borders.

2. Heterogeneous Markets

World markets are not homogeneous, which means that there are significant differences across countries due to factors like climate, language, cultural preferences, customs, and even measurement systems. These differences lead to variations in the behaviour of international buyers, making the nature of international markets diverse and complex.

3. Different National Groups

International trade occurs between different socio-economic groups in various countries, each with distinct cultures, traditions, and economic environments. These differences affect trade patterns and the types of goods that are exchanged between nations.

4. Different National Policies and Government Intervention

Countries have distinct economic and political policies that affect international trade. Policies related to commerce, trade, taxation, exports, and imports differ significantly across countries. Governments may impose tariffs, import quotas, subsidies, and other forms of intervention that impact how trade is conducted between nations, making international trade more complex compared to domestic trade, where policies are more uniform.

5. Different Currencies

International trade involves the exchange of goods between countries that use different currencies. Each country has its exchange rate policy and foreign exchange system, making currency conversion and fluctuation an essential consideration in global trade. This feature adds a layer of complexity and requires careful management of exchange rates and foreign exchange markets.

Recap

- International economics studies the economic interactions between countries, including trade, investment, and monetary relations

- International economics involves both positive analysis (what is) and normative analysis (what ought to be) in evaluating global economic phenomena and guiding policy decisions
- The real side of international economics deals with the trade of goods and services
- The monetary side focuses on exchange rates, capital flows, and international monetary systems
- The Balance of Payments (BoP) records a country's total economic transactions with the rest of the world, helping to assess trade imbalances and currency flows
- International trade requires currency exchange, and countries adopt various exchange rate systems, fixed, floating, or managed
- Government policies such as tariffs, subsidies, quotas, and trade agreements heavily influence international trade
- Organisations like the WTO, IMF, and the World Bank facilitate global trade, resolve disputes, provide financial assistance, and promote development
- International trade is more complex than domestic trade due to different currencies, cultural diversity, legal systems, and the immobility of factors of production

Objective Questions

1. Who defined international economics as the study of international monetary systems and capital movement?
2. What are the two main components of international economics?
3. Name one international organisation that resolves trade disputes among countries.
4. Exchange rates are part of which side of international economics?
5. Which account records a country's economic transactions with the rest of the world?
6. Which theory explains the ability of countries to benefit from trade by specialising in goods they produce more efficiently?

7. Which type of trade is more complex due to the presence of borders?
8. What does international trade promote along with economic efficiency?
9. What type of economics deals with what ought to be?

Answers

1. Robert Mundell
2. Real side and Monetary side
3. World Trade Organisation (WTO)
4. Monetary
5. Balance of Payments (BoP)
6. Comparative Advantage
7. International Trade
8. Specialisation
9. Normative Economics

Assignments

1. Define International Economics. Discuss its nature in the modern global context.
2. Explain the meaning and scope of International Economics.
3. Discuss the interdisciplinary nature of International Economics and its relevance in contemporary policy-making.
4. "International trade promotes specialisation and economic efficiency." Discuss this statement with relevant examples.

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Suggested Reading

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UNIT 2

Production Possibility Curve and Opportunity Cost

Learning Outcomes

After completing this unit, the learner will be able to:

- know the concept of production possibility curve
- understand the concept and use of community indifference curves
- discuss offer curves and how they reflect equilibrium
- apply the principle of opportunity cost

Prerequisites

Understanding the tools of trade analysis is essential in international economics, as they help explain how a country faces trade-offs when allocating its resources efficiently, how society's preferences are reflected in the combinations of goods that bring equal satisfaction, and how countries interact in international markets to reach trade equilibrium. Most importantly, some fundamental principles explain why trade occurs between nations, even when one country is more efficient at producing all goods. These answers are provided through concepts like the Production Possibility Curve (PPC), Community Indifference Curves, Offer Curves, and Comparative Advantage. Together, these concepts form a strong foundation for analysing real-world trade patterns, understanding the benefits of international exchange, and evaluating the impact of trade policies.

Keywords

Production Possibility Curve (PPC), Opportunity Cost, Offer Curve, Comparative Advantage, International Trade, Export and Import, Terms of Trade

Discussion

1.2.1 Production Possibility Curve

The Production Possibility Curve (PPC) shows the various production possibilities of two goods at a given time, with given resources and technology. It is a graphical representation of the maximum possible output combinations of these goods. The PPC is also known as the Production Possibility Frontier (PPF) or the Production Transformation Curve (PTC).

Assumptions

1. The analysis focuses on the combination of only two goods.
2. All resources are fully utilised.
3. Technology and production levels remain unchanged.
4. Technology is used efficiently.
5. Resources are limited and fixed.
6. The production possibilities are evaluated at a specific point in time.

The Production Possibility Curve is a useful tool in decision-making for an economy. Suppose the economy faces limited productive resources; the PPC helps in allocating resources in the most beneficial way for society, given these limitations. It also aids policymakers and businesses in understanding how much of each good should be produced, taking into account the opportunity costs involved in choosing one good over another. The concept of PPC can be explained with the help of the following figure:

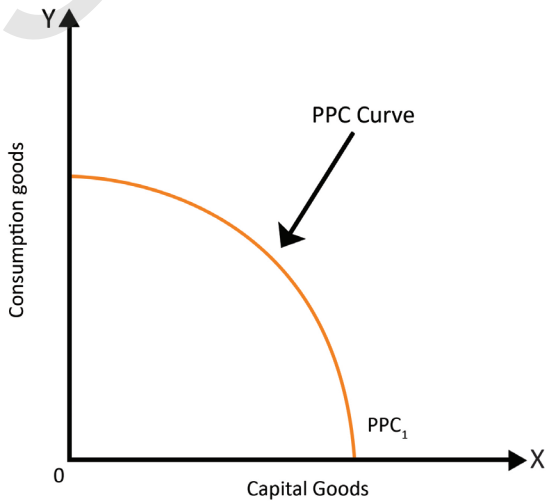

Fig. 1.2.1. Production Possibility Curve

In the figure, capital goods are shown on the X-axis and consumer goods on the Y-axis. The Production Possibility Curve (PPC) is concave to the origin (bowed outwards) because of the law of increasing opportunity cost. This means that to produce more of one good, the economy must give up increasingly larger amounts of the other good. Any point on the curve itself represents an efficient point, where all resources are fully and efficiently used. Any point inside the curve (below the frontier) represents an inefficient point, which indicates that resources are underutilised and the economy could produce more of both goods. Any point outside the curve (above the frontier) represents an unattainable point, meaning it is not possible to produce that combination of goods with the current resources and technology.

1.2.2 Offer Curve

An offer curve refers to how much a country is willing to buy and sell in international trade at different prices. It represents the country's willingness to trade, showing how much it wants to import and how much it is ready to export at various trade terms. The offer curve combines the demand for imports and the supply of exports of a country. Offer curves are also known as the reciprocal demand curve. This concept was originally given by Marshall and Edgeworth.

Assuming two countries are engaged in international trade and are trading two goods, consider Country I and Country II trading goods X and Y. Now, let us draw the offer curves for both countries as follows:

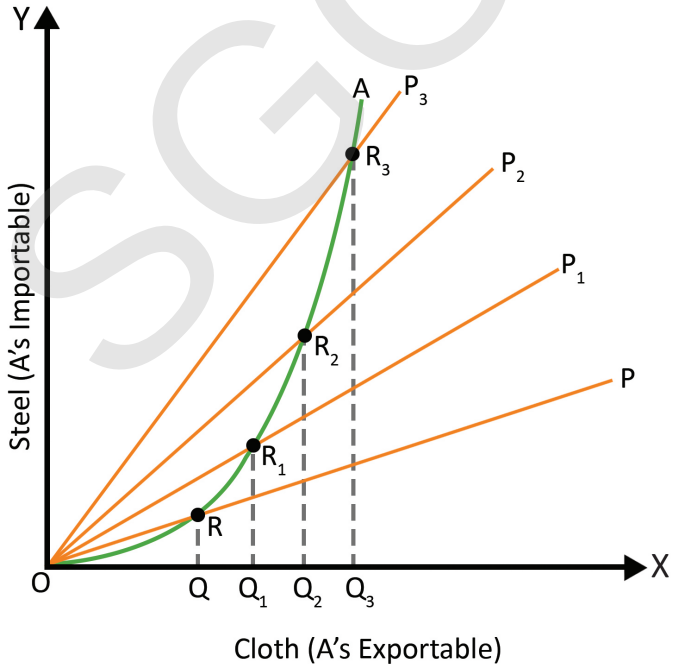

Fig.1.2.2. The derivation of the offer curve of country A

Consider two countries engaged in trade. Country A exports cloth to Country B and imports steel from Country B. Country B exports steel to Country A and imports cloth from Country A. In the figure, OP represents the price ratio between cloth and steel.

This line shows the relative prices of cloth and steel in the international market. As the price of cloth increases relative to steel, the price ratio changes, moving from OP to OP_1, OP_2, and OP_3. These price ratios become steeper. When the price of cloth increases relative to steel, Country B (which imports cloth) starts to demand more cloth, but this demand increases at a decreasing rate. At the same time, Country A (which imports steel) can now absorb more steel at an increasing rate because steel becomes 'cheaper' relative to cloth.

In the figure, the points R, R_1, R_2, and R_3 represent different exchange points between Country A and Country B. At point R, Country A exports OQ of cloth and imports RQ of steel. At point R_1, Country A exports OQ_1 of cloth and imports R_1Q_1 of steel, and so on. By connecting the points R, R_1, R_2, and R_3, we get the offer curve of Country A. The offer curve of Country A, which shows how much cloth Country A is willing to export at various price ratios. The offer curve slopes positively at an increasing rate, meaning that as the price of cloth rises relative to steel, Country A offers more cloth for trade. However, the increase in the quantity of cloth offered becomes less significant with each price rise.

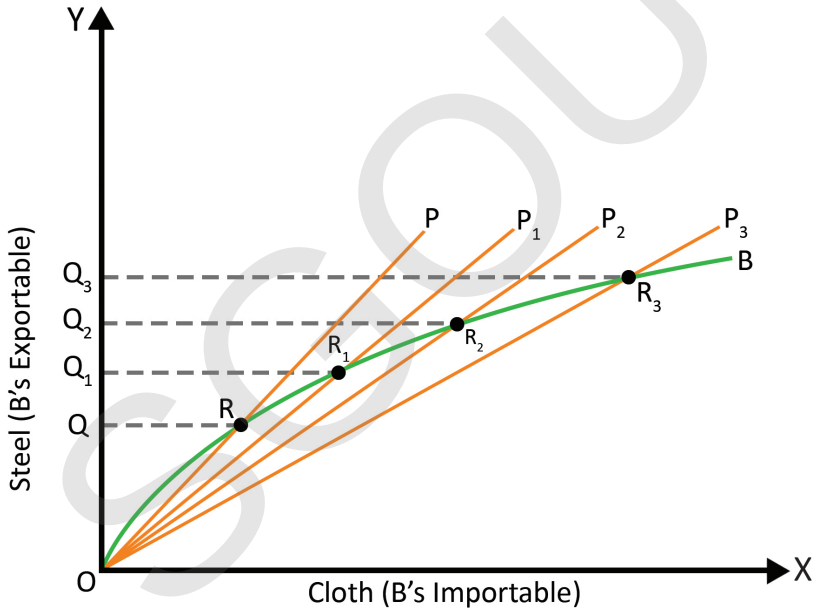

Fig.1.2.3 The derivation of the offer curve of country B

The X-axis shows Country B's importable good, which is cloth in our example. The Y-axis shows Country B's exportable good, which is steel. The price ratio lines are OP, OP1, OP2, and OP3, and they show how the price of steel rises relative to the price of cloth. When the price of steel increases at a faster rate, the demand for steel in Country A may increase, but this increase will happen at a diminishing rate. The points R, R_1, R_2, and R_3 represent the price ratio lines, showing the exchanges between Country A and Country B. At R, Country B exports OQ amount of steel and imports RQ amount of cloth. At R_1, Country B exports OQ_1 of steel and imports R_1Q_1 of cloth. At R_2, Country B exports OQ_2 of steel and imports R_2Q_2 of cloth. At R_3, Country B exports OQ_3 of steel and imports R_3Q_3 of cloth. By connecting the points R, R_1, R_2, and R_3, we get the offer curve of Country B. This curve shows the relationship between the quantity of steel Country B is willing to offer and the price ratio of steel to cloth.

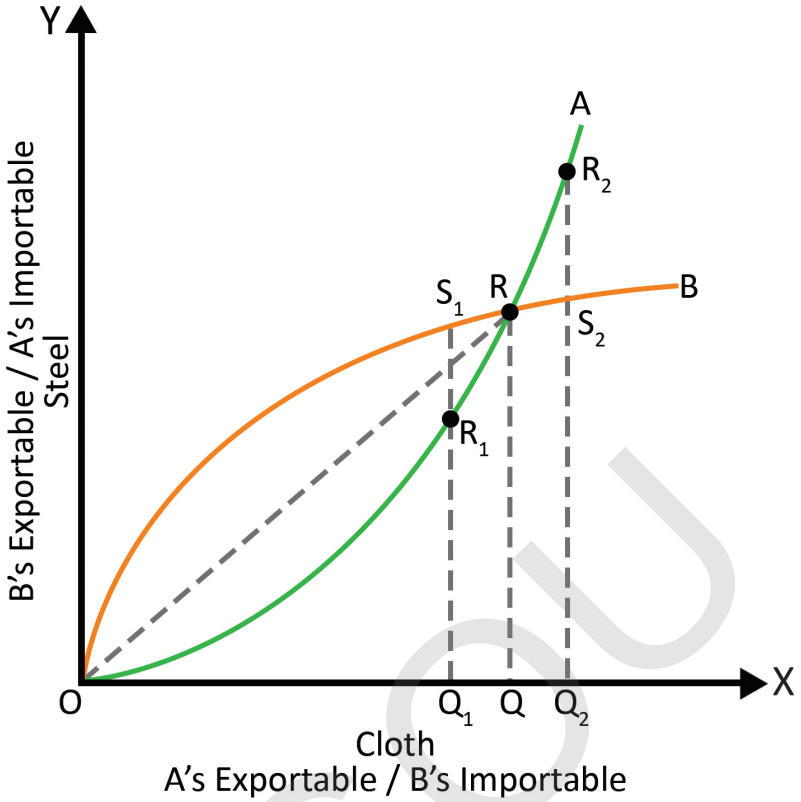

Fig:1.2.3 Trade equilibrium through offer curve of two countries

In the figure, OA represents the offer curve of Country A, and OB represents the offer curve of Country B. These curves show the quantities of goods that each country is willing to export in exchange for imports at various levels of trade. The line joining O (the origin) and R represents the international exchange ratio, showing the rate at which the two countries are willing to trade their goods (cloth for steel). The slope of the OR line is the ratio of the quantity of steel imported to the quantity of cloth exported (RQ/OQ). This slope reflects the international exchange rate between the two countries. Country A exports cloth and imports steel, while Country B exports steel and imports cloth.

At point R_1 on the offer curve OA, Country A is willing to export OQ_1 quantity of cloth to Country B in exchange for R_1Q_1 amount of steel. However, Country B is only willing to export the S_1Q_1 quantity of steel for the OQ_1 quantity of cloth. This means that at point R_1, there is no mutual agreement on the exchange, and trade cannot occur. At point R_2 on the offer curve OA, Country A is prepared to export OQ_2 quantity of cloth in exchange for R_2Q_2 amount of steel. However, Country B is only willing to give up the S_2Q_2 amount of steel for the OQ_2 quantity of cloth. At point R_2, trade cannot take place either. Both R_1 and R_2 represent unequal exchanges of goods, and no trade occurs at these points. The trade equilibrium occurs at point R, where the offer curves OA and

OB intersect. At this point, both countries agree on the quantity of cloth (OQ) to be exchanged for steel (RQ), and trade takes place.

1.2.3 Opportunity Cost

Opportunity Cost refers to the cost of foregoing the next best alternative when making a choice. In the context of international trade, it indicates the amount of one good that must be sacrificed to produce an additional unit of another good.

Opportunity cost forms the foundation of the theory of comparative advantage, which was developed by David Ricardo. According to this theory, even if one country is more efficient (has an absolute advantage) in producing all goods, trade can still be mutually beneficial if each country specialises in producing the good for which it has the lowest opportunity cost. In this way, opportunity cost helps determine which goods a country should export and which goods it should import. For example, let us consider two countries - Country A and Country B - that both produce two goods: Wheat and Cloth.

Table 1.2.1 Opportunity Cost of Two Countries

Country	Wheat (units per day)	Cloth (units per day)
A	10	5
B	8	8

To determine comparative advantage, we begin by calculating the opportunity cost for each country. For Country A, producing 1 unit of cloth requires giving up 2 units of wheat (10 ÷ 5 = 2), while producing 1 unit of wheat costs 0.5 units of cloth (5 ÷ 10 = 0.5). In contrast, Country B sacrifices 1 unit of wheat to produce 1 unit of cloth (8 ÷ 8 = 1), and likewise, gives up 1 unit of cloth to produce 1 unit of wheat. Based on these calculations, Country A has a lower opportunity cost in producing wheat (0.5 cloth compared to Country B's 1 cloth), whereas Country B has a lower opportunity cost in producing cloth (1 wheat compared to Country A's 2 wheat). Therefore, according to the principle of comparative advantage, Country A should specialise in the production and export of wheat, while Country B should specialise in the production and export of cloth. This specialisation and exchange enable both countries to achieve greater overall efficiency and gain from trade.

Recap

- The PPC illustrates the maximum output combinations of two goods that an economy can produce with its available resources and technology
- Opportunity cost refers to the value of the next best alternative that must be sacrificed when making a production decision

- The Offer Curve shows a country's willingness to trade by reflecting the quantity of goods it is willing to export and import at different price ratios
- The principle of comparative advantage suggests that countries should specialise in producing goods for which they have the lowest opportunity cost to maximise trade benefits
- Trade equilibrium is reached when two countries agree on the quantity and price ratio of goods to exchange, determined by the intersection of their offer curves
- The opportunity cost ratio is the amount of one good that must be sacrificed to produce an additional unit of another good
- Specialisation allows countries to focus on producing goods they are most efficient at making, leading to better resource use and greater gains from trade
- The terms of trade are the rate at which one country can trade its exports for imports, and they determine the value of goods traded between countries

Objective Questions

1. Name the curve that shows the maximum output combinations of two goods in an economy.
2. Identify the concept that refers to the value of the next best alternative forgone in production.
3. State the curve that expresses a country's willingness to trade at various price ratios.
4. Mention the principle that explains why countries specialise in goods with the lowest opportunity cost.
5. Give the term used when two countries agree on the exchange ratio of goods.
6. Point out the ratio that shows the amount of one good sacrificed to produce another.
7. Specify the activity that allows countries to access unavailable goods and promotes efficiency.

8. Name the goods that are sold by one country to another.

9. State the process of focusing on producing goods most efficiently.

10. Mention the concept that defines the rate at which exports exchange for imports.

11. Identify the term that means using resources in the most productive way.

Answers

1. PPC
2. Opportunity-cost
3. Offer-curve
4. Comparative-advantage
5. Equilibrium
6. Trade-off
7. Trade
8. Exports
9. Specialisation
10. Terms-of-trade
11. Efficiency

Assignments

1. Explain the concept of the Production Possibility Curve (PPC) and how it illustrates the problem of choice in an economy.

2. Define opportunity cost. How does it help in understanding production decisions in the context of scarce resources?

3. What is the Offer Curve in international trade? How does it reflect a country's willingness to trade?

4. How is trade equilibrium determined using offer curves? What does the equilibrium point signify in international trade?

5. What are terms of trade? How do they influence the exchange of goods between countries?

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UNIT 3

Terms of Trade and Gains from Trade

Learning Outcomes

After completing this unit, the learner will be able to:

- define and calculate different types of terms of trade
- distinguish between static and dynamic gains from trade
- discuss the sources and distribution of gains from trade

Prerequisites

Every country faces the problem of limited resources and cannot produce all goods efficiently on its own. Therefore, countries engage in international trade to obtain the goods they are less efficient at producing. This trade is guided by the principle of comparative advantage, which means that countries specialise in producing goods for which they have a lower opportunity cost. International trade involves an exchange a country gives certain goods (exports) and receives others (imports). The terms of trade indicate the rate at which a country's exports are exchanged for imports. These terms help us understand whether trade is becoming more or less favourable over time.

Countries trade not only out of necessity but also because of the many benefits it brings. These gains from trade include more efficient use of resources, access to a wider variety of goods and services, technological progress, and enhanced productivity. In this unit, we explored all these concepts. Understanding them helps students appreciate how international trade contributes to economic welfare and supports a country's overall development.

Keywords

Terms of Trade (TOT), Net Barter Terms of Trade (NBTOT), Gross Barter Terms of Trade (GBTOT), Income Terms of Trade, Gains from Trade, Static Gains, Dynamic Gains

Discussion

1.3.1 Terms of Trade

Terms of Trade (TOT) refer to the ratio of export prices to import prices, meaning the rate at which one country's goods trade for those of another country. The terms of trade determine how much of a country's exports must be traded to purchase a unit of imports. For example, if Country A exports a good to Country B, the Terms of Trade will define how many units of Country B's goods Country A will receive in exchange for a certain quantity of its goods. This reflects the purchasing power of a country's exports relative to its imports. The formula for Terms of Trade (TOT) is:

$$\text{Terms of Trade (TOT)} = \left(\frac{\text{Price of Exports}}{\text{Price of Imports}}\right) \times 100$$

1.3.1.1 Types of Terms of Trade

1. Net Barter Terms of Trade (NBTOT)

Net Barter Terms of Trade (NBTOT) refers to the exchange of goods between two countries over time. It is actually barter. Barter refers to the direct exchange of goods, meaning there is no use of money in the transaction, only commodities being traded. It is the ratio between the export prices and the import prices of a country. NBTOT is also known as the commodity terms of trade because it focuses on the exchange of commodities between countries. The formula for this can be expressed as:

$$T_c = \frac{P_x}{P_m}$$

That is, $$\text{Commodity Terms of Trade (Tc)} = \frac{\text{Price of Exports } (P_x)}{\text{Price of Imports } (P_m)}$$

2. Gross Barter Terms of Trade (GBTOT)

Gross Barter Terms of Trade (GBTOT) consider the total quantity of exports and imports of a country rather than focusing on a specific commodity. GBTOT is a modified version of the commodity terms of trade. Commodity terms of trade focus on the exchange rate of a particular commodity, while Gross Barter Terms of Trade focus

on the total quantity of goods (exports and imports) exchanged between countries. The formula for this can be expressed as:

$$T_g = \frac{Q_m}{Q_x}$$

Where Qm is the Total quantity of imports and Qx is the Total quantity of exports.

Just like commodity terms of trade, gross barter terms of trade can be analysed over a period of time to see how they change. If the ratio is higher, it is considered favourable to the country because it means the country can import more with fewer exports. Conversely, if the ratio is lower, it indicates that the country must export more to import the same amount of goods, which is unfavourable.

3. Income Terms of Trade

G.S. Dorrance developed the concept of income in terms of trade. It is an improvement over commodity terms of trade and gross barter terms of trade. Income terms of trade incorporate the export prices and export quantities together, and consider only the index of import prices. The income terms of trade establish a ratio between the index of export prices and export quantities on the one hand, and the index of import prices. The formula for income terms of trade (Ty) can be written as:

$$T_y = \frac{P_x \cdot Q_x}{P_m}$$

4. Single Factorial Terms of Trade

Single factorial terms of trade are a refinement of the commodity terms of trade. Commodity terms of trade account for only the change in the prices of exports relative to imports, while single-factor terms of trade incorporate productivity changes in the export sector only. It measures how changes in productivity in the export sector of a country affect the gains or losses a country experiences from international trade. This concept is associated with the name of Jacob Viner. The formula for single factorial terms of trade can be written as:

$$T_S = \frac{P_x \times F_x}{P_m}$$

Where Ts is the Single Factoral Terms of Trade, Px is the Price index of exports is the Productivity of the export sector, Pm is the Price index of imports.

5. **Double Factoral Terms of Trade (DFTT)**

Double Factoral Terms of Trade (DFTT) is an advanced concept that adjusts the traditional terms of trade by considering productivity changes in both the exporting and importing countries. It provides a more accurate measure of the real gains from trade by taking into account how efficiently goods are produced in both countries. If a country's productivity in exports increases, it can produce more goods with the same resources, improving its trade position and vice versa. The formula for double factorial terms of trade can be written as:

$$\text{DFTT} = \text{NBTT} \times \left(\frac{\text{Productivity in Exports}}{\text{Productivity in Imports}} \right)$$

6. Real Cost of Terms of Trade

Real Cost Terms of Trade (RCTT) measures the gains from trade by considering the real costs involved in producing exports, such as labour, effort, or other inputs. Symbolically, this relationship can be expressed as:

$$T_r = T_s \times R_x$$

Where:

T_r = Real Cost Terms of Trade

T_s = Single Factor Terms of Trade

R_x = Disutility or real cost incurred in producing export goods

7. Utility Terms of Trade (UTT)

Utility Terms of Trade (UTT) is calculated by multiplying the Real Cost Terms of Trade index by an index that reflects the relative average utility of imports compared to domestically foregone commodities. This measure aims to assess the satisfaction or utility gained from trade by considering both the costs of production and the benefits in terms of consumer satisfaction. Symbolically, Utility Terms of Trade can be written as:

$$T_u = T_r \times U$$

Where:

T_u = Utility Terms of Trade

T_r = Real Cost Terms of Trade index

U = Index of the relative utility of imports and domestically foregone commodities

1.3.2 Gains from Trade

Gains from international trade refer to the benefits that countries obtain by trading goods and services with one another. These benefits arise primarily due to the international division of labour and specialisation in production. There are mainly two types of gains from trade:

i. **Gain from Exchange:** This occurs when two countries mutually benefit by exchanging goods, as they have in surplus for those they lack. As a result, both countries can obtain goods at a lower opportunity cost than if they tried to produce those goods domestically.

ii. **Gain from Specialisation:** This arises when countries specialise in producing goods in which they have a comparative advantage. Specialisation leads to greater efficiency, increased total output, and mutual benefits from trade.

1.3.2.1 Sources of Gains from International Trade

A country engaged in international trade enjoys several economic advantages that result in gains from trade. According to classical economic theory, the primary source of these gains is specialisation based on comparative cost advantage, as emphasised by David Ricardo.

According to Adam Smith, the division of labour enhances productivity, but its extent is limited by the size of the market. International trade expands the market, which in turn allows for larger-scale production, a more complex division of labour, and greater specialisation. These changes result in higher output per unit of input, representing a direct gain from trade. Building on this, David Ricardo's theory emphasises that when countries specialise in producing goods for which they have a comparative advantage, total world production increases. As a result, each country can obtain goods at lower opportunity costs, leading to better quality, cheaper, and more abundant products. In this process, no country ends up with less than it had before trade, making international trade a win-win situation for all parties involved.

The real-world sources of gains from trade are numerous and significant.

- Trade opens up larger markets, enabling firms to scale up production and benefit from increased demand.
- As trade expands, it also makes specialisation in specific tasks more practical, thereby improving efficiency and overall output. Countries tend to concentrate on producing goods and services in which they hold a comparative advantage, leading to lower production costs and greater productivity.
- Consumers gain access to a broader variety of goods and services, including many not available domestically.
- International trade also enhances competition by challenging domestic monopolies, pushing firms to become more efficient and innovative.
- Trade facilitates larger-scale production, which reduces per-unit costs and

boosts profitability.

- Global trade provides access to advanced technologies, capital, and skilled labour, all of which contribute to raising productivity levels across economies.

1.3.2.2 Factors Determining the Size of Gains from International Trade

International trade offers numerous advantages to participating countries. However, the magnitude of these gains is influenced by several economic factors. The following are key determinants of the size of gains from trade.

1. **Differences in Cost Ratios:** Gains from trade are greater when there is a larger difference in the cost of production between countries. For example, if Country A has a comparative advantage in producing wheat and Country B in cotton, both can benefit by specialising and trading. The greater the difference between internal cost ratios and the international exchange rate, the larger the potential gain from trade.

2. **Reciprocal Demand:** This refers to the relative strength and elasticity of one country's demand for the products of another. Gains are maximised when both countries have strong and elastic demand for each other's products.

3. **Level of Income:** A higher level of money income enables a country to demand more goods and services. Countries with higher and stable income levels often benefit more from trade due to constant external demand.

4. **Terms of Trade (Trading Price):** This is the rate at which goods are exchanged between countries. When the terms of trade are favourable, a country gets more imports for each unit of export, enhancing its gain.

5. **Productive Efficiency:** A country with high productive efficiency can produce goods at lower costs. This results in cheaper exports, improving terms of trade for the partner country, and allowing both to benefit.

6. **Nature of Commodities Exported:** Countries exporting manufactured goods typically enjoy better terms of trade compared to those exporting primary goods. Manufactured goods tend to have higher income elasticity of demand and are less prone to price fluctuations.

7. **Technological Conditions:** Technologically advanced countries with capital abundance engage in larger volumes of trade. Their ability to innovate and produce efficiently leads to greater gains.

8. **Size of the Country:** Smaller countries can specialise in one or a few goods and export surplus to larger markets, maximising gains. Larger countries may need to diversify their exports due to limited external demand for any single product.

9. **Factor Availability:** The availability of natural resources, capital, and labour affects a country's ability to specialise. More available and efficiently utilised factors increase domestic productivity and trade gains.

10. **Productive Efficiency:** Countries with higher productive efficiency can maintain lower costs, competitive prices, and gain more from trade. This reiteration underlines the central role of efficiency in enhancing trade benefits.

1.3.3 Static and Dynamic Gains

International trade offers numerous advantages to participating countries. However, the magnitude of these gains is influenced by several economic factors. The following are key determinants of the size of gains from trade. International trade yields two main types of gains:

1. Static and

2. Dynamic Gains

1.3.3.1 Static Gains from Trade

These are the immediate benefits arising from the reallocation of existing resources in a more efficient manner through trade.

i. **Division of Labour, Specialisation, and Expansion in Production:** Trade encourages countries to specialise in the production of goods in which they have a comparative advantage. This leads to the optimal utilisation of resources, enabling economies to expand production at national and global levels.

ii. **Improved Welfare:** Through specialisation and trade, countries produce better quality goods at lower prices. These goods are more suited to the needs of consumers, thereby enhancing overall welfare. As Ricardo emphasised, "The extension of international trade very powerfully contributes to increasing the mass of commodities and, therefore, the sum of enjoyments.

iii. **Increase in National Income:** Trade increases production and employment opportunities, leading to higher national income and economic growth in trading countries.

iv. **Vent for Surplus:** As per Adam Smith, international trade helps countries utilise their surplus production by selling it in foreign markets, which might otherwise go unused.

1.3.3.2 Dynamic Gains from Trade

These are long-term benefits that improve a country's growth potential over time.

i. **Technological Development:** Trade facilitates the transfer of advanced technology and promotes innovation. Less developed countries benefit from the inflow of modern techniques, boosting productivity and lowering production costs.

ii. **Increased Competition:** By opening markets, trade intensifies competition. This compels domestic firms to become more efficient and to improve product quality.

iii. **Expansion of Market:** International trade enlarges the size of markets, allowing producers to scale up operations. This encourages higher investment and generates more employment opportunities.

iv. **Increase in Investment:** Export growth leads to the development of ancillary industries and attracts foreign direct investment (FDI), further stimulating economic development.

v. **Optimum Use of Resources:** Trade ensures that resources are allocated more efficiently, aligning with comparative advantage and maximising output.

The size of gains from international trade is not uniform across countries. It depends on various factors such as cost structures, demand patterns, income levels, and production capabilities. Understanding these factors helps in formulating effective trade policies and maximising economic benefits.

Recap

- Terms of Trade represent the rate at which one country's goods are exchanged for another's
- Net Barter Terms of Trade deal with export and import prices without using money
- Gross Barter Terms of Trade focus on the physical quantity of goods exchanged
- Income Terms of Trade include both export price and quantity relative to import prices
- Single Factorial Terms of Trade adjust for productivity in the export sector
- Gains from Trade arise through specialisation and exchange, increasing efficiency and welfare
- Static gains are immediate benefits, while dynamic gains contribute to long-term growth
- Factors like cost differences, demand elasticity, and technology influence the extent of trade gains

Objective Questions

1. Who developed the concept of Income Terms of Trade?
2. What do Gross Barter Terms of Trade measure?
3. What term is used to describe the benefits arising from specialisation and exchange between nations?
4. Which economist highlighted the role of international trade in expanding market size and enhancing division of labour?
5. What is the main focus of Single Factorial Terms of Trade?
6. What kind of gain is derived from the transfer of technology through international trade?
7. Which type of gain refers to the immediate reallocation of resources through trade?
8. What does the term 'reciprocal demand' refer to in international trade?

Answers

1. G.S. Dorrance
2. The total quantity of exports and imports
3. Gains from Trade
4. Adam Smith
5. Productivity changes in the export sector
6. Dynamic Gain
7. Static Gain
8. Relative strength and elasticity of demand for each other's products

Assignments

1. Discuss the different types of terms of trade and their significance in measuring trade performance.
2. Explain the concept of gains from trade and differentiate between static and dynamic gains.
3. Describe the sources of gains from international trade with reference to classical economic theories.
4. What are the factors that determine the size of gains from international trade?
5. How does international trade contribute to technological advancement and increased productivity in a country?

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BLOCK

Theories of International Trade

UNIT

Mercantilist Approach to Trade

Learning Outcomes

After completing this unit, the learner will be able to:

- get the core ideas of mercantilism in international trade
- explain the role of government according to mercantilists
- comprehend Thomas Munn's view on trade
- know main criticisms of mercantilism

Prerequisites

International trade means the exchange of goods and services between countries. It helps nations get the products they need and sell what they produce in excess. The government plays an important role in the economy by making rules and policies to support trade, protect local industries, create jobs, and ensure fair competition. One key part of trade is understanding the difference between imports and exports. Imports are goods and services that a country buys from other countries, while exports are goods and services that a country sells to other countries. A healthy balance between imports and exports is important for the economic growth of a country. Many theories have been created by economists to explain trade, and each theory is different from the others. Mercantilism is one such theory, and its relevance may change from time to time depending on the situation.

Keywords

Mercantilism, Bullion, Export, Import, Government Control, Zero-Sum Game

Discussion

2.1.1 Mercantilist Approach to Trade

Mercantilism was the first organised economic thought on international trade, popular in Europe (especially in England, Spain, France, Portugal, and the Netherlands) during the 17th and 18th centuries, before modern economics began with Adam Smith in 1776. Mercantilists were mainly merchants, bankers, government officials, and philosophers. They believed that a nation should engage more in exports than in imports. Through the export of goods, the nation could collect gold and silver (bullion) from other countries. Hence, to achieve this, they supported strict government control over trade, encouraging exports and restricting imports (especially luxury goods). In this way, nations could achieve growth and power. They believed that international trade was a struggle where one nation's gain always came at the expense of another nation's loss.

2.1.1.1 Core idea of Mercantilism

Gold was very important to the mercantilists because it was seen as the main source of a nation's wealth and power. With more gold and silver, rulers could build stronger armies and navies to protect their country and expand their territories. A large supply of gold also meant that more gold coins could be put into circulation, which helped to increase trade and business activity within the country. In addition, by earning gold through more exports and fewer imports, the nation's factories and farms would produce more goods, leading to higher national output. This would create more jobs and reduce unemployment, as more people would be needed to work in industries that made goods for export. In this way, gold was linked not only to national strength but also to economic growth and better living conditions for the people.

According to the mercantilists, the government had a very important role in the economy. The government should encourage exports so that the nation can earn gold and silver from other countries. At the same time, it should discourage or limit imports, especially luxury goods that are not necessary for national strength. Mercantilists believed that strict government control over trade and the economy was needed to achieve these goals. They saw international trade as a zero-sum game, meaning that one country could gain only if another country lost. So, they felt the government must protect the nation's interests at all times.

2.1.1.2 Thomas Munn's View on Trade

Thomas Munn (1571–1641) was one of the most important mercantilist writers. His famous book, England's Treasure by Foreign Trade, clearly explained the ideas of mercantilism. According to Munn, the best way for a country to become rich was through foreign trade. He said that a country should always try to sell (export) more

goods to other countries than it buys (imports). The part of exports that is not used to buy imports would bring gold and silver (bullion) into the country. Munn also suggested that people should avoid spending too much on foreign goods like fancy clothes and food. He advised that we should sell our goods at a high price when other countries really need them, but if those goods can easily be bought from somewhere else, then we should try to sell them as cheaply as possible to keep our business.

2.1.1.3 Relevance in the Modern World

Mercantilism is still seen in the modern world, even though most countries say they support free trade. Many countries continue to put restrictions on imports to protect their jobs and industries. For example, developed countries often limit the import of farm goods, textiles, shoes, steel, and other products to save local jobs. They also give support (subsidies) to important industries like computers and telecommunications to stay strong in global competition. Developing countries also protect their industries. While open protection like tariffs and quotas has reduced in some cases, other hidden protections like tax benefits and research support have increased. This has led to many trade disputes, such as between the US and the European Union over beef, bananas, aeroplanes, and steel. These actions show that even today, countries follow mercantilist ideas to protect their economy and jobs. So, mercantilism is still very much alive in the 21st century.

2.1.1.4 Criticism of Mercantilism

1. Wrong Measure of Wealth

Mercantilists believed that wealth came only from gold and silver. But later economists like Adam Smith showed that a nation's true wealth comes from its ability to produce goods and services that satisfy people's needs.

2. Trade is not a Zero-sum Game

Mercantilists saw trade as a win-lose situation (if one nation gains, another loses). But in reality, trade can benefit both countries through the exchange of goods that each country produces efficiently.

3. Too Much Government Control

Mercantilists supported strict government control over the economy, which limited economic freedom and discouraged innovation and competition.

4. Harmful to Consumers

By restricting imports, especially of luxury or foreign goods, consumers were forced to buy expensive or lower-quality domestic goods.

5. Ignored the Benefits of Imports

Mercantilists focused only on exports and gold inflow, but ignored how imports could provide useful goods, promote competition, and improve living standards.

Mercantilism was an early economic theory that focused on increasing a nation's wealth by exporting more goods than it imported and by accumulating gold and silver. It encouraged government control over trade and industry. While it helped some nations grow stronger in the 16th–18th centuries, it ignored the benefits of free trade and often led to conflicts between countries. Today, it is studied as a historical stage in the development of economic thought.

Recap

- A nation's wealth and strength were measured by how much gold and silver it possessed
- To gain wealth, nations aimed to export more and import less
- Strict government control was needed to protect national interests
- Mercantilists saw trade as a zero-sum game, where one nation's gain came at another nation's loss
- Thomas Munn's main view on trade was that the best way for a nation to become rich was through foreign trade
- Munn suggested avoiding excessive use of foreign goods and selling goods wisely

Objective Questions

1. Who is regarded as one of the most important mercantilist writers?
2. What did mercantilists believe was the true measure of a nation's wealth?
3. What type of game did mercantilists believe international trade was?
4. Name one modern example of protectionist policy that reflects mercantilist ideas.
5. Which book was written by Thomas Munn?

Answers

1. Thomas Munn
2. The amount of gold and silver (bullion) it possessed
3. A zero-sum game
4. Import restrictions on farm goods, steel, or subsidies to high-tech industries
5. *England*'s Treasure by Foreign Trade

Assignments

1. Explain the core idea of mercantilism.
2. What was the role of the government according to mercantilists?
3. State Thomas Munn's main views on trade.
4. Give any four criticisms of mercantilism.

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UNIT 2

Classical Trade Theories

Learning Outcomes

After completing this unit, the learner will be able to:

- know the Absolute Advantage Theory
- explain the concept of Comparative Advantage
- identify how trade helps countries use their resources efficiently

Prerequisites

International trade is the exchange of goods and services between countries. It plays a vital role in a nation's economic growth by allowing access to resources, technologies, and products that may not be available domestically. Trade encourages efficiency, specialisation, and higher standards of living.

In ancient times, many countries believed that the best way to become rich was by exporting more and importing less. This idea was known as Mercantilism. According to this system, a nation's wealth was measured by the amount of gold and silver it held. Countries followed strict trade controls and tried to have a trade surplus. However, this approach was challenged in the 18th century by Adam Smith, who introduced the theory of Absolute Advantage. Smith argued that instead of restricting trade, countries should specialise in producing goods they can make more efficiently than others and trade them. This benefits both nations, increases total production, and promotes economic growth.

Later, David Ricardo developed the theory of Comparative Advantage, further strengthening the case for free trade. He showed that even if a country is less efficient in producing all goods, it can still gain by specialising in the goods it can produce at a lower opportunity cost. These classical theories highlight the benefits of trade for all countries. They explain how trade allows better use of resources,

increases global output, and improves welfare across nations. Understanding these ideas forms the foundation for studying modern international economics.

Keywords

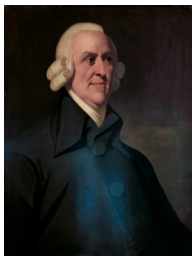
International Trade, Absolute Advantage, Comparative Advantage, Specialisation, Vent for Surplus, Labour Theory of Value, Opportunity Cost

Discussion

2.2.1 Classical Theory of Trade

The Classical Theory of International Trade was developed by economists such as Adam Smith and David Ricardo in the 18th and 19th centuries. This theory explains why countries trade with each other and how trade benefits them. Adam Smith (1723-1790) provided the basic building blocks for the development of the Classical Theory of International Trade. He developed the theory of Absolute Cost Advantage. David Ricardo (1772-1823) further developed it and presented the theory of Comparative Cost Advantage in International Trade. These two models together are called the supply version of the classical theory of international trade, because both these theories paid exclusive attention to the supply or production cost in the determination of the terms of trade and the gains from trade.

1. Adam Smith's Theory of Absolute Advantage



Adam Smith was a Scottish economist and philosopher who was a pioneer of political economy and a key figure during the Scottish Enlightenment. Also known as 'The Father of Economics' or 'The Father of Capitalism', he wrote two classic works, The Theory of Moral Sentiments (1759) and An Inquiry into the Nature and Causes of the Wealth of Nations (1776). The latter, often abbreviated as The Wealth of Nations, is considered his magnum opus and the first modern work of economics. In his work, Smith introduced his theory of Absolute Advantage.

Adam Smith explained that a country should produce and export goods in which it is most efficient, meaning it can produce those goods using fewer resources or at a lower cost than other countries. At the same time, it should import goods that other countries can produce more efficiently. This way, both countries can benefit from trade.

2. David Ricardo's Theory of Comparative Advantage

David Ricardo improved on Adam Smith's idea by showing that even if a country is less efficient in producing all goods, it can still benefit by specialising in goods where its disadvantage is smallest. The country should export these goods and import those in which its disadvantage is greater. This helps both countries use their resources more effectively.

3. Heckscher-Ohlin Theory

The Heckscher-Ohlin theory says that a country will export goods that use its abundant resources and import goods that require resources it lacks. For example, a country rich in land will export agricultural goods, while a country with lots of capital will export machinery. This theory focuses on differences in factor endowments (land, labour, capital) as the reason for trade.

2.2.2 Absolute Advantage Theory

The theory of Absolute Advantage was introduced by Adam Smith in 1776 in his famous book *An Inquiry into the Nature and Causes of the Wealth of Nations*. This theory was developed as a challenge to the prevailing Mercantilist ideas, which believed that a nation's wealth was measured by the amount of gold reserves and trade surpluses it held. In contrast, Adam Smith argued that a nation's wealth depends on the availability of goods and services to its people, which can be achieved through efficient production and free trade. His theory is mainly developed based on the following assumptions.

1. Two countries and two commodities are considered.
2. Each country has an absolute advantage in one of the two goods.
3. Technology remains constant.
4. Labour is the only factor of production.
5. Labour is homogeneous (all labour units are equally productive).
6. The value of goods is based on labour hours .
7. No technological progress over time.
8. Labour can move freely within a country but cannot move between countries.
9. The barter system is used (no money involved).
10. No transportation cost for moving goods.

Adam Smith's theory of Absolute Advantage mainly explains that free trade brings mutual benefits to all countries when each nation specialises in producing the goods in which it is most efficient. According to this theory, each country should produce only

those goods which it can make more efficiently than other countries. This means a country has an absolute advantage if it can produce more goods using the same amount of resources, or if it can produce the same amount of goods using fewer resources. After producing the goods in which it is most efficient, the country can trade them with other countries for the goods it is less efficient in making. This process helps in using the world's resources better, increases total production, and improves the well-being of all countries involved in trade. Let us explain with the help of a table.

Table 2.2.1 Absolute cost differences in two countries

Country	Units of Labour	Good X	Good Y	Rate of exchange
A	1	16	8	1 unit of x= 0.5 units of Y
B	1	8	16	1 unit of x = 2 units of Y

In country A, one man-day of labour can produce 16 units of good X but only 8 units of good Y, while in country B, one man-day of labour can produce 8 units of good X but 16 units of good Y. This means country A has an absolute advantage in producing good X, and country B has an absolute advantage in producing good Y. If country A specialises in producing and exporting good X, and country B specialises in producing and exporting good Y, both countries will gain from trade. The absolute cost advantage can be shown as 16 units of good X in country A being greater than 8 units of good Y in country A, and 8 units of good X in country B being less than 16 units of good Y in country B.

2.2.2.1 Gains from Trade

Adam Smith's theory of Absolute Advantage states that countries should specialise in producing goods they can make more efficiently than others. By doing so and engaging in trade, they can exchange surplus goods for those goods that they face absolute disadvantage in production, leading to mutual gains, better resource use, and increased world production. Adam Smith emphasised that such specialisation, based on absolute advantage, would maximise total world output. The following table shows the gains from trade.

Table 2.2.2 Gain from Trade

Country	Before Trade		After Trade		Gains From Trade	
	X	Y	X	Y	X	Y
A	16	8	32 Units	-	+16 units	- 8units
B	8	16	-	32 Units	-8	+16 units
World Production	24 units	24 units	32 units	32 Units	+ 8 units	+ 8

Before trade, Country A produced 16 units of commodity X and 8 units of commodity Y. Country B produces 8 units of commodity X and 16 units of commodity Y. After trade and specialisation, Country A specialises in the production of commodity X and produces a total of 24 units of X, while it does not produce any unit of Y. Similarly, Country B specialises in the production of commodity Y and produces 32 units of Y, without producing any units of X. Before trade, the total production of both countries together was 24 units of X (16 + 8) and 24 units of Y (8 + 16). After specialisation and trade, the total production is 24 units of X (all from Country A) and 32 units of Y (all from Country B). This means there is a gain of 8 extra units of commodity Y due to specialisation and trade. The gain for Country A is +8 units of X, since it produces 24 units of X instead of 16 units before trade, although it stops producing Y. The gain for Country B is +16 units of Y (from 16 to 32 units) and it stops producing X. Therefore, both countries gain from trade, and the total output of goods increases.

We know that Adam Smith's Absolute Advantage theory explains how international trade helps countries make full use of their idle resources. Another theory by Adam Smith is the Vent for Surplus Theory. It explains that when a country produces more goods than it can consume, it creates a surplus. These extra goods cannot be sold in the domestic market. So, the country uses international trade to sell its surplus to other countries. This helps the country to fully use its resources and increase production. In simple terms, trade helps to expand the market and make full use of resources that would otherwise remain unused.

Criticism of Absolute Advantage Theory

1. Unrealistic Assumption of Labour Theory of Value

The theory assumes that the value of a good depends only on the amount of labour used to produce it. But in reality, other factors like capital, land, and technology also affect value. So, this assumption is too simple and unrealistic.

2. No Similar Tastes

The theory assumes that people in all countries have similar wants and preferences. But in real life, consumer tastes differ from country to country. This makes trade based only on production efficiency less practical.

3. Unrealistic Assumption of Constant Costs

According to the theory, costs remain constant even when production increases. But

in reality, costs may increase or decrease due to scale, resource limits, or technology changes. So, this assumption does not match real-world situations.

4. **Ignores Transport Costs**

The theory does not consider the cost of transporting goods between countries. In reality, transport costs can be high and may reduce or cancel the gains from trade. Ignoring this factor makes the theory less applicable.

5. Factors Not Fully Mobile Internally

The theory assumes that factors of production like labour and capital can easily move from one industry to another within a country. But in practice, such movement is difficult due to skill mismatch, lack of training, or other barriers. This limits a country's ability to specialise quickly.

2.2.3 Comparative Advantage Theory

The Comparative Advantage Theory, developed by David Ricardo, explains that international trade is not based on absolute advantage but on comparative advantage. This means that even if one country is more efficient in producing all goods, both countries can still benefit from trade by specialising in the production of goods in which they have a lower relative cost. Before understanding the theory in detail, we need to examine its basic assumptions. They are:

1. There are only two countries
2. They produce the same two commodities
3. Tastes and preferences are similar in both countries
4. Labour is the only factor of production
5. The supply of labour remains constant
6. All units of labour are homogeneous
7. The prices of the two commodities are determined only by labour cost, i.e., the number of labour units used
8. Goods are produced under the law of constant costs or constant returns
9. Technology remains unchanged in both countries
10. Trade takes place on the basis of a barter system
11. Factors of production are perfectly mobile within each country, but immobile between countries

12. There is free trade, with no trade barriers or restrictions on the movement of goods

13. No transport costs are involved in the exchange of goods

14. All resources are fully employed in both countries

15. The international market is perfect, and the exchange ratio for the two goods is the same in both countries

The Comparative Advantage Theory explains that a country should specialise in producing goods that it can produce at a relatively lower opportunity cost and import goods that it produces at a relatively higher cost. Production costs vary between countries due to differences in climate, natural resources, geographical location, efficiency of labour, and the level of specialisation. As a result, one country may have a comparative cost advantage in producing a particular good, even if it is not the most efficient overall. In such cases, trade allows each country to focus on what it does best and benefit by exchanging goods.

Ricardo's theory shows that trade is beneficial for both countries, even if one is less efficient in producing all goods, because what really matters is opportunity cost-that is, how much of one good must be given up to produce another. Let us explain this with the following table:

Table 2.2.3 Labour Required to Produce One Unit

Country	Wine (Labour units)	Cloth (Labour Units)
England	120	100
Portugal	80	90

From the table, we can see that Portugal uses fewer workers than England to produce both wine and cloth. So, Portugal has an absolute advantage in both goods. However, trade is still possible and beneficial because of comparative advantage. Portugal needs 80 workers to make one unit of wine and 90 workers to make one unit of cloth. This means the opportunity cost of producing one unit of wine in Portugal is 0.80 units of cloth. In comparison, England needs 120 workers for wine and 100 for cloth, so its opportunity cost of producing one unit of wine is 1.2 units of cloth. Since Portugal gives up less cloth to make wine, it has a comparative advantage in wine. On the other hand, England gives up fewer units of wine to make cloth, so it has a comparative advantage in cloth. Therefore, Portugal should specialise in wine and England should specialise in cloth. Portugal can export wine to England, and England can export cloth to Portugal. In this way, both countries benefit from trade. This example shows that trade is useful even when one country is better at producing everything, because what really matters is who gives up less to make a product-that is, comparative advantage. Specialising in such goods and trading helps countries use their resources better and gain more. The

comparative advantage position of both is illustrated in the following fig. in terms of production possibility curves.

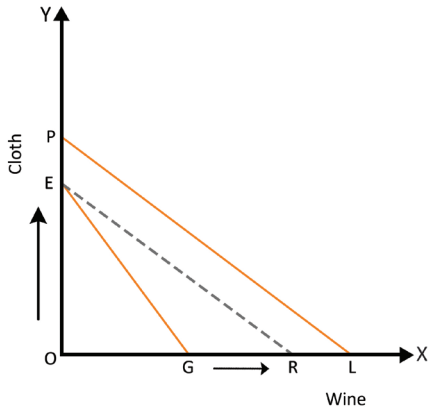


Fig. 2.2.1comparative advantage

In the diagram, PL represents the production possibility curve (PPC) of Portugal, and EG represents the PPC of England. Portugal has an absolute advantage over England in producing both wine and cloth, as it produces more of both goods-specifically**,** OL units of wine and OP units of cloth, compared to England's OG units of wine and OE units of cloth. However, when we look at the slope of the line ER, which is parallel to Portugal's PPC (PL), we can see that Portugal has a greater comparative advantage in producing wine. This is because if Portugal gives up the resources needed to produce OE units of cloth, it can produce OR units of wine, which is more than the OG units of wine that England can produce. On the other hand, England has the least comparative disadvantage in producing cloth. So, it makes sense for Portugal to specialise in wine and export OR units of wine to England, and for England to specialise in cloth and export OE units of cloth to Portugal. In this way, both countries benefit from trade by focusing on their comparative advantage.

Criticism of Comparative Advantage Theory

1. Unrealistic Assumption of Labour Cost

Ricardo's theory considers only labour cost while calculating production costs and ignores other important costs like capital, land, and raw materials. In reality, it is the money cost (which includes all inputs) that matters in international trade. The theory also assumes that all labour is of the same type (homogeneous), but in practice, labour differs in skills and productivity, making this assumption unrealistic.

2. Assumption of Fixed Proportions

Ricardo assumed that labour is used in fixed proportions in the production of all goods. But in real production, the proportions of labour and capital can vary from one industry to another. Also, some substitution of labour and capital is always possible, which makes this assumption unrealistic and overly simplified.

3.Unrealistic Assumption of Constant Costs

The theory is based on the idea that costs remain constant when a country increases

production through specialisation. In reality, large-scale production may lead to economies of scale (lower costs) or rising costs due to resource limitations. This affects a country's comparative advantage and changes the outcome of trade.

4. Ignores Transport Costs

Ricardo's theory does not consider the cost of transporting goods between countries. In practice, transport costs are important because they can reduce or even cancel out the benefit of lower production costs. High transport costs can prevent trade even when a comparative advantage exists.

5. Unrealistic Assumption about Factor Mobility

The theory assumes that factors of production (like labour and capital) are perfectly mobile within a country and completely immobile between countries. But even within a country, factors may not move easily due to skill differences, regional barriers, or a lack of infrastructure. This reduces the accuracy of the theory.

6. Two-Country, Two-Commodity Model

Ricardo's theory explains trade between only two countries dealing with two commodities, which is a very simple case. In the real world, many countries trade in hundreds of products, so the theory does not reflect the complex nature of modern international trade.

7. Neglect of Technology

Ricardo's theory ignores the role of technology in production and trade. Technological innovation helps countries to produce goods more efficiently and also increases the range of goods available for export. Trade patterns often change due to improvements in technology, which the theory does not consider.

8. One-Sided Theory (Ignores Demand Side)

The theory focuses only on the supply side (how much a country can produce) and ignores the demand side (how much consumers want). According to economist Bertil Ohlin, this makes the theory incomplete, as international trade depends on both supply and demand.

9. Complete Specialisation is Not Always Possible

Frank Graham criticised the theory for assuming that countries will completely specialise in one product. In reality, complete specialisation is often not possible, especially when a large country trades with a small one, or when products have high and low values. Partial specialisation is more common in practice.

Recap

- The theory of Absolute Advantage was introduced by Adam Smith
- The theory of Absolute Advantage states that a country should specialise in goods it can produce more efficiently than others
- The theory of Comparative Advantage was introduced by David Ricardo
- The theory of Comparative Advantage states that trade is possible even when one country is better at producing everything, what matters is producing goods at a lower opportunity cost
- Mercantilist believed that a nation's wealth was measured by the amount of gold reserves and trade surpluses it held
- Adam Smith argued that a nation's wealth depends on the availability of goods and services to its people

Objective Questions

1. Who introduced the theory of Absolute Advantage?
2. What is the main idea of Comparative Advantage?
3. Which theory uses the concept of opportunity cost?
4. What is meant by the Vent for Surplus theory?
5. Name one assumption of the Absolute Advantage theory.
6. What is the basis of the Ricardian theory of value?
7. What is meant by specialisation in trade?
8. Why is transport cost important in international trade?
9. What does full employment mean in the context of trade theories?

Answers

1. Adam Smith
2. Specialisation based on lower opportunity cost
3. Comparative Advantage theory
4. A theory that explains how international trade provides an outlet for surplus production
5. Full employment
6. Labour Theory of Value
7. It affects the competitiveness and profitability of trade
8. Comparative Advantage theory
9. All available labour and resources are fully utilised in production

Assignments

1. Explain Adam Smith's theory of Absolute Advantage. What are its assumptions and gains from trade?
2. Discuss David Ricardo's Comparative Advantage theory. How does it differ from Absolute Advantage theory?
3. What are the main assumptions of the Comparative Advantage theory? Explain its relevance with a suitable example.
4. Critically examine the classical theories of international trade. Highlight any four key criticisms.
5. Explain the 'Vent for Surplus' theory by Adam Smith. How does it relate to the concept of Absolute Advantage?

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UNIT 3

Factor Endowments and Modern Trade Theories

Learning Outcomes

After completing this unit, the learner will be able to:

- know the basic idea of Heckscher-Ohlin
- discuss the concepts of factor intensity and factor abundance
- brief evaluate the HOT theory using empirical evidence
- familiarise with Leontief Paradox

Prerequisites

India, which has a large population and abundant labour but relatively less capital equipment. In contrast, Japan has advanced machinery, factories, high savings, and modern technology, but a smaller workforce. This means India is labour-abundant, while Japan is capital-abundant. In international economics, the factor abundance principle is studied. As per this principle, India has a comparative advantage in labour-intensive goods, while Japan has a comparative advantage in capital-intensive goods. Hence, both nations engage in trade. How do we know the mutual gains of the nations? The answer is through Production Possibility Curves (PPCs). And how do we know how the benefits of trade are shared? For this, we use the tool called Terms of Trade (TOT).

Keywords

Factor Abundance, Factor Intensity, Comparative Advantage, Capital-Intensive Goods, Labour-Intensive Goods, Terms of Trade, Production Possibility Curve, Leontief Paradox

Discussion

2.3.1 Factor Endowments and the Heckscher - Ohlin Theory

The Heckscher – Ohlin theory was developed by Swedish economist Eli Heckscher in 1919 and his student Bertil Ohlin in 1933. This theory explains why countries engage in international trade by focusing on differences in factor endowments, such as labour and capital. According to the theory, a country will export goods that make intensive use of the factors of production that are abundant and relatively cheap in that country. At the same time, it will import goods that require factors that are scarce and expensive domestically. For example, a country with abundant labour will export labour-intensive goods, while a country with abundant capital will export capital-intensive goods.

Assumptions

1. There are two countries, two commodities, and two factors (Labour and Capital)
2. Commodity X is labour-intensive, and Commodity Y is capital-intensive in both countries
3. Both product and factor markets are perfectly competitive
4. Factors of production (labour and capital) can move freely within each country, but not between countries
5. Both countries use the same technology to produce goods
6. All resources are fully employed in both countries
7. There is free trade-no tariffs, transport costs, or trade barriers
8. The techniques of production are the same in both countries
9. Incomplete specialisation exists in both countries (they produce both goods)
10. People in both countries have similar tastes and preferences
11. Trade is balanced-exports equal imports for each country

2.3.1.1 Factor Intensity and Factor Abundance

Factor intensity refers to how much of one factor, such as capital or labour is used in the production of a good. It is measured using the capital-labour ratio (K/L), which shows how much capital is used per unit of labour. For example, consider two commodities: Commodity Y uses 2 units of capital and 2 units of labour, giving a K/L ratio of 2/2 = 1,

while Commodity X uses 1 unit of capital and 4 units of labour, giving a K/L ratio of 1/4 = 0.25. Since Commodity Y has a higher capital-labour ratio, it is considered capital-intensive. In contrast, Commodity X has a lower capital-labour ratio and is therefore labour-intensive. It is important to note that factor intensity is not determined by the total amount of capital or labour used, but by the proportion of capital used per unit of labour.

Factor abundance means how much of a factor, labour or capital, a country possesses in comparison to another country. There are two main ways to define it. First is the physical definition, where a country is said to be capital-abundant if its total capital to labour ratio (TK/TL) is higher than that of the other country. For example, if Country II has more machines per worker than Country I, then Country II is considered capital-abundant. The second is the price definition, where a country is considered capital-abundant if the price of capital compared to labour (PK/PL) is lower than in the other country. In this case, capital is relatively cheaper than labour. Factor intensity and factor abundance play an important role in trade under the Heckscher-Ohlin theory. For example, if good Y is capital-intensive (meaning it requires more capital per unit of labour to produce), and country II is capital-abundant, then country II can produce good Y more efficiently and at a lower cost. Therefore, it will specialise in producing good Y and export it to other countries. On the other hand, if country I is labour-abundant, and good X is labour-intensive, then country I can produce good X more efficiently and export it. This trade pattern is clearly shown using PPCs.

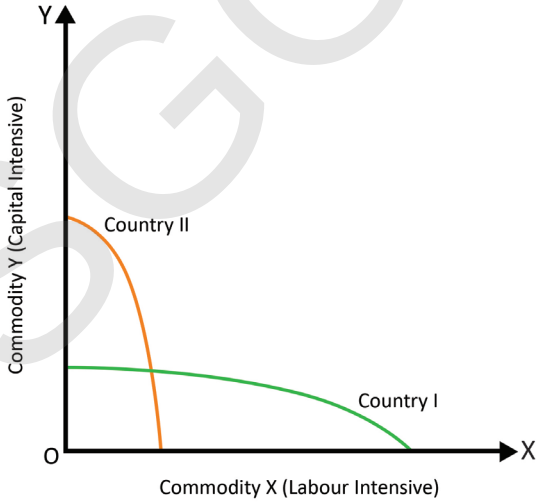

Fig.2.3.1 PPC of countries

The figure illustrates the production possibility curves (PPCs) of two countries; country I and country II based on their factor abundance and the factor intensity of the commodities they produce. Country I is labour-abundant, and it specialises in producing commodity X, which is labour-intensive. Therefore, its PPC is flatter and wider, skewed towards the horizontal axis (which represents labour-intensive good X). country II is capital-abundant, and it specialises in producing commodity Y, which is capital-intensive. As a result, its PPC is steeper, skewed towards the vertical axis (which

represents capital-intensive good Y). This visual representation shows how differences in factor endowments influence the production capacity of countries and form the basis of international trade, as per the Heckscher-Ohlin model.

The classical theory of international trade, as developed by economists like David Ricardo, explained trade based on comparative cost differences between countries. However, the Heckscher-Ohlin Theory (H-O Theory) gave a deeper explanation of why such cost differences arise. According to Heckscher and Ohlin, the main reasons for differences in comparative costs are:

1. Different Factor Endowments

Some countries have more capital (machines, infrastructure), while others have more labour (workers). For example, a developed country may have more capital per worker, while a developing country may have more labour.

2. Different Factor Requirements for Different Goods

Goods are produced using different combinations of factors. Some goods require more labour (like textiles), while others need more capital (like machinery).

The core idea of the H.O theory is that a country will specialise in the production and export of goods that use its abundant and cheaper factor of production more intensively, while it will import goods that require the scarce and more expensive factor. For example, a labour-abundant country will focus on producing and exporting labour-intensive goods, and it will import capital-intensive goods. On the other hand, a capital-abundant country will specialise in producing and exporting capital-intensive goods, and import labour-intensive goods. This is because the abundant factor is cheaper and more readily available in that country, giving it a comparative advantage in the production of goods that depend on that factor. Let us explain with the help of the figure given below :-

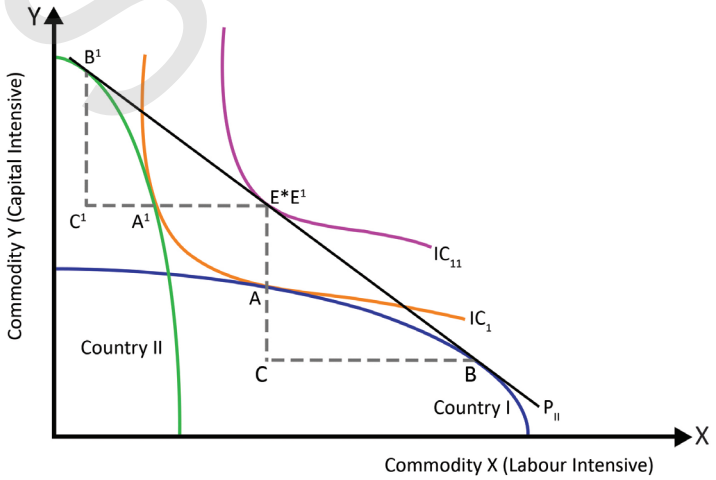

Fig.2.3.2 H.O.Theory

The figure given above based on the Heckscher-Ohlin Theory shows how both countries benefit from trade. Before trade, Country I produces and consumes at Point A, and country II at Point A^1. Each country is limited by its production possibilities. But once trade begins, Country I, which has more labour, specialises in the labour-intensive good X and shifts its production to Point B. Country II, which has more capital, specialises in the capital-intensive good Y and shifts to Point B^1. The line PB represents the international terms of trade, showing the common exchange rate between the two goods. Now, Country I exports good X and imports good Y, while Country II does the opposite. Both countries end up consuming at Point E (or E^1), which lies on a higher indifference curve (IC_{11}). This means both countries enjoy better satisfaction and improved welfare due to trade.

Criticism of Factor Endowments and the Heckscher-Ohlin Theory

The Heckscher-Ohlin (H-O) Theory explains international trade based on differences in factor endowments such as labour and capital. While it is a major improvement over classical theories, it has been criticised on several grounds:

1. Identical Technology Assumption : The theory assumes that both countries use the same technology. But in reality, technological advancement differs across countries, which affects productivity and trade patterns more than just factor endowments.

2. Leontief Paradox : Wassily Leontief tested the H-O theory using U.S. trade data and found the opposite result: the U.S. (a capital-abundant country) was exporting labour-intensive goods and importing capital-intensive goods. This became known as the Leontief Paradox, and it challenged the validity of the theory.

3. Neglect of Demand Side : The theory focuses only on the supply side, such as factor endowments and costs but ignores the demand side of trade. However, international trade is also influenced by consumer preferences, marketing, branding, and global demand trends.

4. Homogeneous Factor Assumption : The theory assumes all units of labour and capital are identical in quality within a country. In reality, labour differs in skills, education, and productivity, and capital varies in efficiency and type.

5. Static Nature of the Model : The H-O theory is static. It does not consider changes over time such as economic growth, changes in resource availability, improvements in technology, or shifts in global demand.

6. Incomplete Explanation of Trade Patterns : The theory does not fully explain trade in services, intra-industry trade (countries trading similar products), or trade in high-technology goods. These are now important parts of world trade.

3.2.2 Leontief Paradox

Wassily W. Leontief was a Soviet-American economist best known for developing Input–Output Analysis, a method used to study how different sectors of an economy are interdependent. For this contribution, he was awarded the Nobel Prize in Economics. Beyond this, he also made important contributions to international trade theory, particularly by challenging the predictions of the H.O. Theory (HOT) through what later came to be called the Leontief Paradox.

According to the H.O. Theory, a capital-abundant country like the United States should be exporting capital-intensive goods and importing labour-intensive goods. However, Leontief conducted an empirical test of this theory in 1953, using 1947 U.S. trade data, and found results that contradicted the theory's expectations. Surprisingly, he discovered that the U.S. was exporting labour-intensive goods and importing capital-intensive goods, which was the opposite of what HOT had predicted. Let us explain this with the help of the following table based on Leontief's study, which shows the capital and labour requirements for producing $1 million worth of U.S. exports and import substitutes in 1947:

Table 2.3.1 U.S Exports and Imports in 1947

	U.S Exports	U.S. Import Substitutes
Capital (in $000s)	2,551	3,091
Labour (man years)	182	170
Capital - Labour Ratio	13.99	18.18

From the table 2.3.1, it is evident that U.S. import-competing industries required 30% more capital than the export industries. The capital–labour ratio was significantly higher for import substitutes (18.18) compared to exports (13.99). This clearly showed that U.S. exports were more labour-intensive, while import substitutes were more capital-intensive, a result that directly contradicted the H.O. theory. This unexpected outcome is known as the Leontief Paradox, and it prompted widespread debate and further research into the complexities of international trade patterns.

Recap

1. The H.O. Theory was developed by Swedish economists Eli Heckscher and Bertil Ohlin
2. HOT explains international trade based on differences in countries' factor endowments, like labour and capital
3. According to the H-O Theory, a labour-abundant country will specialise in producing and exporting labour-intensive goods.
4. Leontief conducted an empirical test that contradicted the predictions of the H.O. Theory.
5. Leontief developed Input–Output Analysis.
6. Leontief found that the capital-rich was exporting labour-intensive goods and importing capital-intensive goods.
7. Leontief paradox contradicted the H.O. Theory

Objective Questions

1. What is the key assumption behind the Heckscher-Ohlin Theory?
2. According to the Heckscher-Ohlin Theory, what will a labour-abundant country export?
3. Who conducted the empirical test that challenged the Heckscher-Ohlin Theory?
4. What was the key finding of Leontief's study?
5. From which year did Leontief use trade data to conduct his test?
6. What does factor intensity refer to?
7. Which Nobel Prize-winning economist developed input–output analysis?
8. What is one of the main criticisms of the Heckscher-Ohlin Theory?
9. When does Factor Intensity Reversal occur?

Answers

1. Factor endowments differ between countries
2. Labour-intensive goods
3. Wassily Leontief
4. U.S. exported labour-intensive goods
5. 1947
6. The ratio of capital to labour used in production
7. Wassily Leontief
8. It ignores demand-side influences
9. When a good is labour-intensive in one country and capital-intensive in another

Assignments

1. Explain the Heckscher-Ohlin Theory of International Trade. What are its assumptions and key conclusions?
2. Define and distinguish between factor intensity and factor abundance. Illustrate how these concepts form the basis of the H-O model.
3. Discuss the Leontief Paradox. How did it challenge the Heckscher-Ohlin theory? Mention its findings and possible explanations.
4. What are the major criticisms and limitations of the Heckscher-Ohlin Theory?
5. What is Factor Intensity Reversal? How does it affect the validity of the Heckscher-Ohlin theorem? Use examples in your explanation.

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International Trade Policy

Free Trade and Protection

Learning Outcomes

After completing this unit, the learner will be able to:

- distinguish between free trade and protectionism
- comprehend the arguments for and against free trade
- Understand more about economic and non-economic factors favouring protectionism

Prerequisites

Countries around the world engage in international trade to exchange goods and services they produce. However, they often face a choice between two broad approaches, free trade and protectionism. Free trade means allowing goods and services to move across borders without any restrictions such as tariffs, quotas, or subsidies. It is based on the idea that if every country specialises in what it does best, overall global production and efficiency will increase. For example, if India focuses on producing software and imports oil from countries that can extract it cheaply, both parties benefit. On the other hand, protectionism involves using trade barriers to shield domestic industries from foreign competition. This approach is often used to support new or struggling industries. For instance, a country may impose import duties on foreign steel to protect its local steel industry. Both approaches have their advantages and limitations. Let us discuss them in detail.

Keywords

Free Trade, Protectionism, Infant Industry, Dumping, Balance of Payment

Discussion

3.1.1 Free Trade

The commercial policy of a nation comprises a set of policy measures that influence its international trade and economic relationships with other countries. Since the era of Adam Smith, economists have engaged in an ongoing and intense debate on a fundamental issue, whether a country should adopt a policy of free trade or one of protection. This unit aims to explore the various dimensions of this debate, laying out arguments from both perspectives.

Free trade refers to a policy framework where no tariff or non-tariff barriers are imposed on the exchange of goods and services across countries. Such a policy allows countries to import goods that they cannot produce efficiently or cannot produce at all, and to export goods in which they hold a comparative advantage. According to Adam Smith, free trade is "a system of commercial policy which draws no distinction between domestic and foreign commodities and thus neither imposes additional burdens on the latter nor grants any special favour to the former."

Free trade is thus inherently non-discriminatory, aiming to remove artificial barriers to international commerce. As Haberler puts it, it represents "the external trade system of liberalism which opposes every interference by the state with the free play of economic forces." Economist Jagdish Bhagwati defines it as the complete absence of tariffs, quotas, exchange restrictions, taxes, and subsidies on production, factor usage, and consumption. In line with this, R.G. Lipsey remarks that a world of free trade would involve no restrictions of any kind, allowing nations to import all commodities that can be procured at lower delivered costs than those of domestic production.

Although free trade implies the absence of trade barriers, import duties levied solely for revenue generation may still align with the principles of free trade, provided they are not designed to protect domestic industries or to discriminate against cheaper foreign goods. For instance, if country A imposes a 15% import tariff on goods from country B, and country B still retains a 25% cost advantage, then trade continues, and country A collects revenue without hampering trade flow. In essence, free trade means avoiding any direct or indirect restrictions on the international movement of goods and services.

3.1.1.1 Arguments for Free Trade

The doctrine of laissez-faire in international trade gained traction as a counter-reaction to the Mercantilist advocacy of protectionist barriers. Thinkers like Locke, Hume, and Adam Smith championed free trade, and this was later supported by influential economists such as Ricardo, J.S. Mill, Bastable, Marshall, and Haberler.

The main arguments in favour of free trade are outlined below:

1. **Maximisation of World Output:** Free trade allows nations to specialise in the production of goods in which they have the greatest comparative advantage. This leads to optimal resource use, maximisation of global output, and increased real income for all participating countries. As Ellsworth stated,

"the income of any community or nation is large just in proportion to the extent to which it specialises."

2. **Optimum Use of Resources:** Free trade leads to both product and factor specialisation. Scarce productive resources are allocated to industries with the highest efficiency, ensuring minimal under-utilisation or wastage. Additionally, any scarcity can be mitigated by importing resources, contributing to their global optimal use.

3. **Higher Factor Incomes:** With fewer restrictions, factor inputs such as labour and capital can move freely to regions or sectors offering better returns. As a result, wages, rents, interest, and profits tend to be higher under a regime of free trade.

4. **Optimisation of Consumption:** Consumers gain access to a wider variety of superior goods at lower prices. The ability to import high-quality and affordable goods enhances consumer welfare and leads to a more optimal pattern of consumption.

5. **Expansion of Markets:** Free trade expands the market size for each nation, enabling surplus production to be sold abroad. This encourages investment, innovation, and the development of superior, cost-effective products.

6. **Control of Monopolies:** Open trade fosters competition by allowing producers from various nations to compete in global markets. This price competition and product innovation reduce the chances of exploitative monopolies. Nonetheless, natural monopolies or international cartels may still exist even under free trade.

7. **Enhance overall Productivity:** According to Haberler, free trade inculcates competitiveness, a drive for excellence, and efficiency. It promotes the development of advanced production, managerial, and organisational skills, enhancing the overall productivity of nations.

8. **Augmented Development:** Free trade plays a pivotal role in speeding up economic development in less developed countries. It facilitates the import of essential raw materials and capital goods, encourages the transfer of technology and entrepreneurship, and enables the inflow of international capital. By promoting efficiency and competitive capabilities, it enhances the productive capacity of developing nations, resulting in higher income and employment levels.

3.1.1.2 Arguments Against Free Trade

Despite the strong classical endorsement of free trade, the global economic landscape has steadily moved away from the ideals of unrestricted international commerce. In particular, less developed countries have often viewed free trade as a mechanism for perpetuating colonial exploitation. Even the advanced industrial nations have frequently employed various restrictions to safeguard their economic interests. The following are the major arguments against free trade:

1. **Absence of the Preconditions for Free Trade:** The most fundamental theoretical criticism of free trade lies in the non-existence of essential preconditions in actual economies. Classical economic theory assumes the presence of perfect competition, absolute mobility of production factors, unhindered operation of price mechanisms, and the philosophy of laissez-faire. However, these conditions rarely prevail in the real world. Their absence compromises the theoretical validity of the free trade model and limits its practical applicability.

2. **Aggressive Competition:** Free trade often leads to highly competitive and destabilising trade environments, especially for developing countries. Advanced economies, aiming to expand their global market share, may resort to dumping, i.e., exporting goods at extremely low prices to outcompete local industries. This form of aggressive pricing undermines domestic enterprises in less developed countries, as historically demonstrated by the collapse of Indian handicrafts in the nineteenth century due to intense competition from British factory-made textiles.

3. **Unbalanced Economic Development:** Free trade encourages countries to specialise in industries where they possess a comparative cost advantage. Developing countries, which often have comparative advantages in primary sectors like agriculture, may become locked into these low-value activities, limiting their prospects for industrialisation and broader economic diversification. The resulting dependence on a narrow range of exports can have serious long-term consequences for economic and social stability.

4. **Excessive Foreign Dependence:** Adherence to the principles of comparative advantage under free trade can make a nation overly reliant on other countries for critical goods and services. This excessive dependence not only undermines domestic production capacity but also poses significant risks during periods of geopolitical tension or war. A country's ability to respond to external shocks is severely compromised when it lacks self-sufficiency in essential commodities.

5. **Vulnerable to International Economic Fluctuations:** Free trade facilitates the cross-border transmission of economic cycles, making national economies more vulnerable to external downturns. For instance, a recession in one country may reduce its import demand, adversely affecting the export revenues of its trading partners. This ripple effect can magnify economic disturbances and lead to global economic crises. Imposing selective trade restrictions may serve as a buffer against such contagion effects.

6. **Inflow of Sub-standard or Harmful Goods:** In the absence of import controls, countries may experience a surge of low-quality, sub-standard, or even harmful goods from abroad. Such imports can negatively affect public health, consumer safety, and overall societal welfare. Governments are often compelled to introduce regulatory barriers to safeguard their populations from the adverse consequences of unregulated trade.

7. **Negative Implications for Development in Less Developed Countries:** Contrary to the views of economists like Haberler, who argue that free trade

fosters development in less developed countries, historical evidence suggests otherwise. Over the past two centuries, free trade has often served as a vehicle for the economic domination of developing countries by advanced industrial nations. The unregulated extraction of raw materials and control over local markets have hindered industrial diversification and the nurturing of infant industries in these countries. Without strategic protection and regulation, it becomes exceedingly difficult for underdeveloped economies to transition toward industrial maturity and self-reliant growth.

3.1.2 Protection

Protection refers to a trade policy aimed at shielding domestic industries from foreign competition. This is typically achieved through the imposition of import duties that elevate the prices of cheaper foreign goods to levels comparable with domestically produced alternatives. Protection may also take the form of outright bans on certain imports, the use of quotas and licensing systems, the subsidisation of domestic industries and exports, exchange rate manipulation, or direct foreign exchange controls.

During the 18th and 19th centuries, classical free trade advocacy as proposed by Adam Smith was questioned by economists like Alexander Hamilton, Friedrich List, and H.C. Carey. Their arguments laid the groundwork for the emergence of a strong protectionist school of thought, which has significantly influenced trade policies in both developed and developing countries. Protectionism is particularly attractive to economies burdened with underutilised or unemployed resources, as it is believed that protection can facilitate their absorption into productive use. From this standpoint, moving away from free trade may not represent a loss but a net gain through the expansion of output and employment.

Although protection has become an accepted component of contemporary trade policy, the debate continues as to whether it can pave the way to economic prosperity or instead lead to stagnation and inefficiency.

3.1.2.1 Arguments for Protection

A range of arguments has been presented in support of protectionist trade policies. Haberler categorised these into economic and non-economic justifications. The key economic arguments are discussed below:

1. Infant Industry Argument:

Among the various rationales for protection, the infant industry argument stands out as the most widely accepted and enduring. This argument holds that nascent industries, in their early stages of development, are ill-equipped to compete with well-established, low-cost foreign producers. As such, temporary protection from international competition is essential to allow these industries time to develop, achieve economies of scale, and enhance their efficiency.

Pioneers of this argument include Alexander Hamilton, Friedrich List, J.S. Mill, and Bastable. The central idea is that the protected industry possesses a latent comparative advantage which, though currently unrealised due to its early developmental stage, can be activated through government support. Such support may take the form of import

duties, subsidies, infrastructure development, and other enabling measures. As the industry expands, it can achieve cost reductions through learning-by-doing and benefit from internal and external economies.

Additionally, the development of infant industries often triggers positive spillovers. These include growth in sectors such as power, transport, and communications, as well as the creation of forward and backward linkages across the economy. Protective tariffs can also generate revenue that governments may channel into economic and social infrastructure. For late-industrialising countries, particularly LDCs, this argument has strong developmental appeal. A critical aspect of the infant industry argument is that protection should be time-bound. Once the industry has matured and overcome its initial disadvantages, it should be exposed to international competition.

Limitations of the Infant Industry Argument

Despite its popularity, the infant industry argument is not without its limitations and has been subject to various criticisms:

i. Every emerging industry can claim to be an infant, which complicates the process of deciding which ones truly deserve protection. A more stringent selection criterion is necessary.

ii. While protection is intended to be temporary, determining the right moment to withdraw it is often vague and subjective, leading to prolonged protection.

iii. There is a risk that inefficient firms may cluster around a few successful ones, thriving under the shelter of protectionist policies. These firms may lobby for continued protection, creating inefficiencies and rent-seeking behaviours.

iv. Protection can result in the entrenchment of vested interests, making it politically difficult to reverse. Such interests may exert pressure on policymakers to maintain protective barriers indefinitely.

v. Local monopolies or cartels may emerge under the shield of protection, manipulating markets and influencing legislators to maintain their privileged status.

vi. Haberler criticised the notion that protection inevitably leads to significant internal and external economies. He considered such expectations vague and theoretically unsubstantiated, referring to tariff-based arguments grounded on these assumptions as theoretical curiosities rather than practical policy tools.

vii. The saying “once an infant, always an infant” captures the concern that industries may perpetually claim infancy to justify ongoing protection. This leads to enduring inefficiencies and burdens society with high tariffs and inflated production costs.

While many developing countries argue that protection fosters development, it is not a panacea, especially for capital-deficient nations. Although protection may create investment opportunities by displacing imports, it cannot generate the capital or savings required for sustained growth. Furthermore, protection can reduce savings and investment rates by encouraging high-cost import substitution and may contribute to

inflationary pressures.

2. Distortion Elimination Argument

It is often argued that distortions in commodity and factor markets necessitate protectionist policies. In the commodity market, such distortions may stem from externalities in production and consumption or from monopolistic and monopsonistic pricing structures. In factor markets, issues like wage rigidities, sectoral wage disparities, e.g., between agriculture and industry, limited labour mobility, credit rationing in capital markets, and general disequilibrium are prevalent. These distortions hinder the realisation of the potential benefits of free trade. Unlike the infant industry argument, which advocates temporary protection, the elimination of such distortions justifies protection as a more enduring policy measure to ensure efficient market functioning and social welfare.

3. Key Industries Argument

Key industries are those that form the foundation of industrial development and serve as catalysts for the growth of numerous related sectors. These include agriculture and core industrial sectors such as iron and steel, heavy engineering, chemicals, heavy electricals, cement, petroleum, and machine tools. Developing countries often prioritise the protection of these industries even when similar goods are available more cheaply from foreign markets. The rationale is that nurturing these sectors is vital for achieving industrial and economic self-sufficiency. In the context of LDCs, the protection of such foundational industries is seen as a stepping stone toward broader industrialisation and national development.

4. Employment Argument

The employment argument is a longstanding justification for protective tariffs. In situations of excess capacity or structural unemployment, governments may use tariffs to stimulate job creation in domestic, import-competing industries. By reducing imports, these industries can capture greater market share and expand employment. This can also trigger job growth in the upstream and downstream sectors. John Maynard Keynes supported this line of reasoning in the 1930s to justify British tariffs, arguing that moderate protection could aid economic recovery without severely curtailing international competition.

5. Anti-Dumping Argument

Protection through tariffs is also justified to counteract dumping, the practice where foreign producers sell goods at artificially low prices in foreign markets, often below their domestic prices after accounting for shipping and handling. Dumping can severely disrupt local markets by undercutting domestic producers. Although GATT members pledged to curb dumping practices in 1967, they persist. Imposing tariffs on dumped goods protects domestic industries from unfair competition and market distortion.

6. Balance of Payments Argument

Tariffs can also serve as a corrective measure when a country experiences persistent balance of payments deficits, where the value of imports exceeds the earnings from

exports and other receipts. In the absence of sufficient foreign exchange reserves or gold, tariffs can help reduce imports and encourage import substitution, aiding domestic industry growth. Compared to devaluation, tariffs are considered more targeted. Devaluation impacts all international transactions and may be ineffective if import demand is inelastic. However, the tariff route is not without criticism. Reduced imports can spur domestic inflation, aggravate deficits, and diminish trading partners' incomes and exports, potentially triggering retaliatory policies. Moreover, if foreign suppliers are monopolistic or superior, tariffs may have little effect. Retaliation and foreign subsidies can neutralise tariffs' impact, making them a temporary fix rather than a sustainable solution.

7. Terms of Trade Argument

A country can enhance its terms of trade, the rate at which its exports are exchange for imports through tariffs. By restricting imports, domestic demand for foreign goods falls, potentially lowering their prices relative to export prices. The success of this strategy hinges on demand and supply elasticities domestically and abroad. Countries with inelastic demand for imports can improve their terms of trade more effectively through protectionist policies.

8. Foreign Capital Inflow Argument

High tariffs can incentivise foreign firms to bypass import restrictions by establishing local operations. This inflow of foreign direct investment helps boost domestic production, generate employment, and strengthen industrial infrastructure. Historical examples include European nations attracting U.S. firms and India partnering with foreign entities under similar motives. For LDCs, this strategy is beneficial if they can steer foreign capital toward essential capital goods sectors rather than non-essential consumer industries.

3.1.2.2 Non-Economic Arguments in Support of Protection

Apart from economic considerations, several non-economic reasons are often cited to justify the implementation of protectionist policies. These arguments, rooted in national priorities beyond mere trade and efficiency, are outlined below:

1. National Defence Argument

One of the most compelling non-economic justifications for protection is the need for national security. A country must maintain a level of self-sufficiency in defence production to safeguard its sovereignty. Relying on foreign nations for critical military supplies is viewed as highly risky, especially during times of conflict or diplomatic tension. Even Adam Smith, an ardent advocate of free trade, acknowledged the supremacy of defence over wealth, famously stating, "Defence is better than opulence." This underscores the belief that industries related to defence production should receive government protection regardless of economic efficiency or cost implications.

However, the challenge is particularly acute for developing countries, which often lack the resources and technological capabilities to achieve full self-reliance in defence manufacturing. In such cases, it is more realistic for these nations to aim for maximum feasible self-sufficiency rather than absolute independence from imports.

Strategic considerations further suggest that it may be wiser to procure advanced and effective defence equipment from abroad than to rely on outdated and inefficient domestic production, especially when such production is carried out under the shelter of protectionist policies. Nonetheless, given the overriding importance of national security, economic arguments opposing protection in this domain are considered secondary or irrelevant.

2. Special Interest Argument

Another significant non-economic rationale for protection is the need to safeguard certain vulnerable segments of the population or specific occupations that are especially susceptible to foreign competition. For example, traditional artisans with unique skills may be unable to compete with the lower-priced, mass-produced imports manufactured using advanced machinery. Protecting such artisans through tariffs is seen as essential not only for their economic survival but also for preserving a nation's cultural identity, social fabric, and heritage.

Similarly, agriculture represents a particularly sensitive sector, especially in developing countries. Farmers often face tremendous pressure due to the influx of cheaper imported agricultural products. Without protection, domestic agricultural production may collapse, leading to widespread economic disruption and social instability. Recognising this, economist Gottfried Haberler highlighted agriculture's foundational role in human development, stating that, "Agriculture is the well-spring from which the human race is physically and mentally regenerated." Based on this perspective, agriculture should be insulated from foreign competition to maintain national well-being and stability.

This argument holds sway not only in less developed countries (LDCs) like India but also in advanced economies. For instance, both the European Union and the United States have long maintained high levels of agricultural protection through subsidies. These protective measures have sparked intense debate on the global stage and were among the primary causes of the deadlock during the Doha Round of WTO negotiations. This highlights that the protection of agriculture and other vulnerable sectors is not merely an economic issue, but also a deeply political and cultural one, central to national identity and policy priorities.

Recap

- Free trade means no tariff or non-tariff barriers on goods and services between countries
- It allows countries to import goods they cannot produce efficiently
- Countries export goods in which they have a comparative advantage
- Free trade is based on non-discrimination between domestic and foreign goods
- It maximises world output by allowing specialisation based on comparative advantage
- Resources are used optimally through specialisation in production and factors
- It enhances productivity by encouraging efficiency and competition
- Free trade supports development in developing countries by enabling technology and capital inflow
- Free trade is criticised because ideal conditions like perfect competition rarely exist
- It may cause aggressive competition and dumping, harming local industries
- Free trade can lead to unbalanced development, focusing only on low-value sectors
- It creates excessive dependence on foreign goods and services
- Economies become more vulnerable to global economic shocks under free trade
- Free trade can lead to the entry of harmful or substandard goods
- Protectionism is used to support domestic industries by using tariffs and other restrictions

Objective Questions

1. What is meant by free trade?
2. Who is considered the first major advocate of free trade?
3. What is comparative advantage?
4. What does free trade promote in terms of resource use?
5. How does free trade affect world output?
6. Which economist defined free trade as the complete absence of tariffs and subsidies?
7. What type of development does free trade help in developing countries?
8. Why do critics say free trade is impractical in real-world economies?
9. What is dumping in international trade?
10. How can free trade lead to unbalanced economic development?
11. What is one major risk of excessive dependence on foreign goods?
12. What is one consequence of allowing unrestricted imports?
13. What can emerge under free trade if small firms are driven out?
14. What is the infant industry argument?

Answers

1. Free trade is the absence of barriers to international trade of goods and services.
2. Adam Smith.
3. The ability of a country to produce goods at a lower opportunity cost than others.
4. Optimum and efficient use of resources.

5. It maximises world output through specialisation.
6. Jagdish Bhagwati.
7. Economic development through capital, technology, and entrepreneurship inflow.
8. This is because conditions like perfect competition and mobility rarely exist.
9. Selling goods at very low prices to outcompete local industries.
10. By locking countries into low-value sectors like agriculture.
11. Inability to respond effectively to crises or wars.
12. Inflow of sub-standard or harmful goods.
13. Monopolies or cartels.
14. A case for protecting young industries until they become competitive.

Assignments

1. Explain the main features of free trade and how it benefits global economic efficiency.
2. Discuss the arguments for and against free trade using examples from developing countries.
3. What are the key economic and non-economic justifications for protectionist trade policies?
4. Evaluate the strengths and limitations of the infant industry argument.
5. Compare and contrast free trade and protectionism in terms of their impact on national development.

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UNIT 2

Trade Restrictions and Dumping

Learning Outcomes

After completing this unit, the learner will be able to:

- distinguish between different methods of trade restrictions
- identify different non-tariff barriers
- understand how dumping works in international trade

Prerequisites

Countries around the world often use various methods to restrict the free flow of international trade. These methods, known as trade restrictions, are part of a country's trade or commercial policy. While they are sometimes presented as ways to protect national interest or public welfare, they are usually meant to protect specific domestic industries from foreign competition. Trade restrictions can take many forms, including tariffs and non-tariff barriers like quotas, regulations, or export controls.

One major method of trade restriction is dumping, where a country exports goods at prices lower than their normal value or production cost. This can hurt industries in the importing country. To protect against such unfair trade practices, countries impose anti-dumping duties, i.e., extra charges on the dumped goods. Let us see the different methods of trade restrictions practised globally.

Keywords

Tariff, Import Quota, Voluntary Export Restrain, Cartel, Infant Industry, Dumping

Discussion

3.2.1 Methods of Trade Restriction

In practice, almost all countries impose some form of restriction on the free flow of international trade. Since these restrictions pertain to the exchange of goods and services across borders, they are commonly referred to as trade policies or commercial policies. Although these measures are often justified in the name of promoting national welfare, they are typically driven by the interests of specific domestic groups that stand to gain from such protectionist policies. There are tariff and non-tariff restrictions on trade. Let us discuss them in detail.

3.2.1.1 Tariffs Barriers

Among the various types of trade restrictions, tariffs have historically been the most significant. A tariff is essentially a tax or duty levied on goods as they cross national borders. Tariffs can be categorised into two main types: import tariffs, where duties are imposed on goods brought into the country and export tariffs, where duties are applied to goods sent out of the country.

In general, import tariffs are more widely used and form the core of most discussions on trade policy. Export tariffs, while relatively rare in developed nations, are still used by many developing countries. For instance, countries like Ghana have taxed cocoa exports, and Brazil has applied duties on coffee. These nations often depend on export tariffs as a source of revenue, primarily because they are easier to collect at the point of export. Conversely, industrialised nations tend to use tariffs or other trade barriers not so much for revenue, but to protect specific domestic industries, especially those that are labour-intensive or vulnerable to foreign competition. These countries typically raise public revenue through income taxes rather than trade taxes.

Tariffs can be classified into three main types, viz., ad valorem tariff, specific tariff, and compound tariff. An Ad Valorem tariff is levied as a fixed percentage of the value of the imported commodity. Specific tariff is levied as a fixed amount per physical unit of the imported good, and a compound tariff is a combination of both ad valorem and specific tariffs. An ad valorem tariff of 10% on imported bicycles means the importer must pay ₹1,000 on a bicycle valued at ₹10,000, ₹2,000 on a bicycle valued at ₹20,000. A specific tariff of ₹1,000 per imported bicycle means the importer pays ₹1,000 for every bicycle, regardless of whether it costs ₹10,000 or ₹20,000. A compound tariff of 5% ad valorem plus ₹1,000 per unit means that on a ₹10,000 bicycle, the total duty would be ₹1,500 (₹500 as a percentage + ₹1,000 fixed). On a ₹20,000 bicycle, it would be ₹2,000 (₹1,000 as percentage + ₹1,000 fixed)

Different countries use different types of tariffs based on policy preferences. For example, the United States applies both ad valorem and specific tariffs with roughly equal frequency, whereas European countries tend to prefer ad valorem tariffs.

3.2.1.2 Non-Tariff Barriers

Tariffs are undoubtedly a significant barrier to international trade. However, they are not the only form of trade restriction. Other notable trade barriers include import quotas, voluntary export restraints, technical and administrative regulations, international cartel arrangements, dumping practices, and export subsidies. During the Great Depression of the 1930s, many countries began turning to these non-tariff barriers as alternatives to traditional tariffs. International organisations such as the General Agreement on Tariffs and Trade (GATT) and the World Trade Organisation (WTO) have consistently encouraged member nations to reduce tariff levels. As a result, both developed and developing countries have increasingly relied on non-tariff barriers (NTBs) to pursue their economic objectives and protect domestic interests. Let us see some of the non-tariff trade barriers in practice.

1. Import Quotas

An import quota refers to a government-imposed limit on the quantity or value of specific goods that can be imported from other countries within a defined time frame, usually one year. The quota may be expressed in physical units or monetary terms. For example, a government may permit the import of 60,000 colour television sets from Japan, or allow the import of TVs worth up to ₹50 crore from that country in a given year.

Various methods may be used to implement import quotas, such as:

i. Issuing import licenses to the highest bidders in an open market

ii. Allocating licenses through a tendering process to the highest offer

iii. Distributing licenses on a first-come, first-served basis

iv. Granting licenses to specific categories of importers, such as established importers, star trading houses, or actual users

v. Allocating import rights to government agencies, such as the State Trading Corporation

Objectives of Import Quota:

i. Governments impose import quotas for a variety of reasons, including:

ii. Protecting domestic industries by limiting foreign competition

iii. Correcting balance of payments deficits by reducing import volumes

iv. Conserving scarce foreign exchange reserves and allocating them to high-priority imports

v. Stabilising domestic price levels by regulating the inflow of goods

vi. Discouraging luxury consumption among affluent groups by limiting imports of non-essential goods

vii. Enhancing bargaining power in international trade by favouring countries that support reciprocal access for domestic goods

viii. Retaliating against the discriminatory trade policies of foreign nations

ix. Curbing speculative imports that anticipate changes in tariffs, exchange rates, or monetary policy

2. Voluntary Export Restraints (VERs)

Among the most significant non-tariff trade barriers are Voluntary Export Restraints (VERs). VERs arise when an importing country persuades an exporting country to voluntarily limit its exports of a particular product, often under the implicit threat of harsher trade restrictions. This typically occurs when rising imports pose a threat to the domestic industry of the importing nation.

Since the 1950s, countries such as the United States and members of the European Union have negotiated VERs with exporters like Japan, Korea, and other industrialising nations. These arrangements primarily targeted products such as textiles, steel, electronics, and automobiles, especially from industries in developed countries experiencing significant employment declines over the past few decades. Also referred to as "orderly marketing arrangements," VERs allowed industrialised nations to maintain the appearance of supporting free trade while protecting vulnerable domestic sectors The Uruguay Round of trade negotiations mandated the elimination of all existing VERs by the end of 1999 and prohibited the establishment of new ones. Despite this, the legacy and effects of VERs continue to be relevant in understanding trade policy.

Economically, VERs function much like import quotas. However, the key distinction is that VERs are managed by the exporting country, meaning that the associated economic gains (or "quota rents") benefit foreign producers rather than the importing country's government. A notable example is the 1981 U.S.-Japan agreement on limiting Japanese automobile exports to the United States. Similarly, in 1982, the U.S. negotiated VERs with major steel-exporting countries, capping imports at approximately 20% of the domestic steel market. Although these measures were estimated to have saved around 20,000 U.S. jobs, they also increased domestic steel prices by 20 to 30 per cent. When these agreements expired in 1992, they were quickly followed by demands for antidumping duties, sparking intense trade disputes between the U.S., Japan, the EU, and others.

Despite their intentions, VERs were often less effective than formal import quotas. Exporting countries, often agreeing reluctantly, would still strive to maximise gains by exporting higher-quality, higher-priced products within the quota limits. This phenomenon, known as product upgrading, was particularly evident in the case of Japanese automobile exports to the U.S. Furthermore, VERs usually involved only the major exporting countries, which left opportunities for smaller nations or third-country transshipments to partially offset the restrictions.

3. Technical, Administrative, and Other Restrictions

Another significant category of non-tariff barriers to international trade includes a wide range of technical, administrative, and regulatory measures. These encompass safety standards for automobiles and machinery, health and hygiene requirements for the production and packaging of food products, intellectual property laws such as patents and copyrights, as well as labelling requirements indicating the product's origin and composition. While many of these regulations serve legitimate public interest objectives, some are strategically implemented to protect domestic industries from foreign competition. For example, France's ban on advertising Scotch whisky and the United Kingdom's restriction on broadcasting foreign films on British television are disguised trade barriers designed to limit imports.

Trade restrictions can also arise from legislative provisions. A notable example is the Buy American Act of 1933, which mandated that U.S. government agencies give preferential treatment to domestic suppliers in their procurement processes. Similar policies exist in many countries, both developed and developing, where government procurement programs prioritise local products. Although the Tokyo Round of GATT negotiations led to an agreement encouraging equal opportunity for foreign suppliers in public procurement, implementation has been uneven.

Another form of trade distortion involves tax rebates for exporters, such as refunds on sales tax, excise duties, and value-added tax (VAT). This practice is common across both developing and developed countries and aims to enhance the competitiveness of their exporters in global markets. Additionally, trade is impeded by a range of other restrictive practices, including international commodity agreements, multiple exchange rate systems, opaque customs valuation and classification methods, complex and restrictive import licensing procedures, and local content requirements mandating the use of domestic inputs.

These measures are often designed to favour domestic industries at the expense of international trade partners. Although there is a growing consensus on the need to eliminate such barriers, significant progress remains elusive. Developed countries, particularly the United States, continue to enforce various trade restrictions to safeguard their economic interests. Meanwhile, developing nations often face pressure to liberalise their trade policies, leading to an imbalance in the global trading system. This disparity in expectations is a major obstacle to the dismantling of technical, administrative, and other regulatory trade barriers.

4. International Cartels

An international cartel is an association of producers or suppliers from different countries or sometimes even governments that agree to limit output and exports of a particular commodity. The objective is to maximise or enhance the collective profits of the group by influencing global supply and consequently, prices.

One of the most well-known examples of an international cartel is OPEC (Organisation of the Petroleum Exporting Countries). By curbing oil production and exports, OPEC was able to quadruple crude oil prices between 1973 and 1974. Another example is the now-defunct International Air Transport Association (IATA), which functioned as a cartel of major global airlines. Until 2007, IATA set international airfares and

coordinated airline policies through annual meetings. While domestic cartels are illegal in countries like the United States and strictly regulated in Europe, international cartels operate beyond the jurisdiction of any single nation, making it difficult to regulate or dismantle them effectively.

The success of an international cartel largely depends on certain conditions. It is more likely to be effective when there are only a few major global suppliers, the commodity is essential, and has few or no close substitutes. OPEC met these conditions quite well in the 1970s. In contrast, when a commodity has many global producers or readily available substitutes, organising a successful cartel becomes far more difficult. This explains the limited success or absence of cartels in commodities such as most minerals (other than oil and tin) and agricultural products (except for a few like sugar, coffee, cocoa, and rubber).

Despite the apparent advantages, cartels face internal pressures that often lead to instability. Since their power lies in restricting output and exports, individual members may find it tempting to exceed their quotas or undercut prices to gain market share effectively, "cheating" on the cartel agreement. This was evident in the 1980s when non-OPEC producers like the UK, Norway, and Mexico ramped up oil production in response to high prices, increasing global supply. Simultaneously, conservation efforts curbed demand growth. As a result, oil prices fell significantly throughout the 1980s and 1990s, demonstrating the fragile and often unstable nature of cartels, as predicted by economic theory.

5. Export Subsidies

Export subsidies are financial incentives provided by governments to support and promote a nation's exports. These may take the form of direct cash payments, tax exemptions, subsidised loans to domestic exporters, or low-interest loans to foreign buyers intended to facilitate the purchase of the exporting country's goods. In effect, these subsidies can function similarly to dumping, as they allow goods to be sold abroad at artificially low prices.

Despite being prohibited under international trade agreements, export subsidies continue to be employed both openly and through indirect or disguised measures by many countries. For instance, most major industrialised nations provide low-interest export financing to foreign buyers through specialised government-backed institutions. In the United States, this role is played by the Export–Import Bank, which supports around 2% of total U.S. exports. However, in countries such as Japan, France, and Germany, a significantly larger share of exports is supported through such subsidised credit schemes.

This practice has become a major source of trade friction, particularly between the U.S. and other industrialised countries. The magnitude of the subsidy can be estimated by comparing the interest rate charged on these government loans with the rate that would have applied through normal commercial lending. The difference represents the effective benefit or subsidy provided to the exporter or foreign buyer.

3.2.2 Dumping and Anti-Dumping Duties

Dumping occurs when a country exports goods at prices lower than their cost of production or below the price at which the same goods are sold in the domestic market. It is considered a significant form of unfair trade practice and can act as a trade barrier by distorting competition. Dumping is typically categorised into three types:

Persistent Dumping (International Price Discrimination): This involves the continuous practice by a domestic monopolist of selling a product at a higher price in the protected domestic market, while charging lower prices internationally to compete with foreign producers. This strategy maximises overall profits.

Predatory Dumping: Here, a country temporarily sells goods below cost in foreign markets to drive local competitors out of business. Once market dominance is achieved, prices are raised to monopolistic levels.

Sporadic Dumping: This refers to occasional instances of selling goods at lower prices abroad to offload excess inventories without disturbing domestic prices.

To counteract dumping, countries often implement antidumping duties or tariffs designed to neutralise the price advantage of dumped imports and protect domestic industries. While these duties are justified in cases of predatory dumping, distinguishing between the types of dumping can be difficult. Domestic industries frequently push for protection against any form of dumping, often leading to excessive trade restrictions and "harassment" of foreign exporters.

In some instances, consumers may benefit from dumped goods due to lower prices, even if domestic producers incur losses. Despite this, countries have historically taken firm action against dumping, viz. Japan has faced frequent accusations of dumping steel and electronics in the U.S., and the European Union has been criticised for dumping agricultural products, driven by farm support programs. In 1987, the U.S. imposed a 100% duty on $300 million of Japanese exports over semiconductor dumping issues. Between 1998 and 2003, the U.S. imposed duties on steel imports from various countries, including the EU, China, and Russia. Some of these were later overturned by the WTO. Antidumping duties have also been levied against products like Chinese solar panels, steel pipes, and tires in response to subsidised pricing. The United States and other industrial nations have also negotiated temporary export limits, such as the 7.5% annual cap on Chinese textile exports between 2005 and 2008, following the removal of textile quotas in 2004.

Disputes have arisen frequently at the World Trade Organisation (WTO), with countries filing cases regarding unfair antidumping measures. For instance, in 2010, the U.S. won a long-standing banana trade dispute with the EU, in 2011, the U.S. challenged China's antidumping duties on American chicken products, and in 2012, the U.S., Japan, and the EU filed a complaint against China for restricting exports of rare earth metals. The number of antidumping measures globally has grown substantially from 880 in 1998 to 1,683 in 2011. While about half of all investigations are dismissed, the other half typically result in duties or price adjustments by exporters.

Recap

- Countries impose trade restrictions called trade policies
- Tariffs are taxes on goods crossing borders
- Import tariffs are more common than export tariffs
- Tariffs protect domestic industries or raise revenue
- Three types of tariffs are advalorem, specific compound
- Non-tariff barriers include quotas, voluntary export restraints, and regulations
- Import quotas limit the quantity or value of imports
- Quotas can be allocated by licenses or tenders
- Voluntary export restraints are export limits agreed by exporting countries
- Technical regulations can act as hidden trade barriers
- International cartels control the supply to raise prices
- OPEC is a famous international cartel for oil
- Export subsidies are financial aids to promote exports
- Dumping is selling goods abroad at unfairly low prices
- Anti-dumping duties protect domestic producers from unfair dumping

Objective Questions

1. What is a tariff?
2. Which tariff is more commonly used, import or export?
3. Name the three types of tariffs.
4. What is a non-tariff barrier?

5. What does an import quota do?
6. How are import quotas often allocated?
7. What are voluntary export restraints?
8. Give an example of a technical trade barrier.
9. What is an international cartel?
10. Name a well-known international cartel.
11. What are export subsidies?
12. Define dumping in trade.
13. What is the purpose of anti-dumping duties?

Answers

1. A tax on imported or exported goods
2. Import tariff
3. Advalorem tariff, specific tariff, compound tariff
4. Trade restrictions other than tariffs
5. Limits the quantity or value of imports
6. By licenses or tenders
7. Export limits agreed upon voluntarily by exporting countries
8. Safety or health standards
9. A group of producers from different countries that collude to control supply, fix prices, or divide markets
10. OPEC
11. Financial incentives to promote exports
12. Selling goods abroad at unfairly low prices
13. To protect domestic producers from dumping

Assignments

1. Explain the differences between ad valorem, specific, and compound tariffs with examples.
2. Describe the main reasons why countries impose import quotas.
3. Discuss how voluntary export restraints differ from import quotas and their economic effects.
4. Analyse the role of technical and administrative regulations as trade barriers.
5. Examine the causes and effects of dumping and how anti-dumping duties address these issues.

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Suggested Reading

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UNIT 3

International Trade Organisations

Learning Outcomes

After completing this unit, the learner will be able to:

- comprehend on how GATT evolved into the formation of the WTO
- gain awareness of egional co-operations such as the European Union and SAARC
- understand the role of the Bretton Woods system in keeping a stable exchange rate system in the world

Prerequisites

The WTO is a global body that creates and enforces rules for international trade. It helps countries trade goods and services smoothly by reducing barriers like tariffs and resolving disputes between member nations. It also oversees agreements covering trade in goods, services, and intellectual property rights. GATT was an international agreement aimed at promoting free trade by lowering tariffs and other trade barriers. It introduced principles like Most Favoured Nation (MFN), which requires equal trade advantages for all member countries. GATT laid the foundation for the creation of the WTO.

The EU is a political and economic union of European countries that work together to promote peace, economic growth, and cooperation. It has common policies on trade, environment, and justice, and its main institutions make laws and manage shared programs. The EU uses a common currency called the euro among many of its members. SAARC is a regional group of South Asian countries formed to encourage cooperation and development in areas like trade, education, health, and disaster management. It aims to strengthen ties among its members and promote peace and economic progress in the region. The Bretton

Woods system was created after World War II to stabilise the world economy through fixed exchange rates linked to the US dollar, which was convertible to gold. It established the IMF and World Bank to support economic stability and development. The system ended in the early 1970s when fixed exchange rates collapsed. In this unit, we will discuss these international institutions and how they impact global trade.

Keywords

World Trade Organisation, General Agreement on Trade and Tariff, European Union, South Asian Association for Regional Cooperation, Bretton Woods System

Discussion

In July 1944, while World War II was still ongoing, representatives from the United States, the United Kingdom, and 42 other Allied nations convened in Bretton Woods, New Hampshire, to design a new international monetary system for the post-war era. The outcome was the creation of a structured global economic framework aimed at promoting stability and cooperation. The system proposed at Bretton Woods led to the creation of the International Monetary Fund (IMF), tasked with two principal objectives, viz. supervising member nations to ensure adherence to an agreed set of rules governing international trade and finance, and providing financial support to countries facing short-term balance-of-payments difficulties. The final blueprint for the new system largely reflected the American proposal, crafted by Harry D. White of the U.S. Treasury. It prevailed over the British proposal led by economist John Maynard Keynes.

The Bretton Woods system was essentially a gold-exchange standard. Under this arrangement, the United States pledged to maintain the price of gold at $35 per ounce and to exchange dollars for gold at that rate without restriction. Other countries fixed the value of their currencies in terms of the U.S. dollar, thus indirectly to gold and committed to intervening in foreign exchange markets to maintain their currency's exchange rate within ± 1% of the agreed par value against the dollar. Within this band, exchange rates were influenced by supply and demand. Nations were required to use their dollar reserves to stabilise their currencies when they neared the edges of the permitted fluctuation band. Until the late 1950s and early 1960s, when other major currencies became convertible, the U.S. dollar served as the sole intervention currency, effectively creating a gold-dollar standard.

3.3.1.1 Evolution of the Bretton Woods System (1947–1971)

Over the years, the Bretton Woods system evolved in response to changing global economic conditions. A key development came in 1962 when the IMF introduced the General Arrangements to Borrow (GAB), allowing it to borrow up to $6 billion from the Group of Ten industrialised nations comprising the U.S., U.K., West Germany, Japan, France, Italy, Canada, the Netherlands, Belgium, Sweden and Switzerland. This facility aimed to supplement IMF resources for assisting countries facing balance-of-payments crises. The GAB was renewed and expanded over time.

In the early 1960s, the IMF also began negotiating *standby arrangements* with member countries. These arrangements gave countries the right to borrow pre-agreed amounts from the Fund when needed. In return, countries paid a small commitment fee (0.25%) and an interest charge (5.5%) on the amount actually drawn. These arrangements served as a preemptive tool for countries facing potential destabilising capital flows. By 1971, the IMF's total resources had reached $28.5 billion, with the U.S. holding the largest share ($6.7 billion or 23.5%). The Fund had lent around $22 billion by that time, with $4 billion still outstanding. Additionally, borrowing limits were raised to 50% of a country's quota per year.

A major innovation was the introduction of Special Drawing Rights (SDRs) in 1967. SDRs were designed to supplement traditional reserves of gold, foreign exchange, and IMF reserve positions. Often referred to as "paper gold," SDRs are not backed by any commodity but are recognised as international reserve assets by IMF member countries. They are used exclusively in official transactions among central banks. SDRs carried charges and incentives to encourage both deficit and surplus countries to correct balance-of-payments imbalances. The initial allocation of $9.5 billion was distributed in three tranches (1970–1972). Later allocations followed in 1979–1981. Originally pegged to the U.S. dollar, the value of SDRs was later linked to a basket of major currencies.

Another notable development was the creation of the *gold pool* in 1961, led by the U.S. and other industrial nations. Its purpose was to maintain the official gold price at $35 per ounce by intervening in the London market. However, following the gold crisis of 1968, a two-tier system was introduced; gold continued to trade at $35 per ounce in official transactions, while its market price was allowed to fluctuate. This move aimed to prevent depletion of U.S. gold reserves. Despite structural weaknesses, the Bretton Woods system contributed to rapid postwar global growth, particularly from 1947 to the mid-1960s. Membership in the IMF expanded steadily, eventually including most countries worldwide.

3.3.1.2 Challenges of the Bretton Woods System

While the Bretton Woods framework theoretically allowed par value changes in the face of fundamental disequilibrium, in practice, industrial nations were reluctant to adjust their exchange rates until external pressure or speculation left them with no alternative. Deficit countries, like the United Kingdom, feared that devaluation would signal economic weakness. Surplus countries, such as West Germany, resisted

revaluation and preferred to amass reserves.Between 1950 and 1971, key industrial nations rarely adjusted their par values. The UK devalued only in 1967, France in 1957 and 1969, and West Germany revalued in 1961 and 1969. The U.S., Italy, and Japan maintained fixed parities. Canada diverged from IMF rules and adopted a floating exchange rate from 1950 to 1962, resuming it again in 1970. Meanwhile, developing countries frequently resorted to devaluations. This reluctance to adjust par values had two critical consequences. One is the loss of flexibility. The system lost its adjustment mechanism, undermining the ability to correct persistent imbalances. Another one is the speculative capital flows. The static par values created "one-way bets" for speculators. For example, expectations of a British pound devaluation led to capital flight from the UK, which eventually forced a devaluation in 1967. Conversely, expectations of a German revaluation triggered capital inflows, pressuring the mark upward.

Convertibility of the dollar into gold resumed shortly after World War II. By 1958, major European currencies were convertible for current account purposes in practice, and by 1961, formally. Japan's yen became convertible in 1964. Although capital account restrictions were permitted, destabilising capital flows, especially in the 1960s, became increasingly disruptive. The rise of Eurocurrency markets further amplified these speculative flows, setting the stage for the system's eventual breakdown.

Under the 1962, Trade Expansion Act and GATT auspices, the U.S. led the Kennedy Round of multilateral negotiations. These efforts significantly reduced average tariffs on manufactured goods to below 10%. However, many non-tariff barriers, particularly in agriculture and low-skill manufacturing like textiles, persisted, hindering access for developing nations. During this period, several regional economic integration initiatives emerged, the most notable being the European Economic Community (EEC), the precursor to the European Union (EU). The EU's success in economic coordination offered a striking contrast to the growing dysfunction within the global monetary system.

3.3.1.3 U.S. Balance-of-Payments Deficits and the Collapse of Bretton Woods

In the immediate postwar years (1945–1949), the U.S. ran significant balance-of-payments surpluses and extended Marshall Plan aid to Europe. Once Europe's recovery was complete by 1950, the U.S. began running modest deficits averaging $1 billion annually until 1957. These deficits helped rebuild international reserves in Europe and Japan during the dollar shortage era. However, from 1958 onward, U.S. deficits surged, averaging over $3 billion annually. This was driven by large capital outflows, including U.S. investments in Europe, and later, high inflation during the Vietnam War. By 1970, foreign official dollar holdings had risen to over $40 billion (up from $13 billion in 1949), while U.S. gold reserves dropped from $25 billion to $11 billion. As the dollar remained central to the international monetary system, the U.S. could not devalue its currency without threatening the system's stability. Instead, it adopted measures such as Operation Twist to manage interest rates and discourage capital outflows. Operation Twist is a monetary policy tool where a central bank simultaneously buys long-term government bonds and sells short-term government bonds to influence interest rates and

stimulate the economy. Foreign exchange market interventions were also done. Still, the U.S. continued to run large deficits. Foreign-held dollars soon far exceeded U.S. gold reserves, raising concerns over convertibility. To reassure holders, the U.S. issued Roosa bonds, dollar-denominated treasury bonds with an exchange rate guarantee. Yet these steps were insufficient.

Efforts by the U.S. to persuade surplus nations like Japan and West Germany to revalue their currencies failed. As global capital markets matured, speculation against the dollar intensified. On August 15, 1971, President Nixon suspended dollar-gold convertibility, effectively ending the Bretton Woods system. A temporary 10% import surcharge and wage-price controls were also introduced. While the dollar's role as an international currency gave the U.S. a unique advantage, i.e., seigniorage, it also imposed constraints limiting its ability to devalue or rely on monetary policy. This prompted growing resentment from surplus nations like France and Germany, who accused the U.S. of abusing its "exorbitant privilege." Ironically, even after the collapse of Bretton Woods, the dollar remained the dominant global currency, despite no longer being backed by gold.The collapse was precipitated by mounting U.S. deficits and a loss of confidence in the dollar by the late 1970s. In December 1971, the Smithsonian Agreement sought to restore order by devaluing the dollar (gold price raised from $35 to $38/oz), revaluing major currencies like the German mark and Japanese yen, and widening exchange rate fluctuation bands to 2.25%. President Nixon praised the agreement, but with a record U.S. deficit in 1972, pressure on the dollar resumed. In February 1973, the U.S. devalued again (gold price increased to $42.22/oz), though gold convertibility remained suspended.

In March 1973, faced with renewed speculation, major currencies were allowed to float freely. The European Community introduced the "snake in the tunnel," a joint float mechanism among its members, but this too unravelled by 1978. Thus, the managed floating exchange rate system emerged. The deeper, structural causes of the Bretton Woods collapse lay in the Triffin dilemma, the system relied on U.S. deficits to supply global liquidity, but persistent deficits eroded confidence in the dollar. Liquidity was essential to finance temporary deficits and support global trade, but too much of it fuelled inflation and instability. The IMF's attempt to ease this tension by creating SDRs in 1967 came too late, just as dollar over-supply was peaking. The imbalances in liquidity, limited mechanisms for adjustment, and declining confidence eventually made Bretton Woods' system collapse.

3.3.2 European Union

The European Union is a political and economic union of 27 European countries that work together as a unified entity. It operates through a standardised system of laws that apply across all member states in areas where they have agreed to act collectively. Out of the 27 EU members, 20 countries use the euro as their official currency. The remaining 8, viz. Bulgaria, Croatia, the Czech Republic, Denmark, Hungary, Poland, Romania, and Sweden retain their national currencies.

The EU was born out of a vision to prevent further conflicts in Europe following the devastation of World War II. Key milestones include Winston Churchill's speech in 1947

at the University of Zurich, which called for the creation of a "United States of Europe." Then, in 1951, six countries viz. Belgium, France, Germany, Italy, Luxembourg, and the Netherlands signed the Treaty of Paris, establishing the European Coal and Steel Community (ECSC). The Treaties of Rome in 1957 established the European Economic Community (EEC) and the European Atomic Energy Community (Euratom). The Merger Treaty was signed in 1965 and entered into force in 1967, unifying the ECSC, EEC, and Euratom under common institutions, forming the European Communities (EC).In 1985, the Schengen Agreement laid the foundation for passport-free movement, and in 1992, the Maastricht Treaty formally established the European Union, introducing European citizenship and a roadmap for a single currency. The euro was introduced in 1999–2002, becoming the currency for 19 EU countries. The Treaty of Lisbon restructured EU institutions and enhanced integration, and in 2016, the UK voted to leave the EU in a referendum, known as Brexit.

3.3.2.1 Key Objectives and Functions of the European Union

The key objectives of the EU are as follows:

i. Promote peace, values, and citizens' well-being

ii. Ensure freedom, security, and justice without internal borders

iii. Achieve sustainable development with balanced growth and environmental protection

iv. Fight social exclusion and discrimination

v. Promote scientific and technological advancement

vi. Strengthen cohesion and solidarity among member countries

vii. Respect cultural and linguistic diversity

viii. Maintain an economic and monetary union with the euro as its currency

Key functions of the union are given below:

i. Single Market: Enables free movement of goods, services, capital, and people.

i. Economic Integration: Common currency and coordinated fiscal policies to support economic cohesion.

ii. Trade Leadership: The EU is the world's largest trading bloc and a key player in global trade liberalisation.

iii. Humanitarian Aid: A top donor in global humanitarian assistance.

iv. Security & Diplomacy: Promotes democracy, human rights, and stability globally.

3.3.2.2 Structure of the European Union

Important bodies that form the key structure of the European Union are as follows:

a. **European Council:** The council defines the EU's overall political direction. Comprises heads of state/government, the President of the European Council, the President of the European Commission, and the High Representative for Foreign Affairs.

b. **European Parliament:** The members are directly elected by EU citizens, share legislative powers with the Council of the EU. However, its authority is more limited than national parliaments.

c. **Council of the European Union (Council of Ministers):** The council represents member state governments. Here, ministers from each country meet to adopt laws and coordinate policies.

d. **European Commission (EC):** This is an executive branch proposing legislation, enforcing treaties, and managing daily operations. It includes one commissioner per member state.

e. **High Representative for Foreign Affairs and Security Policy:** This is an individual position responsible for coordinating the EU's foreign, security, and defence policies.

f. **European Court of Justice (CJEU):** The institution ensures uniform interpretation and application of EU law.

g. **European Central Bank (ECB):** It governs monetary policy for eurozone countries and maintains financial stability. It is Headquartered in Frankfurt.

3.3.2.3 EU's Strategy in the Indo-Pacific and the Challenges

In October 2021, the EU released its Indo-Pacific strategy, highlighting resilient supply chains for building sustainable, secure global value chains. It aims to do partnerships or collaborate with like-minded countries in the region, engaging with Quad members, especially on climate, health, and technology. Its Global Gateway Initiative is a counter to China's Belt and Road Initiative aimed at enhancing global infrastructure partnerships.

With respect to challenges faced by the EU. It faces disintegration risks. The Lisbon Treaty allows member states to leave, as seen with Brexit. The Southern states face economic pressure and austerity, unemployment, and bailouts, leading to resentment. Also, despite strong R&D, the EU lags in commercialising key technologies. The rise in nationalism is another issue faced in the EU, where populist politics and scepticism about EU integration are on the rise. Here, strains from immigration have increased public dissatisfaction. Under geopolitical factors, the US retreat from multilateralism and assertive Russia challenge the EU's global position. Moreover, the UK's exit

highlights tensions around sovereignty, immigration, and economic autonomy.

The EU is a strategic partner for India, supporting peace, growth, and sustainable development. The relationship has matured from financial aid to strategic cooperation. The EU is one of India's largest trading partners, with trade exceeding USD 130 billion in 2022, making the EU one of India's largest trading partners.. India and the EU have a bilateral trade agreement, namely, the Bilateral Trade and Investment Agreement (BTIA). It was revived, aiming to reduce trade barriers and boost investment.

The ideas of regional cooperation in South Asia were discussed at the Asian Relations Conference (1947), the Baguio Conference (1950), and the Colombo Powers Conference (1954). However, the concrete proposal for SAARC came only in 1980 from Bangladesh's President Ziaur Rahman who proposed a framework to foster peace, stability, and collective progress in the region. This initiative culminated in the formal establishment of the South Asian Association for Regional Cooperation (SAARC) on 8 December 1985, in Dhaka, Bangladesh. The founding members included Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka. Afghanistan became the eighth member in 2007, though its participation has been suspended since 2021 due to political instability.

SAARC operates on key principles, which include sovereign equality of all member states, respect for territorial integrity and political independence, non-interference in internal affairs, and decision-making through mutual agreement and consensus. As of 2023, SAARC represents about 3% of the world's land area, nearly 21% of the global population, and over 5% of global GDP, with a combined output exceeding USD 5 trillion.

3.3.3.1 Objectives of SAARC

SAARC was created with the following primary objectives:

- To promote the welfare of the people of South Asia and improve their quality of life.
- To accelerate economic growth, social advancement, and cultural development.
- To foster mutual trust and self-reliance among member nations.
- To enhance collaboration across economic, social, cultural, technical, and scientific fields.
- To cooperate with other developing countries and international organisations for broader global integration.

3.3.3.2 Contemporary Relevance of SAARC

Despite internal challenges, SAARC continues to hold strategic value in many aspects.

1. **A Platform for Dialogue**: SAARC remains one of the few regional forums where India and Pakistan can engage diplomatically. While outcomes are often limited, periodic summits enable discussion on pressing regional issues such as poverty, environmental degradation, and climate change.

2. **Regional Solutions for Shared Challenges**: Transnational issues like terrorism, health pandemics, and natural disasters require coordinated regional responses. Notably, SAARC initiated a Covid-19 Emergency Fund in 2020, underlining its relevance in times of crisis.

SAARC has established mechanisms to deepen regional integration:

- **South Asian Free Trade Area (SAFTA)**: Established in 2004 and operational since 2006, SAFTA aims to reduce tariffs and promote free trade among member countries.

- **SAARC Agreement on Trade in Services (SATIS)**: Enforced since 2012, SATIS is designed to liberalise and boost intra-regional trade in services and encourage investment flows.

3. **Economic Integration Potential**: With a population nearing 1.8 billion and a collective GDP exceeding USD 4 trillion, South Asia is economically potent. Revitalising SAFTA and SATIS can unlock substantial intra-regional trade and investment.

4. **Reducing Dependence on External Actors**: Neglecting SAARC risks pushing member states toward external platforms like ASEAN or China-led initiatives such as the Belt and Road Initiative (BRI). It is important to strengthen SAARC to enable the region to chart an independent developmental course.

3.3.3.3 India's Contributions to SAARC

India has played a pivotal role in shaping and supporting SAARC. It has hosted three SAARC summits, the 2nd in Bengaluru (1986), the 8th in New Delhi (1995), and the 14th also in New Delhi (2007). Through technological and educational cooperation, India extended its National Knowledge Network (NKN) to countries like Bhutan, Sri Lanka, and Bangladesh, enhancing digital and educational collaboration. The 2017 launch of the South Asian Satellite (SAS) provided communication and meteorological services to SAARC nations. The South Asian University (SAU) is located in India. The SAU is established via an Inter-Governmental Agreement at the 14th SAARC Summit, which offers world-class education and research opportunities for students from all SAARC countries.

The country has also extended financial support via currency swaps. In 2019, India approved a USD 400 million 'Standby Swap' under the SAARC Currency Swap Arrangement to bolster financial cooperation during crises. India plays a great role in disaster management leadership. India hosts the Interim Unit of the SAARC Disaster Management Centre in Gujarat, which provides policy guidance, training, and technical support to mitigate disaster risks across the region.

3.3.3.4 Key Challenges Facing SAARC and Way Forward

SAARC's progress is impeded by several deep-rooted challenges. SAARC face Political Tensions and Bilateral Conflicts. India and Pakistan, the largest members, are frequently at odds over issues like terrorism and territorial disputes. These tensions culminated in India's boycott of the 19th SAARC Summit (2016), causing its indefinite postponement. Broader political instability in countries like Afghanistan, Pakistan, and Bangladesh also impedes consistent regional cooperation. The association also face Low Levels of Economic Integration. Intra-regional trade constitutes merely 5% of SAARC's total trade, starkly contrasting with 65% in the EU and 26% in ASEAN. Poor SAFTA implementation and lack of product diversification remain significant barriers.

The SAARC region has asymmetrical development and perception gaps. It also faces institutional weaknesses. SAARC's consensus-based decision-making model allows any single member to block progress. For instance, Pakistan has vetoed agreements like the SAARC Motor Vehicles and Railways Pacts. Moreover, SAARC excludes bilateral disputes from its scope, limiting its effectiveness. The influence of external powers is also an issue. China's expanding footprint via the Belt and Road Initiative (BRI), particularly through projects such as the China-Pakistan Economic Corridor (CPEC) and infrastructure investments in Sri Lanka (e.g., Hambantota Port), has complicated SAARC's regional dynamics.It is important that SAARC concentrates on boosting economic cooperation. It needs to prioritise full operationalisation of SATIS and expand the SAARC Development Fund to support initiatives in infrastructure, education, and health. Also, it is required to address political conflicts by introducing informal mediation mechanisms within SAARC. It can resort to promoting Track-II diplomacy by engaging academics, civil society, and business leaders to facilitate dialogue and reduce mistrust.

SAARC also needs to focus on non-contentious issues. Cooperation on disaster management, education, and public health areas that are politically neutral yet regionally impactful needs to be prioritised. Strengthening sub-regional initiatives like BBIN and BIMSTEC to complement SAARC's goals and build mutual trust through smaller-scale cooperation may be done. Moreover, it can tackle non-traditional security threats by enhancing cooperation in counter-terrorism, climate change mitigation, and disaster preparedness. Develop robust intelligence-sharing networks.

Institutional reforms on the unanimity rule by adopting a weighted voting system to prevent deadlocks can be one solution. Empowering the SAARC Secretariat with greater autonomy and adequate resources to implement decisions effectively is needed. It is also important to engage the youth of South Asia's demographic dividend through student exchange programs, scholarships, and youth-led development initiatives, especially through platforms like SAU.

The World Trade Organisation (WTO) is the only global body overseeing the rules of international trade between nations. It aims to ensure that international trade flows as smoothly, predictably, and freely as possible. The key roles of the WTO include administering trade agreements, where it implements and monitors a global system of trade rules based on WTO agreements, which are negotiated and ratified by most of the world's trading nations. It also acts as the Forum for Trade Negotiations. The forum provides a platform for member countries to negotiate trade agreements and discuss trade-related issues.

In the realm of international economic relations, particularly in international trade, the most significant development has been the establishment of the World Trade Organisation (WTO) in 1995. The WTO replaced the General Agreement on Tariffs and Trade (GATT), which had been in place since 1947. The General Agreement on Tariffs and Trade (GATT) was signed in 1947 by 23 countries, including India as a founding member. By 1994, the membership had expanded to 123 countries. GATT primarily aimed to promote international trade through the reduction of tariffs, the elimination of discriminatory trade practices, and the implementation of rules to combat protectionism.

A central principle of GATT was the Most Favoured Nation (MFN) clause. This clause stipulated that any advantage, favour, privilege, or immunity granted by a contracting party to any product originating in or destined for any country must be extended unconditionally to all other members. The MFN principle was designed to discourage bilateralism and foster multilateralism, facilitating the orderly expansion of world trade. However, GATT did permit the formation of customs unions or free trade areas, provided they promoted trade among member territories and did not create new barriers to trade with non-member countries. GATT envisioned a gradual reduction in tariffs and trade barriers, achieved through successive rounds of multilateral trade negotiations. Eight such rounds were conducted, viz. Geneva (1947), Annecy, France (1949), Torquay, UK (1950–51), Geneva (1956), Geneva (1960–61), Geneva (1964–67), Tokyo, Japan (1973–79), Punta del Este, Uruguay (1986–94) under GATT.

The eighth round, known as the Uruguay Round, was the most comprehensive and prolonged, lasting over eight years. It addressed complex issues such as agricultural subsidies, the Multi-Fibre Arrangement, market access, trade in services, anti-dumping measures, and intellectual property rights. Due to significant differences among member countries, the then Director-General of GATT, Arthur Dunkel, proposed a Draft Final Act, commonly known as the Dunkel Draft. This draft was presented as a comprehensive package, where agreement on the whole was mandatory for any part to be adopted. The Dunkel Draft sparked intense debate, especially in developing countries, where it was criticised for being heavily biased in favour of developed nations and potentially undermining national sovereignty. Despite strong opposition, developing countries eventually agreed to the Final Act under pressure, especially from the United States, fearing exclusion from the global trade system. The Final Act was signed on April 15, 1994. As noted by Muchkund Dubey, the supposed benefits for developing countries were largely a rationalisation of an unavoidable compromise.

3.3.4.1 Functions and Organisation of the WTO

The WTO came into force on January 1, 1995. Unlike GATT, which was a provisional legal arrangement, the WTO is a formal international organisation established as a permanent body to oversee international trade in goods, services, investment, and intellectual property rights. According to Article III of the WTO Agreement, the organisation has the following functions:

- To facilitate the implementation, administration, and operation of the Multilateral and Plurilateral Trade Agreements.
- To serve as a forum for multilateral trade negotiations among members.
- To administer the Dispute Settlement Understanding.
- To oversee the Trade Policy Review Mechanism.
- To promote greater coherence in global economic policymaking through cooperation with the International Monetary Fund and the World Bank.

3.3.4.2 WTO Agreements

The key agreements under the WTO can be categorised as follows:

1. **Agreement on Agriculture:** This agreement establishes a framework for long-term reform in agricultural trade and domestic policies. It aims to enhance market orientation in global agricultural trade. It includes commitments in three main areas viz. market access, domestic support, and export competition. Member countries are required to convert non-tariff barriers, such as quotas, into equivalent tariffs. These tariffs, along with existing ones, must be reduced by an average of 36% for developed countries over 6 years, and 24% for developing countries over 10 years. Least developed countries (LDCs) were exempted from any reduction commitments.

2. **Agreement on Textiles and Clothing (Multi-Fibre Arrangement):** This agreement phased out the import quotas on textiles and clothing that were in place since 1974 under the Multi-Fibre Arrangement. The phase-out occurred over a 10-year transition period, concluding on January 1, 2005, effectively eliminating all quotas on textiles and garments.

3. **Agreement on Market Access:** This agreement mandates member countries to reduce tariffs on both industrial and agricultural goods. The objective is to enhance international trade and ensure better access to domestic markets for foreign competitors.

4. **Agreement on TRIMs (Trade-Related Investment Measures):** The TRIMs Agreement promotes national treatment of foreign investments and prohibits quantitative restrictions. It identifies certain measures inconsistent

with GATT principles, such as requirements to use domestic inputs, export obligations for receiving imports or incentives, restrictions to balance foreign exchange inflows and outflows. All such measures had to be notified and eliminated within a specified timeframe.

5. **Agreement on TRIPs (Trade-Related Intellectual Property Rights):** Before TRIPs, intellectual property rights (IPRs) were governed by the Paris Convention of 1863, revised up to 1967, which allowed significant flexibility to national governments. Under the TRIPs Agreement, stringent global standards were enforced, particularly in favour of developed countries, due to concerns over inconsistent protection, especially in sectors like pharmaceuticals. TRIPs expanded its coverage to include patents (product and process), Copyrights and related rights, Geographical indications, Industrial designs, Layout designs of integrated circuits, and protection of undisclosed information. Product patents (especially for food, drugs, and chemicals) are now granted for 20 years, while copyrights are protected for 50 years. A transition period until January 1, 2005, was granted to developing countries to align their laws with TRIPs. India responded by passing the Patents (Amendment) Act, 2005, introducing product patents in pharmaceuticals and agriculture.

6. **Agreement on Services (GATS):** For the first time, trade in services such as banking, insurance, tourism, transport, and labour mobility was included in multilateral trade rules. The General Agreement on Trade in Services (GATS) provides a framework that promotes transparency and progressive liberalisation. It obligates member nations to grant most favoured nation status in services, maintain transparency, and commit to the gradual liberalisation of their service sectors.

7. **Dispute Settlement Body (DSB):** Under GATT, dispute resolution was slow and ineffective. The WTO's DSB addresses this by creating a binding and time-bound process for resolving disputes, aims to complete proceedings within about 12 months (or 15 months if appealed). Decisions of dispute panels are final and mandatory, enhancing the credibility and enforceability of trade rules.

3.3.4.3 Critical Review of WTO's Performance

Over the past two decades, the WTO has failed to deliver on many of the promised benefits for developing countries, including India. The system has consistently shown a structural bias in favour of developed countries, undermining the principle of equity in global trade.

a. Structural Inequality within the WTO

The WTO's structure inherently favours powerful nations. As economist Subir Gokarn noted, the content of agreements is often dictated by the bargaining power of developed countries, who use economic incentives and coercive threats to influence outcomes. Consequently, agreements are typically skewed in their favour. Two important aspects of inequality include the single undertaking approach and uniform TRIPs standards.

Single Undertaking Approach refers that all WTO members had to accept every Uruguay Round agreement, regardless of their development status. This denied developing nations the flexibility or extended timelines they needed to comply, placing them at a disadvantage. The Uniform TRIPs standards refer that all members are required to implement IPR regimes at the level already achieved by developed countries, placing a disproportionate compliance burden on developing economies.

The WTO's Dispute Settlement Body, while more efficient than GATT's system, is still inherently biased toward wealthier countries. Legal experts argue that the system functions best only when equally powerful countries are in dispute. The mechanism only allows individual retaliation, not collective action, against violators. It does not provide compensation to affected members. This discourages weaker nations from initiating or pursuing disputes against stronger trading partners, leading to silence in the face of unfair practices.

b. Trade-Related Intellectual Property Rights (TRIPs)

The Uruguay Round of trade negotiations significantly strengthened the protection of intellectual property rights (IPRs) such as patents, copyrights, and trademarks. This shift largely favours developed countries and multinational corporations (MNCs), as the TRIPs Agreement prioritises the rights of patent holders. This protection contradicts the principles of competition and liberalisation by legalising monopolies and creating trade barriers. The following points show how TRIPS affect India.

1. Pharmaceuticals and Product Patents: India's Patent Act of 1970 allowed only process patents for drugs, enabling local companies to develop alternative methods to produce medicines without needing the original patent. This kept drug prices low and helped the Indian pharmaceutical industry thrive, increasing its market share and making India a major exporter of generic medicines. However, TRIPs requires the adoption of product patents (from January 1, 2005), which restricts Indian companies from manufacturing patented drugs, posing a challenge to both affordability and local industry growth.

2. Agriculture and Patents on Plant Varieties: In India, agricultural R&D and seed production are mainly publicly funded, ensuring affordable seeds for farmers and supporting food security. Under TRIPs, MNCs can patent plant varieties, shifting control from public institutions to corporations. This may restrict access to genetic materials, weaken local research, and endanger food security by making farmers dependent on foreign companies for seeds.

3. Patents on Microorganisms: TRIPs also allows patenting of life forms such as bacteria, fungi, and genes, which play a key role in agriculture, medicine, and industrial biotechnology. MNCs already hold or are rapidly acquiring patents in these areas, potentially dominating future biotechnology-based industries. This poses a serious threat to India's indigenous capabilities and control over essential resources.

4. Trade-Related Investment Measures (TRIMs): TRIMs were designed to eliminate restrictions on foreign investors in developing countries, favouring the interests of developed nations. While some exceptions are allowed for balance of payments concerns, they are temporary. TRIMs can disrupt domestic strategies for self-reliant

growth and strain foreign exchange reserves. The Tenth Five-Year Plan rightly notes that TRIMs do not guarantee more foreign investment but may compromise the quality of such inflows.

5. Services and GATS: The General Agreement on Trade in Services (GATS) opens up trade in sectors like banking, insurance, and telecom areas where developed nations are already strong. This benefits them more than developing countries. Although India has a large pool of skilled professionals, the movement of workers is heavily restricted by developed nations, limiting India's potential benefits under GATS.

6. Non-Tariff Barriers (NTBs) : Despite promises to reduce NTBs, developed countries continue to impose complex and opaque measures that restrict exports from countries like India.

7. Agreement on Agriculture (AoA): The AoA allows developed countries to maintain high subsidies and tariffs while limiting the policy space of developing nations. Key concerns include that historical subsidies during 1986–88 became the baseline, benefiting rich countries, whereas developing countries face strict limits on new subsidies. In the case of developed nations, they use "Green Box" and "Blue Box" subsidies that are exempt from reduction but still distort trade. High tariffs on key agricultural goods (e.g., cereals, dairy, and meat) in developed countries hinder exports from the developing world.

Recap

- Bretton Woods (1944) created a new monetary system
- The IMF was formed to support trade and currency stability
- Gold-dollar system fixed currency rates to the U.S. dollar
- SDRs introduced to supplement reserve assets
- Bretton Woods collapsed (1971) due to U.S. deficits and inflation
- The European Union (EU) is a group of 27 European countries that work together politically and economically
- EU started after World War II to promote peace, with key steps like the Maastricht Treaty (1992) and the euro currency launch
- The EU has common goals like peace, justice, environmental protection, and economic growth
- Major bodies like the European Council, European Parliament, and European Commission manage EU's aws and policies

- The EU is active in the Indo-Pacific region, faces challenges like Brexit, nationalism, and economic gaps, and is a strategic partner of India
- SAARC was formed in 1985 to promote peace and development in South Asia
- SAARC includes 8 member countries, with Afghanistan joining in 2007
- SAARC focuses on cooperation in trade, health, education, and disaster relief
- India has supported SAARC through summits, satellite launches, and financial aid
- SAFTA and SATIS aim to boost trade and investment among member countries
- WTO replaced GATT in 1995 to manage global trade rules
- GATT focused on reducing tariffs and trade barriers
- WTO covers goods, services, and IPRs, unlike GATT
- TRIPs and GATS agreements brought major changes for developing countries
- Disputes in the WTO are binding, unlike the older GATT system

Objective Questions

1. What organisation replaced GATT in 1995?
2. What clause in GATT required equal trade advantages for all member countries?
3. Which WTO agreement deals with intellectual property rights?
4. What WTO body ensures the binding resolution of trade disputes?
5. Which WTO agreement covers trade in sectors like banking, insurance, and tourism?
6. What is the official currency used by 19 EU member states?
7. Which treaty formally established the European Union in 1992?

8. Where is the headquarters of the European Central Bank located?

9. Which 1985 agreement laid the foundation for passport-free movement in the EU?

10. When was SAARC formally established?

11. Which country proposed the idea of SAARC?

12. Which country became the 8th member of SAARC in 2007?

13. What is the aim of the SAARC Agreement on Trade in Services (SATIS)?

14. Where is the South Asian University located?

15. Which two key institutions were created as a result of the Bretton Woods Conference?

16. Who proposed the idea of a global clearing union with a new currency called 'bancor'?

17. What was the fixed price of gold under the Bretton Woods gold-dollar standard?

18. What was introduced in 1967 to supplement traditional reserve assets?

19. Which event marked the formal end of the Bretton Woods system?

Answers

1. WTO.
2. MFN (Most Favoured Nation).
3. TRIPs.
4. DSB (Dispute Settlement Body).
5. GATS.
6. Euro.
7. Maastricht Treaty.
8. Frankfurt,
9. Schengen Agreement.

10. 1985.

11. Bangladesh.

12. Afghanistan.

13. Liberalise trade in services.

14. New Delhi.

15. The International Monetary Fund (IMF) and the World Bank.

16. John Maynard Keynes.

17. $35 per ounce.

18. Special Drawing Rights (SDRs).

19. President Nixon's suspension of dollar-gold convertibility on August 15, 1971.

Assignments

1. Explain the structure and purpose of the Bretton Woods System. What role did the IMF play?

2. Discuss the reasons behind the collapse of the Bretton Woods System in 1971.

3. Discuss the major differences between GATT and WTO in terms of structure, legal status, and coverage of trade.

4. Analyse the impact of the TRIPs Agreement on developing countries, especially in the fields of agriculture and pharmaceuticals.

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BLOCK

Balance of Payments

Components of Balance of Payments

Learning Outcomes

After completing this unit, the learner will be able to:

- discuss the significance of the balance of Payments (BoP)
- know the main components of the BoP
- aware about the structure and classification of BoP entries into credits and debits
- Use BoP data to assess country's external economic position

Prerequisites

In today's global economic world, the concept of the 'closed economy' is an abstract textbook concept. However, we can now provide more realism by looking at the 'open economy' that is directly affected by the global marketplace. An open economy is a nation which has economic relationships with the rest of the world. When an economy is open, it is necessary to record the international transactions of that country. The Balance of Payment (BOP) is a systematic record of all the international economic transactions between countries.

In this unit, we discuss the monetary aspects of international trade. When countries trade with each other, they pay foreign currencies or foreign exchange. Every country has its own currency and monetary system. The Balance of Payment account is one of the fundamental tools for depicting and accounting the international economic transactions. It is the summary accounting statement of the dealings of a country with the rest of the world. The Balance of Payment of a country provides an overall view of its international economic position. It is very helpful for the policy makers and the business communities.

Keywords

Balance of Trade, Balance of Payment, Double Entry Book Keeping System, Current Account, Capital Account, Credit and Debit

Discussion

4.1.1 Meaning of Balance of Payments

The Balance of Payments (BOP) is a statistical record of all the economic transactions of the residents of a country with the residents of the rest of the world during a particular period of time, usually a year. An international economic transaction refers to the exchange of a good, service or asset, for which payment is required between the residents of one country with the residents of other countries. However, gifts and certain other transfers for which no payment is required are also included in a country's BOP. Thus, it is a flow of goods, services, gifts and assets between the residents of one country and residents of other countries during a year. Hence, the BOP is a flow concept, not a stock concept. By contrast, a country's international investment position (IIP), which records assets and liabilities at a point in time, is a stock concept.

The BOP is one of the important statistical statements of a country. It reveals how many goods and services the country has been exporting and importing, and whether the country has been borrowing from or lending money to the rest of the world. In addition, the BOP statistics report whether the central bank has increased or reduced its foreign exchange reserves. Knowledge of the BOP informs the government about the country's international position and assists in formulating monetary, fiscal, and trade policies.

4.1.1.1 Transactions in Balance of Payments

All transactions in the BOP have a monetary impact. These economic transactions can be carried out by individuals, firms, and governments in other countries, and they involve the transfer of ownership of money, assets, goods, or services. Economic transactions in the BOP can be divided into the following categories as follows :

1. Visible items
2. Invisible items
3. Capital transfer
4. Unilateral transfer.

1. Visible Items

Visible items include all types of physical goods exported and imported. It is also known as tangible goods. For example, the exports and imports of textiles, machines, electronic items, vehicles, etc.

2. Invisible Items

Invisible items include the exports and imports of services such as transport services, medical services, financial services, etc. It is also known as intangible assets.

3. Capital Transfer

Capital transfers, including the transfer of ownership of fixed assets or the forgiveness of liabilities are classified as capital transfers. For example, conditional grants for specific capital projects, debt forgiveness, investment grants, transferring cash to enable the recipient to acquire another asset, etc.

4. Unilateral Transfer

Unilateral transfer refers to the payment or aid from one nation to another that does not require anything in return. For example, gifts, donations, personal remittances, foreign aid, humanitarian aid, etc.

4.1.1.2 Balance of Payments and Balance of Trade

In international economics, two important concepts are Balance of Payments (BOP) and Balance of Trade (BOT). Though both deal with a country's transactions with the rest of the world, they are different in scope and meaning. The Balance of Trade refers only to the export and import of goods, while the Balance of Payments is a broader term that includes trade in goods, services, capital flows, and financial transfers. Understanding the difference between BOP and BOT helps us to better analyse a country's economic position in the global market. Let us explain the difference between the BOT and BOP.

Basis	Balance of Payments (BOP)	Balance of Trade (BOT)
Definition	BOP is a comprehensive record of all economic transactions (goods, services, income, and capital) between a country and the rest of the world.	BoT refers to the difference between the value of a country's exports and imports of goods only.
Scope	Broader scope – includes current account, capital account, and financial account.	Narrow scope – includes only visible trade (export and import of goods).

Includes Services	Yes, includes services like tourism, banking, insurance, etc.	No, it does not include services.
Includes Capital Flows	Yes, includes foreign investments, loans, remittances, etc.	No, capital flows are not included.
Accounts Balanced?	Always balances in accounting terms (as every credit has a matching debit).	May show a surplus or deficit.
Example	Export of software, remittance from abroad, FDI inflow, import of oil, etc	Export of tea worth ₹10 crore and import of machinery worth ₹15 crore.

4.1.2 Structure of Balance of Payments

The Balance of Payments (BOP) is a systematic record of all economic transactions between the residents of a country and the rest of the world during a specific period, usually a calendar year. It includes all international economic interactions such as trade in goods and services, capital flows, and financial transfers. The BOP serves multiple purposes: it helps nations assess their international financial position and formulate appropriate monetary, fiscal, and trade policies; it enables governments to analyse economic conditions and make informed decisions in consultation with trade partners; and it provides vital information for banks, businesses, and individuals engaged in international finance. The BOP is broadly divided into three main components. They are:

1. Current Account
2. Capital Account
3. Financial Account

4.1.2.1 Current Account

The current account of a country encompasses various transactions, including trade in goods and services, primary income, and secondary income. The major components of goods and services includes the following

1. General merchandise on a balance of payments (BOP) basis

2. Net exports of goods under merchanting

3. Non-monetary gold

4. Manufacturing services on physical inputs owned by others

5. Maintenance and repair services

6. Transport, travel, construction, insurance, and pension services

7. Financial Services

8. Charges for the use of intellectual property

9. Telecommunication, computer, and information services.

10. Business services

11. Personal, cultural, and recreational services, etc

The second component of the current account is primary income, which includes the compensation of employees, investment income, and other primary income. The investment income consists of direct investment income from equity and investment fund shares, as well as interest and portfolio investment, which refers to investment income from equity, investment fund shares, and interest. Other investments and reserve assets include income from equity, investment fund shares, and interest.

Another component of the current account is secondary income, which includes income from financial corporations, non-financial corporations, NPIHs (Non-profit Institutions serving Households), and general governments.

4.1.2.2 Capital Account

The capital account in the Balance of Payments (BOP) records all international transactions where the residents of a country either change their assets/claims or liabilities with the rest of the world. In this account, when money comes into the country from abroad (capital inflow), it is recorded as a credit. When money goes out of the country to foreign nations (capital outflow), it is recorded as a debit. The capital account mainly includes two components as follows

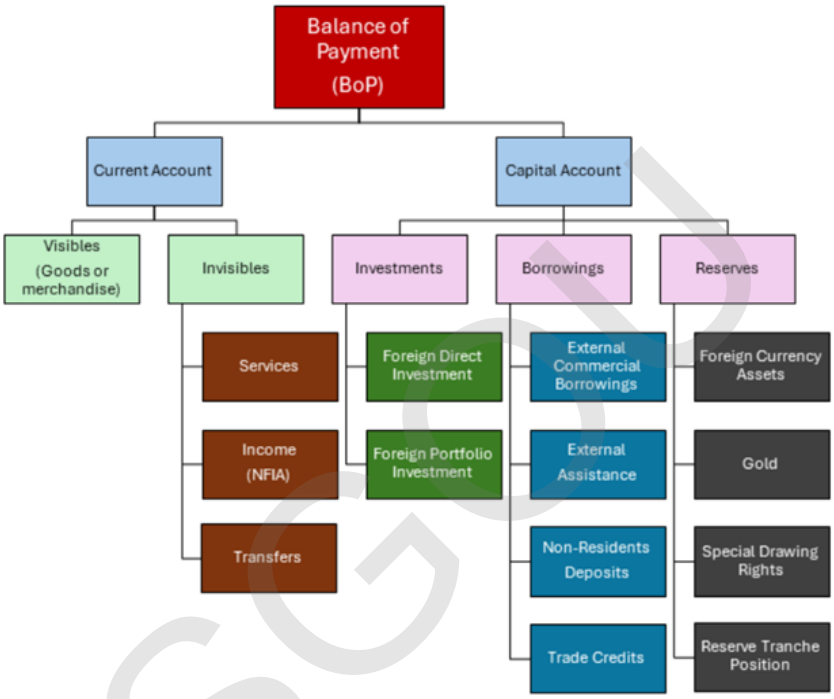
1. Gross acquisition/disposals of non-produced, non-financial assets, and

2. Capital transfers

The first component includes things like natural resources, contracts, leases and licenses, and marketing assets. The second component, capital transfers, includes activities like debt forgiveness and other capital transfers by government, financial and non-financial corporations, households, and non-profit institutions serving households (NPISHs).

4.1.2.3 Financial Account

The financial account in the Balance of Payments includes transactions related to international ownership of financial assets and liabilities. It covers direct investment, portfolio investment, financial derivatives, and employee stock options. This account also includes reserve assets such as monetary gold, Special Drawing Rights (SDRs), reserve positions in the International Monetary Fund (IMF), and foreign currency assets held by the central bank. In addition, it records other investments like currency and deposits, insurance and pension funds, trade credit and advances, loans (including external assistance), and banking capital.



Recap

1. BOP records all economic transactions between residents and the rest of the world, usually on a yearly basis
2. Transactions include goods (visible), services (invisible), capital transfers, and unilateral transfers such as remittances or aid
3. BOT refers only to trade in goods, whereas BOP covers goods, services, capital flows, and transfers
4. The structure of BOP consists of the Current Account, the Capital Account, and the Financial Account

5. The Current Account records trade in goods and services, primary income such as wages and investment income, and secondary income such as remittances and transfers

6. The Capital Account includes non-produced assets as well as capital transfers

7. The Financial Account records transactions involving ownership of assets and liabilities

8. The Financial Account including FDI, portfolio investments, and reserves

Objective Questions

1. What does BOP stand for?
2. Is the Balance of Payments a flow or a stock concept?
3. What does the BOP record?
4. Whose transactions does BOP include?
5. What does BOP help governments formulate?
6. Name the four categories of BOP transactions.
7. Which items are also known as tangible goods?
8. Which items are called intangible assets?
9. Give one example of a capital transfer.
10. What does a unilateral transfer include?
11. What does BOT stand for?
12. BOT refers to the difference between which two items?
13. Give one example of a BOP transaction.
14. Name the three main components of BOP.
15. Which BOP account records trade in goods and services?

16. Which BOP account records debt forgiveness?

17. Which account records FDI inflow?

18. Which account includes SDRs and foreign exchange reserves?

Answers

1. Balance of Payments
2. Flow concept
3. All economic transactions between residents of a country and the rest of the world
4. Residents of a country and residents of other countries
5. Monetary, fiscal, and trade policies.
6. Visible items, Invisible items, Capital transfers, Unilateral transfers
7. Visible items
8. Invisible items
9. Debt forgiveness / investment grants
10. Gifts, donations, remittances, foreign aid
11. Balance of Trade
12. Value of exports and imports of goods
13. Export of software / FDI inflow / remittances
14. Current Account, Capital Account, Financial Account
15. Current Account
16. Capital Account
17. Financial Account
18. Financial Account

Assignments

1. Explain the meaning of Balance of Payments (BOP). Discuss its economic significance for a country's international position and policy-making.

2. What are the main components of the Balance of Payments? Explain the structure of BOP with suitable examples.

3. Differentiate between Balance of Payments (BOP) and Balance of Trade (BOT). Why is BOP considered a broader concept?

4. What is the Capital Account in the Balance of Payments? Explain its main elements.

5. "Balance of Payments is a flow concept, not a stock concept." Explain this statement with reference to its transactions.

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UNIT 2

Balance of Payments

Learning Outcomes

After completing this unit, the learner will be able to:

- distinguish between BOP equilibrium and BOP disequilibrium
- understand the importance of maintaining BOP equilibrium
- identify the causes of BOP disequilibrium
- recognise the measures used to correct BOP disequilibrium

Prerequisites

Suppose our nation is facing a crisis situation, or you are planning to invest your resources in another country. In such cases, how can you assess the health of an economy? One of the most reliable indicators is the Balance of Payments (BOP), which acts as a vital health indicator for every nation. The BOP is one of the most important macroeconomic indicators of a country's economic stability and international position. It provides a comprehensive record of all economic transactions between the residents of a country and the rest of the world during a specific period. These transactions reflect the country's performance in trade, services, income flows, capital movements, and official reserves. This unit introduces you to the importance and stability of the BOP and explains the causes and corrective measures for its disequilibrium through real-world examples and insights.

Keywords

Balance of Payments, Current Account, Capital Account, Financial Account, BOP Equilibrium, BOP Deficit, BOP Surplus, Devaluation

Discussion

4.2.1 Equilibrium in the Balance of Payments

The Balance of Payments (BOP) is a systematic record of all economic transactions between the residents of a country and the rest of the world during a specific period, usually a year or a quarter. It includes all inflows and outflows of goods, services, income, and capital. BOP can be expressed as:

$$BOP = Total\ Receipts\ (Credits) - Total\ Payments\ (Debits)$$

This record helps to assess the international economic position of a country by showing whether it is earning more from the rest of the world or spending more abroad. A balanced BOP reflects economic stability, while a surplus or deficit indicates external strength or weakness in trade and capital flows. The structure of the Balance of Payments (BOP) is broadly divided into three main accounts:

1. Current Account
2. Capital Account
3. Financial Account

The Current Account records day-to-day transactions involving the export and import of goods (called visible trade), services such as banking, insurance, and tourism (invisible trade), as well as income flows like wages, interest, and dividends. It also includes current transfers such as remittances, gifts, and grants.

The Capital Account covers capital transfers and transactions related to non-produced, non-financial assets, such as patents and copyrights. This account is usually smaller in size compared to the others.

The Financial Account deals with investments and loans between countries. It includes direct investment (FDI), portfolio investment (in stocks and bonds), other investments like loans and banking capital, and reserve assets such as foreign exchange reserves and gold. Together, these accounts provide a comprehensive view of a country's international economic interactions.

The Balance of Payments (BOP) is said to be in equilibrium when a country's autonomous receipts are equal to its autonomous payments. In this case, the inflows and

outflows of foreign exchange through exports, imports, services, income, and capital transactions are balanced, and the country does not need to borrow or use its foreign exchange reserves. This indicates a stable and sustainable international economic position. A BOP deficit occurs when autonomous payments exceed autonomous receipts, meaning the country is spending more foreign exchange than it is earning. This results in a shortage of foreign currency, which must be covered through borrowing, use of reserves, or foreign aid. A persistent deficit often signals over-dependence on imports, weak exports, or rising foreign debt. Conversely, a BOP surplus arises when autonomous receipts exceed autonomous payments, implying the country is earning more foreign exchange than it is spending. This leads to the accumulation of reserves and reflects a strong external position, often driven by high exports, remittances, or foreign investments.

4.2.1.2 Importance of Maintaining BOP Equilibrium

Maintaining BOP equilibrium means ensuring that a country's foreign receipts and payments are balanced, particularly in the current and capital/financial accounts. It plays a vital role in ensuring currency stability, as balanced external transactions help avoid sharp fluctuations in the exchange rate and maintain investor confidence. A balanced BOP reflects the economic strength and credibility of a country in the global market, showing that it is managing its international transactions responsibly. This enhances the country's reputation, making it a trustworthy partner in trade and finance. Let us explain the importance of BOP equilibrium:

1. BOP equilibrium also helps to attract foreign investment, as stable external accounts signal lower economic risks to global investors. When investors see stability, they are more likely to invest in domestic industries and infrastructure.

2. BOP equilibrium prevents excessive dependence on foreign loans, which can otherwise increase a country's external debt and long-term interest obligations. By maintaining balance, the country reduces its vulnerability to external shocks.

3. BOP stability supports sustainable growth in trade and investment, as consistent inflows and outflows promote long-term economic planning and resource allocation. This helps to maintain confidence among domestic businesses and international stakeholders.

4. BOP equilibrium avoids BOP crises, which could otherwise lead to inflation, currency devaluation, or reserve depletion. Such crises can destabilise the economy, forcing the country to take emergency measures like IMF bailouts or strict import restrictions.

5. BOP equilibrium avoids issues of BOP deficits. Persistent BOP deficits are dangerous as they create foreign exchange shortages, making it hard to pay for essential imports like fuel or food. They can also lead to the accumulation of external debt, placing pressure on future generations to

repay it. In such situations, the country may be forced to borrow heavily or devalue its currency, which can hurt public confidence and worsen inflation. Therefore, achieving and maintaining BOP equilibrium is crucial for long-term economic stability and self-reliance.

4.2.2 BOP Disequilibrium

Disequilibrium in the Balance of Payments refers to a situation where a country's autonomous receipts and payments are not equal, resulting in either a deficit or a surplus in its international transactions. It indicates an imbalance in trade, services, income, or capital flows and can lead to foreign exchange shortages, reserve depletion, or excessive borrowing if not corrected in time. Let us explain the causes and corrective measures of BOP disequilibrium.

4.2.2.1 The Causes of Disequilibrium in BOP

The following are the major reasons for BOP disequilibrium, grouped under economic, social, and political factors:

A) Economic Factors

a. **Inflation:** High inflation in a country increases the cost of production and wages, making exports more expensive and less competitive. As exports decline, imports may rise, resulting in a BOP deficit.

b. **Exchange Rate Fluctuations:** When a country's currency appreciates, its exports become costlier and imports cheaper. This reduces export earnings and increases import expenditure, contributing to BOP disequilibrium.

c. **Population Growth:** Rapid population growth increases domestic consumption and reduces export surplus. As a result, the country may face an adverse BOP situation.

d. **Cyclical Business Conditions:** In capitalist economies, trade cycles like the depression reduce foreign demand for exports. This decline in exports can create a BoP imbalance.

e. **Fall in External Demand:** A reduction in global demand for a country's goods and services leads to a fall in exports, causing disequilibrium in the BOP.

f. **Import of Services:** Developing countries often import expensive capital and professional services from developed nations. These costly imports can create a significant burden on the BOP.

g. **Cost of Diplomatic Functions:** Newly independent nations often establish embassies and missions abroad to build diplomatic ties. The large expenditure involved in these activities can negatively affect the BOP.

h. **Rise in National Income:** When national income increases, people's purchasing power grows, often leading to higher imports. This can result in a trade deficit and a BOP imbalance.

i. **International Borrowing and Lending:**Large-scale international borrowing or lending may create imbalances. Heavy external borrowing can lead to repayment pressures, while large lending or grants can reduce foreign exchange reserves.

B) Social Factors

In many developing or underdeveloped countries, people often try to imitate the consumption patterns of citizens in developed countries. This leads to an increase in demand for imported luxury goods, even if the country lacks the resources to support such imports. As a result, the volume of imports rises disproportionately to exports, worsening the trade deficit and leading to BOP disequilibrium. Moreover, a lack of awareness about domestic alternatives and a preference for foreign brands further intensifies the problem.

C) Political Factors

Political instability, weak governance, and uncertain economic policies can discourage foreign investment and reduce export competitiveness, thereby affecting the BOP negatively. Non-cordial international relations, trade embargoes, or diplomatic tensions can disrupt trade flows and lead to reduced access to international markets. Additionally, major political changes such as partition, unification, or civil unrest can divert resources toward security and administrative restructuring, resulting in reduced focus on foreign trade and growing deficits in the BOP. Foreign aid and grants may also be withheld due to geopolitical conflicts, aggravating the situation further.

4.2.2.2 Measures to Correct Disequilibrium in BOP

When there is disequilibrium in BOP, adjustment can be brought about automatically through price and income changes or by adopting certain policy measures like export promotion, monetary and fiscal policies, devaluation or direct controls. These measures are summarised below.

1. **Automatic correction:** under flexible exchange rates, disequilibrium min BOP is automatically solved by the forces of demand and supply. When there is a deficit there will be automatic depreciation of the country's currency, leading to an increase in exports and a decrease in imports, thereby leading to equilibrium in the BOP.

2. **Deliberate Measures:** Deliberate Measures are intentional economic policies taken by authority to correct a BOP disequilibrium they are :

a. *Devaluation*: When a country devalues its currency, its exports become cheaper and imports tend to become more expensive. As a result, there is a shift in expenditures, which can help eliminate disequilibrium.

b. *Direct Controls*: The government can also adopt some direct controls, such as fixing quotas, tariffs, exchange controls, etc., to correct disequilibrium in the BOP.

c. *Capital movements*: A deficit in BOP can be corrected or financed by capital inflows. When capital is perfectly mobile, a small rise in the domestic interest rate can bring a large inflow of capital.

Table 4.2.1 Distinction between BOP Equilibrium and Disequilibrium

Point of Difference	**BOP Equilibrium**	**BOP Disequilibrium**
Definition	Occurs when autonomous receipts equal autonomous payments.	Occurs when there is an imbalance between autonomous receipts and payments.
Foreign Exchange Position	No shortage or excess of foreign exchange.	Leads to either a shortage (deficit) or surplus of foreign exchange.
Economic Stability	Indicates external economic stability and a sound trade position.	Indicates external economic imbalance and possible economic stress.
Need for Adjustment	No need for corrective measures.	Requires policy intervention to restore balance.
Impact on Reserves	Foreign exchange reserves remain stable.	May lead to reserve depletion (deficit) or accumulation (surplus).
Investor Confidence	Enhances confidence among global investors.	It may reduce investor confidence, especially in the case of a deficit.
Example Situation	Exports and imports are balanced with capital flows.	Persistent trade deficit or excessive borrowing from abroad.

Recap

- BOP equilibrium occurs when a country's autonomous receipts equal autonomous payments.
- Indicates external economic stability and avoids the need for borrowing or using reserves.
- A BOP deficit arises when a country's foreign payments exceed its receipts, while a surplus occurs when receipts exceed payments.
- Deficits may lead to borrowing or reserve depletion, whereas surpluses increase foreign reserves.
- Devaluation is the deliberate downward adjustment of a country's currency value in relation to other currencies.
- Devaluation makes exports cheaper and imports more expensive, helping to reduce BOP deficits.
- Direct controls are government-imposed restrictions like tariffs, import quotas, and exchange controls used to manage BOP imbalances.
- Direct controls aim to reduce imports and conserve foreign exchange.
- Capital movements refer to the flow of funds for investment, trade, or production between countries.
- Under capital movement help finance BOP deficits or influence exchange rates.
- Changes in exchange rates affect the relative prices of exports and imports.
- A stronger currency makes imports cheaper and exports costlier, potentially causing BOP disequilibrium.
- BOP Equilibrium: Autonomous Receipts = Autonomous Payments
- BOP Deficit: Autonomous Receipts < Autonomous Payments
- BOP Surplus: Autonomous Receipts > Autonomous Payments

Objective Questions

1. Write the formula for BOP.
2. What does a balanced BOP reflect?
3. Name the three main accounts of BOP.
4. Which account records FDI and portfolio investment?
5. What does a BOP deficit indicate?
6. What does a BOP surplus indicate?
7. What does BOP equilibrium help to attract?
8. What crises can BOP equilibrium help avoid?
9. What does BOP disequilibrium refer to?
10. How does inflation affect BOP?
11. What happens when a country's currency appreciates?
12. What may happen to countries that borrow heavily in the long run?
13. Under which exchange rate system does automatic correction occur?
14. What happens when a country devalues its currency?
15. Give one example of a direct control used to correct disequilibrium.

Answers

1. BOP = Total Receipts (Credits) – Total Payments (Debits)
2. Economic stability
3. Current Account, Capital Account, Financial Account
4. Financial Account
5. Excess spending over earnings, shortage of foreign exchange

6. Strong external position and accumulation of reserves
7. Foreign investment
8. Crises like inflation, currency devaluation, or reserve depletion
9. An imbalance between autonomous receipts and payments
10. Makes exports expensive, leading to deficit
11. Exports fall and imports rise
12. Temporary surplus turning unstable in the long run
13. Flexible exchange rates
14. Exports become cheaper, imports costlier
15. Tariffs / quotas / exchange controls

Assignments

1. What is BOP equilibrium and disequilibrium? Discuss the causes of disequilibrium ?
2. Evaluate the importance of maintaining BOP equilibrium in a developing economy.
3. Discuss the economic, social, and political factors that cause BOP disequilibrium.
4. Describe the measures that can be taken to correct BOP disequilibrium.
5. Why is BOP considered an indicator of a country's economic health? Explain with suitable arguments.

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UNIT 3

Devaluation and BoP

Learning Outcomes

After completing this unit, the learner will be able to:

- know the causes of BOP deficits and surpluses
- explain the concept of devaluation
- discuss the relationship between BOP and devaluation

Prerequisites

Have you ever wondered how countries buy and sell goods or services from each other, or how currencies like the Indian Rupee or US Dollar are exchanged in this process? This is where the concepts of international trade and foreign exchange come into play. We know that international trade refers to the exchange of goods and services between different countries. For example, when India exports spices or software to the USA or imports crude oil from the Middle East, it is participating in international trade. This trade helps countries access resources they donot have, benefit from specialisation, and improve the standard of living for their people. This is done through a system called the Balance of Payments (BOP). It acts like a financial diary that helps policymakers understand whether the country is earning more than it is spending, and whether any corrective action is needed to maintain economic stability. Without such tracking, a country could face problems like rising debt, falling currency value, or depletion of foreign reserves.

To support this exchange, foreign exchange becomes essential. It is the system through which one country's currency is converted into another's, for instance, converting Indian Rupees to US Dollars when purchasing goods from the USA. Foreign exchange plays a key role in settling payments between countries.

Now, why is it important for a country like India to track its economic transactions with the rest of the world? When a country consistently faces a BOP deficit, meaning it is spending more foreign exchange than it earns, it may need to take certain corrective measures. One such tool is devaluation. To fully understand this process, it is also important to know about exchange rate systems, the methods by which the value of a currency is determined in relation to others. Some countries follow a fixed exchange rate system. Others use a flexible (or floating) exchange rate system. All these mechanisms; foreign exchange, devaluation, and exchange rate systems, are closely linked to how a country manages its balance of payments. Understanding these concepts is essential to analyse the external sector of the economy and to assess how a nation interacts with the global financial system.

Keywords

Balance of Payments (BOP), Currency Devaluation, Fixed Exchange Rate, Elasticity Approach, J-Curve Effect

Discussion

4.3.1 Devaluation and Balance of Payments

The Balance of Payments (BOP) is a record of all economic transactions between a country and the rest of the world. It includes the money a country earns from exports, spends on imports, and the flow of capital through investments, loans, and remittances. When a country imports more than it exports, it faces a BOP deficit. A BOP deficit means that more foreign currency is going out than coming in. To correct this problem, the government may use a policy tool called devaluation. Devaluation refers to the official reduction in the value of the country's currency in terms of foreign currencies. It happens under a fixed exchange rate system. Under the fixed exchange rate system where the government or central bank controls the currency value. When a currency is devalued, exports become cheaper for foreign buyers, and imports become more expensive for domestic consumers. This encourages more exports and reduces imports. As a result, the country starts earning more foreign exchange and spending less, helping to improve its BOP position.

Let us understand how devaluation works with an example. Suppose before devaluation, 1 US dollar was equal to ₹50. An Indian product costs ₹500. When a foreign buyer wants to buy it, they pay ₹500 ÷ 50 = $10. After devaluation, 1 US dollar becomes equal to ₹60. Now, the same product costing ₹500 will be priced at ₹500 ÷ 60

= $8.33. So, for the foreign buyer, the product becomes cheaper. This means exports from India will increase because more people in other countries will now buy Indian goods. On the other hand, let us look at imports. Suppose a foreign product costs $10. Before devaluation, Indians pay $10 × ₹50 = ₹500. But after devaluation, they will pay $10 × ₹60 = ₹600. So, the foreign product becomes more expensive in India. As a result, imports will reduce because people in India may stop buying costly foreign goods. Now think about the country's Balance of Payments (BOP). Before devaluation, let us say India was earning $100 million from exports but spending $150 million on imports. So, there was a BOP deficit of $50 million. After devaluation, exports increase to $130 million and imports fall to $120 million. Now, India has a BOP surplus of $10 million. This means devaluation helped improve the BOP by increasing exports and reducing imports.

4.3.1.1 Devaluation in India

India has used devaluation in the past during times of economic crisis to improve its Balance of Payments and boost foreign exchange reserves. The first major devaluation happened in 1966. On 6th June 1966, the Indian government officially devalued the rupee. The exchange rate changed from 1 USD = ₹4.76 to 1 USD = ₹7.50. This means the value of the Indian rupee fell sharply. The main reasons for this move were problems in the Balance of Payments (BOP), pressure from foreign aid agencies, and rising inflation inside the country.

The second major devaluation happened in 1991, when India faced a severe economic crisis. The country had very low foreign exchange reserves, enough to pay for only about two weeks of imports. To manage the crisis, the government devalued the rupee in two steps in July 1991. The exchange rate changed from 1 USD = ₹17.90 to 1 USD = ₹24.50. This devaluation was part of a larger programme of economic reforms and liberalisation, which opened up the Indian economy to the global market.

4.3.1.2 Objectives and Purpose of Devaluation

1. Correcting Balance of Payments (BOP) Deficit

One of the main reasons for devaluation is to correct a BOP deficit. A BOP deficit means the country is spending more foreign exchange (on imports and other payments) than it is earning (from exports and inflows). Devaluation helps by reducing the value of the local currency, which makes exports cheaper and imports costlier. This change improves the country's trade balance and helps reduce the BOP deficit.

2. Boosting Exports

Devaluation helps a country to increase its exports. When the value of the currency is lowered, goods and services produced in the country become cheaper for foreign buyers. This encourages people in other countries to buy more of those products. As a result, export earnings increase, which helps the country earn more foreign exchange.

3. Discouraging Imports

Another important purpose of devaluation is to reduce the volume of imports. After devaluation, imported goods become more expensive for local buyers. Because of the higher price, people and businesses in the country may choose to reduce their use of imported goods and instead buy locally made alternatives. This helps save foreign exchange and protect domestic industries.

4. Improving Foreign Exchange Reserves

When a country exports more and imports less due to devaluation, it starts earning more foreign currency. This leads to a growth in foreign exchange reserves; the stock of international currencies held by the central bank. These reserves are very important because they help the country to pay for essential imports (like oil and medicines),repay international loans, maintain confidence in the economy thus devaluation helps improve the country's overall financial position.

4.3.1.3 Effects of Devaluation

The primary aim of devaluation is to make exports cheaper and imports costlier, thereby improving the country's Balance of Payments (BOP). While it can offer several benefits in the short term, devaluation also brings a range of negative consequences. Below is a discussion on the positive and negative effects of devaluation with clear explanations.

Positive Effects of Devaluation

1. Improvement in Balance of Payments (BOP)

Devaluation helps correct a country's BOP deficit by making exports cheaper and imports more expensive. As a result, foreign buyers are encouraged to purchase more goods from the country, while domestic consumers reduce the import of costlier foreign goods. This helps to narrow the trade gap and strengthen the external sector of the economy.

2. Boost to Export Sector

One of the immediate outcomes of devaluation is increased competitiveness of the country's exports in the global market. Since the value of the local currency falls, Indian goods become cheaper to foreign buyers. This encourages higher demand for Indian products abroad, leading to growth in export volumes and earnings.

3. Reduction in Imports

With devaluation, the cost of imported goods rises. This discourages the excessive purchase of foreign products, especially non-essential goods. As a result, domestic industries face less competition from foreign brands, and there is a decrease in the outflow of foreign currency.

4. Encouragement to Domestic Industry

As imports become expensive, local consumers and businesses turn towards domestic products. This shift creates opportunities for Indian producers to expand production, generate employment, and contribute to industrial growth. It promotes self-reliance and stimulates the manufacturing sector.

5. Increase in Foreign Exchange Reserves

Higher exports due to devaluation lead to increased foreign exchange earnings. This helps build the country's foreign reserves, which can be used to finance essential imports, repay foreign debt, and stabilise the economy during crises.

Negative Effects of Devaluation

1. Inflationary Pressures

A major downside of devaluation is its tendency to fuel inflation. When imports become costlier, especially essential items like petroleum, machinery, and medicines, the overall price level in the economy rises. This imported inflation affects all sectors and reduces the value of money.

2. Higher Cost of Living

The increase in prices resulting from inflation leads to a rise in the cost of living. ordinary citizens, particularly the poor and middle classes, find it harder to meet daily expenses. Their real income declines, and purchasing power weakens, creating social and economic stress.

3. Rising Burden of Foreign Debt

Devaluation increases the cost of repaying foreign loans. Since these debts are usually denominated in foreign currency, a weaker rupee means the government and companies have to spend more local currency to repay the same amount. This can increase fiscal pressure and reduce funds available for development.

4. Economic Uncertainty and Instability

Frequent or poorly managed devaluation can create uncertainty in the economy. It may reduce investor confidence, encourage capital flight, and cause fluctuations in stock markets. Businesses may postpone investments due to fear of exchange rate volatility and policy unpredictability.

5. Temporary Relief if Structural Issues Persist

While devaluation may offer short-term relief, it does not solve deeper structural problems like low productivity, inefficient industries, or policy bottlenecks. Without broader reforms in trade, infrastructure, and industry, the benefits of devaluation may not be sustainable in the long run.

4.3.1.4 Theoretical Approaches to Devaluation and Balance of Payments Adjustment

We know that devaluation is a crucial policy tool used to address persistent Balance of Payments (BOP) deficits. It is often employed to stimulate exports, discourage imports, and thereby restore external equilibrium. Over the years, economists have developed several theoretical frameworks to explain how devaluation affects a country's trade balance and overall macroeconomic stability. These approaches help policymakers understand the short-run and long-run consequences of currency devaluation and guide decisions on when and how to implement it effectively. The key theoretical models used to analyse the impact of devaluation on the BOP include:

1.Elasticity Approach (Marshall-Lerner Condition)

The Elasticity Approach to the Balance of Payments adjustment was introduced by Joan Robinson in the 1930s. It explains how changes in the exchange rate affect a country's trade balance through their impact on exports and imports. The central idea is that when a country's currency is devalued (or depreciates), exports become cheaper to foreign buyers and imports become costlier for domestic consumers. This change in relative prices can improve the trade balance if the sum of the price elasticities of demand for exports and imports is greater than one, this is known as the Marshall–Lerner condition.

The approach focuses on price effects rather than income effects. If the demand for exports is highly price-elastic, a small fall in export prices (due to depreciation) will significantly increase export quantity. Similarly, if the demand for imports is elastic, an increase in their prices will sharply reduce import quantity. The key equation representing the Marshall–Lerner condition is:

$$Ex + Em > 1$$

where, Ex = Price Elasticity of Demand for Exports, and Em = Price Elasticity of Demand for Imports.

If this condition is met, a currency depreciation will improve the trade balance; if not, it may worsen it in the short run.

2. Absorption Approach (Alexander's Approach)

The Absorption Approach, developed by Sidney Alexander, explains changes in a country's Balance of Payments (BOP) by studying the relationship between national income and domestic spending (absorption). Absorption refers to the total domestic expenditure on goods and services, including consumption (C), investment (I), and government spending (G)."Therefore:

$$A = C + I + G$$

where, A stands for absorption.

According to this approach, the balance of trade (B) can be expressed as:

$$B = Y - A$$

where,

B = Balance of trade

Y = National income (output)

A = Absorption (domestic spending)

If national income (Y) is greater than absorption (A), the country will have a trade surplus ($B > 0$). This is because the country produces more than it spends domestically, and the extra output is exported. On the other hand, if absorption (A) is greater than national income (Y), the country will have a trade deficit ($B < 0$), meaning it spends more than it produces, leading to higher imports. The Absorption Approach suggests that to improve the BOP, a country must either increase national income (Y) or reduce domestic spending (A), so that output exceeds expenditure.

3. J-Curve Effect

A general consensus is that export and import elasticities are lower in the short run than in the long run, in which case, the Marshall-Lerner condition may only hold in the medium to long run. The possibility that, in the short run, the Marshall – Lerner condition holds over the longer run leads to the phenomenon of what is known as "J curve effect". It is the tendency of a country's trade balance to first deteriorate before improving as a result of a devaluation of the country's currency.

In a very simple sense, J-curve is a trend line or plotted line that shows a preliminary loss immediately followed by a dramatic gain. When we plot this pattern of activity in a graph, it would follow the shape of a capital letter "J". So this effect is known as J curve effect.

If the consumers and producers do not respond immediately to changes in prices of traded goods and services resulting from shifts in exchange rate, the devaluation of the currency may actually leads to worsening in the current account balance in the short run. However, with the passage of time, the price effect does have an impact on both consumers and producers, the current account deficit begin to narrow. The lagged adjustment response to the current account balance to devaluation (depreciation) of the currency traces out a locus that resembles the letter 'J'. Hence, it is referred to as J curve. The J curve is shown below.

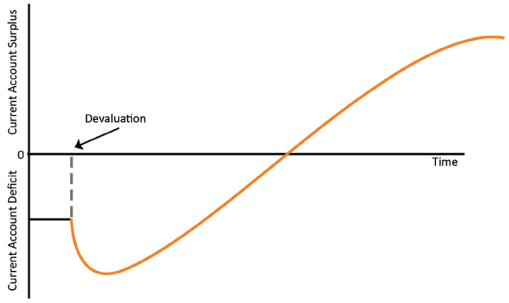

Fig. 4.3.1 J -Curve Effect

The idea underlying the J curve effect is that in the short run export volumes and import volumes do not change much so that price effect outweighs the volume effect leading to deterioration in the current account. However, after a time lag, export volume starts to increase and import volume start to decrease and consequently, current account deficit starts to improve and eventually moves into surplus. Thus, the J curve implies that with the current account in deficit, depreciation of the currency would presumably tend to removal of deficit. However, if the consumers and producers are unresponsive in the short run, depreciation actually leads to short run worsening of the current account before it ultimately gets better. The longer both groups remain unresponsive to the change in exchange rate, the deeper is the J curve response. Such an adjustment response is of concern to policy makers since it adds to the uncertainty already present in the market.

Recap

- Devaluation is the official reduction in the value of a country's currency under a fixed exchange rate system
- Devaluation helps correct BOP deficits by making exports cheaper and imports more expensive
- India devalued the rupee in 1966 and 1991 during BOP crises to boost exports and stabilise the economy
- Both episodes aimed at strengthening foreign exchange reserves and were followed by broader economic reforms
- The main objectives of devalution include correcting BOP deficits, boosting exports, reducing imports, and increasing foreign exchange reserves
- The objective of devaluation also aims to promote domestic industry and ensure macroeconomic stability
- Devaluation improves the BOP, encourages exports, reduces imports, and boosts domestic production
- Devalution also helps increase foreign currency reserves
- However, devaluation can lead to inflation, a higher cost of living, and an increased foreign debt burden
- Devaluation may also create economic instability and offer only temporary relief without deeper reforms

- The Elasticity Approach (Marshall-Lerner) shows that devaluation improves the BoP only if the total price elasticity of exports and imports is greater than one
- The Elasticity Approach focuses on how demand responds to price changes due to currency devaluation
- The Absorption Approach states that for devaluation to improve the BoP, the country must produce more than it spends
- The Absorption Approach emphasises managing domestic absorption - consumption, investment, and government expenditure
- The Monetary Approach views BOP imbalance as a monetary issue arising from excess money supply
- Devaluation must be accompanied by a tight monetary policy to be effective
- The J-Curve Effect shows that immediately after devaluation, the BOP may worsen before it improves. Over time, the trade balance recovers as prices adjust and the quantities of imports and exports respond

Objective Questions

1. What is meant by the deliberate downward adjustment of a country's currency value against foreign currencies under a fixed exchange rate system?
2. In which years did India witness major currency devaluation?
3. Devaluation helps correct which economic problem?
4. Which approach states that the sum of price elasticities of exports and imports must be greater than one for devaluation to be effective?
5. Which approach emphasises that devaluation will improve the Balance of Payments only if national income rises relative to domestic absorption?
6. What refers to the short-run worsening and long-run improvement of the trade balance after devaluation?

Answers

1. Devaluation
2. In 1966 and 1991
3. Balance of Payments deficit
4. Elasticity Approach (Marshall-Lerner condition)
5. Absorption Approach
6. J-Curve effect

Assignments

1. Explain the role of devaluation in correcting a Balance of Payments deficit.
2. Discuss the positive and negative effects of devaluation on an economy.
3. Describe the Elasticity and Absorption Approaches to BOP adjustment.
4. Explain the significance of the J-Curve effect in devaluation policy.
5. What were the causes and consequences of India's devaluation in 1991?

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Foreign Exchange 1

UNIT 1

Foreign Exchange Market

Learning Outcomes

After completing this unit, the learner will be able to:

- understand the instruments of foreign exchange
- explain the key functions of foreign exchange markets
- analyse how demand and supply determine equilibrium exchange rates

Prerequisites

Suppose Riya from India wants to buy a phone made in the US and John from the US wants to buy tea from India. Riya has Indian Rupees (INR), but the American company wants US Dollars (USD). Similarly, John has US Dollars, but the Indian seller wants Rupees. Therefore, both Riya and John need to exchange their currencies to make these purchases. This currency exchange happens in the foreign exchange market, where people can buy and sell different currencies.

Just like fruits in a market have prices based on how much people want to buy and how much is available, currencies also have prices. This price is called the exchange rate. When the amount of currency demanded equals the amount supplied, we get the equilibrium exchange rate.

Knowing this basic idea helps us understand how the foreign exchange market works and how the value of one currency is decided in terms of another. Let us look into the concepts like foreign exchange markets and the equilibrium rate of exchange from this unit.

Keywords

Foreign Exchange Markets, Exchange Rate, Flexible Exchange Rate System, Hedging, Speculation

Discussion

5.1.1 Foreign Exchange Markets

Every country in the world uses its own currency, such as the Indian Rupee in India or the US Dollar in the United States. These currencies are usually accepted only within their own countries. So, when countries trade with each other, or even invest money, they need a system to convert one currency into another. This is where the Foreign Exchange Market, also known as the Forex Market, comes in. It is the system or mechanism that helps in making payments between countries that use different currencies.

All international transactions are recorded in the Balance of Payments (BOP) of a country. These transactions involve either receipts (money coming in from other countries) or payments (money going out to other countries). Since payments are made in different currencies, the foreign exchange market plays a key role in converting one currency into another so that international trade and investment can happen smoothly.

The term foreign exchange can be understood in two ways. In a narrow sense, it refers to foreign currencies themselves, like euros, pounds, or yen. In a broad sense, foreign exchange means the entire system of international payments. This includes the rules and regulations for making payments across countries, the methods of payment, such as through banks or online systems, and the institutions involved, like commercial banks and central banks.

Foreign exchange also includes all types of claims or rights to receive money in a foreign currency. These could be funds held in foreign bank accounts, bills of exchange, or cheques that are written in a foreign currency and are payable in another country.

5.1.1.1 Instruments of Foreign Exchange

When payments are made between countries for trade, services, or financial transactions, they are done through various tools or instruments of foreign exchange. These instruments help to make international payments secure, smooth, and reliable. Some of the main instruments used in the foreign exchange market include foreign bills of exchange, telegraphic transfers, bank drafts, and letters of credit. Let us understand each of them.

1. **Foreign Bills of Exchange:** They are one of the most commonly used instruments in foreign trade. This is a written order where the drawer (usually the exporter or seller) instructs the drawee (the importer or buyer) to pay a

fixed amount either to the drawer or a third party (called the payee). The payment can be made either immediately (on demand) or after a specified period (at a fixed date). Once the importer accepts this bill, the exporter can sell it to someone in their own country who wants to make payments abroad. The person who buys the bill will then collect the payment from the foreign debtor. This process helps to facilitate payments across borders.

2. **Telegraphic Transfers (TT):** They are used when money needs to be sent quickly from one country to another. Here, the bank of importer deposits the required amount and then sends a message (telegraphic order) to the exporter's bank in the other country, requesting them to transfer the money into the exporter's account. The amount is transferred in the currency of the exporter's country. This is a fast and reliable way of transferring funds internationally.

3. **Bank Drafts:** They are written orders issued by a bank to pay a specific sum of money to a particular person or organisation. The importer (debtor) gets a bank draft from his local bank and sends it to the exporter (creditor). The exporter then collects the money from the bank or its branch in his own country. A bank draft is a secure way of making international payments because it is backed by a bank.

4. **Letters of Credit (LC)**: It is another important instrument used in foreign exchange. A letter of credit is issued by the importer's bank, promising that it will pay the exporter the agreed amount as long as the exporter meets certain conditions, like providing shipping documents. It allows the exporter to draw a bill or cheque on the importer's bank. A revocable letter of credit can be changed or cancelled by the importer, while an irrevocable letter of credit cannot be changed without the consent of both parties. Exporters usually prefer irrevocable letters of credit, as they offer more payment security.

Besides these main instruments, international payments can also be made through other methods like gold, home currency, personal cheques, and international money orders. However, these are less commonly used today due to the efficiency and safety offered by modern banking instruments.

5.1.1.2 Functions of the Foreign Exchange Markets

The foreign exchange market plays a crucial role in the global economy by facilitating the exchange of currencies between different countries. The primary function of this market is the transfer of funds or purchasing power from one nation and currency to another. This process is mainly conducted through electronic transfers and increasingly via the Internet, allowing for quick and efficient international transactions.

1. Transfer of Purchasing Power

One of the key functions of the foreign exchange market is to enable the transfer of purchasing power between countries. This is essential for international trade, investments, and tourism. When an individual, firm, or government in India needs to pay for goods, services, or investments in another country, they must exchange Indian

rupees (INR) for the foreign currency required for the transaction. For example, an Indian exporter receiving payment in U.S. dollars (USD) will convert them into rupees through a commercial bank, which in turn may sell those dollars to an Indian firm that needs them for imports or investments in the United States.

2. Provision of Credit

The foreign exchange market plays a vital role in providing trade credit, which is essential for financing international trade. Since goods and services take time to be shipped and delivered, exporters and importers rely on credit arrangements to facilitate smooth transactions.

Typically, an exporter extends a credit period of 90 days to the importer for making payments. However, to avoid liquidity constraints, the Indian exporter can approach a commercial bank and discount the bill of exchange or export receivables with the bank's foreign exchange department. This process, known as bill discounting, allows the exporter to receive immediate payment from the bank at a discounted rate, while the bank later recovers the full amount from the importer when the payment is due.

This mechanism helps in ensuring a continuous flow of funds in international trade and reduces financial risk for exporters. It also enables importers to manage their working capital efficiently.

3. Clearing House for Foreign Exchange Transactions

Indian commercial banks act as clearinghouses by matching foreign exchange demand and supply among their customers. If one bank has an excess supply of a foreign currency, it sells the surplus to another bank that requires it through the interbank market or via foreign exchange brokers. This process enhances market liquidity and prevents inefficiencies. Without such a system, buyers and sellers would have to find each other manually, which would be highly time-consuming and inefficient.

4. Exchange Rate Determination and Balance of Payments Adjustment

The foreign exchange market plays an important role in determining exchange rates. When India's demand for foreign exchange exceeds its foreign exchange earnings, the rupee's value may depreciate, making imports more expensive and exports more competitive. Similarly, if there is an excess supply of foreign currency, the rupee may appreciate, making imports cheaper but reducing export competitiveness. If exchange rates were not allowed to adjust freely, commercial banks would face difficulties in meeting foreign currency demands. In such cases, they would need to borrow foreign exchange from the Reserve Bank of India (RBI).

5. Hedging and Speculation

The foreign exchange market provides facilities for hedging and speculation. Hedging is a strategy used to protect against unexpected changes in exchange rates. When businesses trade internationally, they deal with different currencies, which can change in value over time. To avoid financial losses due to these fluctuations, they use financial instruments like forward contracts and currency futures.

A forward contract is an agreement between two parties to exchange a specific amount of currency at a fixed exchange rate on a future date. This helps businesses lock in a stable rate and avoid losses if the currency value changes. Similar to forward contracts, currency futures are standardised agreements traded on financial exchanges. They allow businesses and investors to fix an exchange rate for future transactions, in order to reduce uncertainty.

For example, an Indian exporter expecting payment in US dollars in the future may worry that the value of the dollar could drop. By using a forward contract or currency futures, the exporter can lock in today's exchange rate, which will ensure that to receive a predictable amount of Indian rupees when the payment arrives.

Speculators trade currencies not to protect against risks but to make a profit from changes in exchange rates. They buy a currency when they expect its value to rise and sell when they expect it to fall. Unlike hedging, speculation does not involve the actual trade of goods or services; it is purely focused on financial gain.

6. The Role of the U.S. Dollar, Euro, and Indian Rupee

The U.S. dollar plays a unique role in the foreign exchange market. It is not only the national currency of the United States but also serves as an international currency and a vehicle currency. This means that the dollar is used in transactions that do not involve the United States. For instance, an Indian importer may pay a Japanese exporter in U.S. Dollars instead of Rupees or Yen. Similarly, the Euro, the common currency of the European Monetary Union (EMU), has become the second most important vehicle currency in global transactions. The Indian rupee (INR) is increasingly being used for trade settlements with countries like Russia and the UAE, reducing dependency on the dollar.

7. Global Integration and 24/7 Market Operations

The foreign exchange market has become truly global and seamless, operating 24 hours a day due to electronic transfers and time zone differences. When banks close in one region, trading continues in another. For example, as banks in Mumbai and New Delhi end their business day, trading shifts to Singapore, Hong Kong, Sydney, and Tokyo. When these markets close, trading moves to London, Paris, Zurich, Frankfurt, and Milan, before opening again in New York and Chicago. This continuous cycle ensures that foreign exchange transactions are executed in real-time, making the market highly liquid and efficient.

Thus, the foreign exchange market serves multiple essential functions. It facilitates the transfer of funds between nations, provides credit for international trade, acts as a clearinghouse, determines exchange rates, supports hedging and speculation, and ensures global market integration. With technological advancements and electronic transfers, foreign exchange markets have evolved into a truly global system. The Reserve Bank of India (RBI) plays a crucial role in managing exchange rate stability and foreign exchange reserves in India, and ensures a stable financial environment for India's economic growth.

5.1.2 Equilibrium Rate of Exchange

The exchange rate is the price of one currency in terms of another and plays a crucial role in international trade and finance. It determines how much one country's currency is worth compared to another. The exchange rate can be classified into flexible (floating) exchange rates and fixed exchange rates. In a flexible exchange rate system, the exchange rate fluctuates based on market forces, whereas in a fixed exchange rate system, the government or central bank maintains a stable exchange rate.

Determination of Equilibrium Exchange Rate

The equilibrium exchange rate is the rate at which the demand for a currency equals its supply in the foreign exchange market. It is determined similarly to how prices are set in a competitive market by the interaction of demand and supply. For example, consider the exchange rate between the U.S. dollar (USD) and the Euro (EUR). If R = 1, it means one dollar can buy one euro. If demand for euros increases, the exchange rate rises, i.e., the dollar depreciates relative to the euro. Conversely, if demand for euros decreases, the exchange rate falls, leading to a dollar appreciation

The determination of exchange rates can be represented graphically as follows.

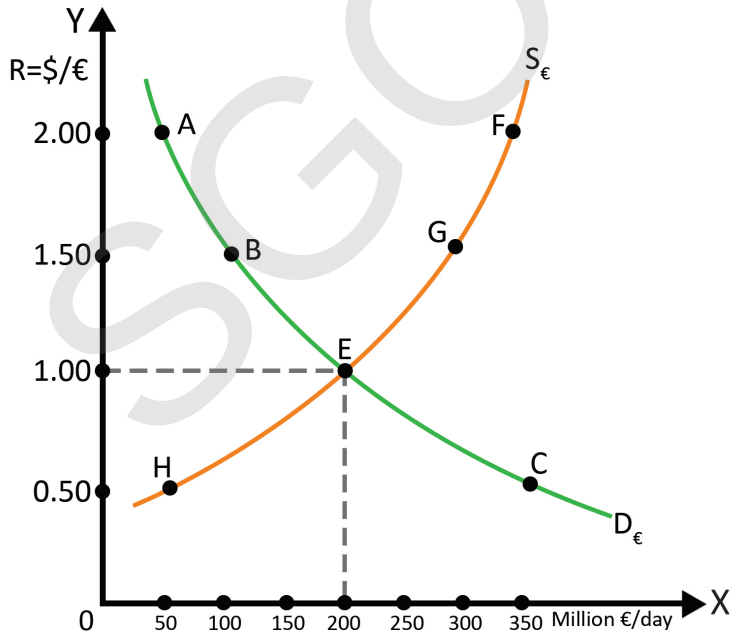

Fig 5.1.1 The Exchange Rate under a Flexible Exchange Rate System

The given graph illustrates the determination of exchange rates under a flexible exchange rate system, where the value of a currency is governed by the forces of demand and supply without direct government intervention. The X-axis represents the quantity of Indian Rupees (₹) exchanged per day (Million ₹/day), while the Y-axis represents the exchange rate in terms of dollars per rupee (R = $/₹). The graph consists of two curves,

viz, the demand curve for rupees (D₹), which slopes downward, and the supply curve for rupees (S₹), which slopes upward. These curves reflect the behaviour of currency demand and supply in response to changes in exchange rates.

The demand for rupees (D₹) arises from U.S. residents and firms that require rupees to purchase Indian goods, services, and investments. As the exchange rate declines, the rupee becomes cheaper in terms of dollars, and American consumers find Indian goods and services more affordable, thereby increasing their demand for rupees. Similarly, when the exchange rate rises, Indian goods become more expensive for Americans, which reduces their willingness to exchange dollars for rupees.

On the other hand, the supply of rupees (S₹) comes from Indian residents and firms seeking U.S. dollars to purchase American goods and services. As the exchange rate increases, Indian consumers find U.S. goods and services cheaper, leading to a greater supply of rupees. When the exchange rate falls, U.S. goods become relatively more expensive, reducing the supply of rupees in the foreign exchange market.

The equilibrium exchange rate is determined at Point E, where the quantity of rupees demanded equals the quantity supplied. At this point, the foreign exchange market is in balance, with no excess supply (surplus) or excess demand (shortage). However, if the exchange rate rises above equilibrium, such as at Point F, the rupee becomes overvalued, leading to a surplus of rupees. Indian suppliers are willing to exchange more rupees for dollars, but the demand from American consumers is insufficient to absorb the excess supply. As a result, market forces push the exchange rate downward toward equilibrium. Similarly, Point G represents another scenario where the exchange rate is above equilibrium, indicating reduced demand for rupees while supply remains relatively high, ultimately leading to a depreciation of the rupee.

If the exchange rate falls below equilibrium, as seen at Point H, the rupee is undervalued, causing a shortage of rupees. At this rate, American consumers and investors find Indian goods and services more attractive, leading to an increased demand for rupees. However, since the supply of rupees is insufficient at this lower rate, market forces push the exchange rate back up towards equilibrium. A similar situation is observed at Point C, where a large quantity of rupees is supplied at a lower exchange rate, potentially due to Indian investors seeking to acquire more U.S. goods and investments. However, if demand does not rise proportionally, the exchange rate remains suppressed.

Points A and B illustrate different levels of exchange rates that influence demand and supply. Point A represents a high exchange rate scenario where the rupee is expensive relative to the dollar, leading to lower demand but also lower supply, as fewer rupees are exchanged in the market. Moving downward along the demand curve, Point B shows a slightly lower exchange rate, where demand for rupees increases, and supply starts responding as Indian exporters receive more favourable terms. These fluctuations in exchange rates showcase the self-correcting mechanism of a flexible exchange rate system, where surpluses and shortages are naturally adjusted through shifts in demand and supply.

Market forces also cause shifts in the demand and supply curves, affecting equilibrium

exchange rates. If the U.S. demand for rupees increases, for example, due to a rise in American imports from India, the demand curve shifts rightward. This results in a higher equilibrium exchange rate, which means the U.S. dollar depreciates relative to the rupee. On the other hand, if U.S. demand for rupees decreases, the demand curve shifts leftward, leading to a lower equilibrium exchange rate, signifying that the dollar has appreciated relative to the rupee. Similar shifts can occur with the supply curve. If Indians increase their demand for U.S. goods, they supply more rupees, shifting the supply curve to the right and leading to a depreciation of the rupee. Conversely, a decrease in Indian demand for U.S. goods results in a leftward shift in the supply curve, causing the rupee to appreciate.

Thus, the flexible exchange rate system ensures that exchange rates are determined by market forces of demand and supply, allowing automatic corrections in case of temporary currency surpluses or shortages.

Recap

- Foreign Exchange Market (Forex Market) enables the conversion of one currency into another for international trade and investment
- Foreign exchange refers narrowly to foreign currencies and broadly to the system of international payments
- Foreign Bills of Exchange are written orders for cross-border payments
- Telegraphic Transfers (TT) implies quick electronic fund transfers via banks
- Bank Drafts are bank-issued payment orders for international transactions
- Letters of Credit (LC) stands for bank guarantees for payment upon meeting terms
- Transfer of Purchasing Power enables conversion of currencies for trade and investment
- Provision of Credit Checks the equilibrium of offers credit facilities (e.g., bill discounting) for international trade
- Clearing House Role - matches currency demand and supply via interbank transactions
- Exchange Rate Determination sets exchange rates based on currency demand and supply
- Hedging and Speculation, helps manage exchange rate risk and enables profit-seeking trades

- The U.S. Dollar is a leading vehicle currency; the Euro and Indian Rupee also play important international roles
- The Forex market operates 24/7, running continuously across global time zones.
- Equilibrium Exchange Rate occurs where the demand for and supply of a currency are equal
- Under a Flexible Exchange Rate System, exchange rates fluctuate freely based on market forces

Objective Questions

1. What is the main function of the foreign exchange market?
2. Which document instructs an importer to pay a certain amount either immediately or on a future date?
3. Which instrument is used for fast money transfer between countries?
4. What is a bank-issued order to pay a specific sum internationally called?
5. Which document guarantees payment to an exporter upon meeting certain conditions?
6. What is the most widely used vehicle currency in the world?
7. What type of exchange rate is determined by market demand and supply?
8. What strategy helps protect against exchange rate fluctuations?
9. What is the buying and selling of currencies for profit called?

Answers

1. Currency conversion
2. Foreign bill of exchange
3. Telegraphic transfer (TT)

4. Bank draft
5. Letter of credit
6. U.S. Dollar
7. Flexible exchange rate
8. Hedging
9. Speculation

Assignments

1. What is the foreign exchange market, and why is it important in international trade?
2. Explain the main instruments used in the foreign exchange market.
3. List and briefly explain the functions of the foreign exchange market.
4. What is meant by the equilibrium exchange rate? How is it determined under a flexible exchange rate system?
5. Differentiate between hedging and speculation in the foreign exchange market.

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UNIT 2

Theories of Exchange Rate Determination

Learning Outcomes

After completing this unit, the learner will be able to:

- explain the concept of the exchange rate
- understand the mint parity theory
- describe the purchasing power parity (PPP) theory
- examine how the Balance of Payments (BOP) influences exchange rates

Prerequisites

Before learning about the theories of exchange rate determination, it is important to understand what an exchange rate is. Simply put, an exchange rate is the price of one country's currency in terms of another. For example, if 1 US dollar equals ₹83, this means the exchange rate between the US dollar and the Indian rupee is 1:83.

Countries buy and sell goods, services, and investments across borders, and these international transactions involve the use of different currencies. So, knowing how the value of one currency is determined in terms of another becomes very important for international trade, investment, and policy decisions.

In this unit, we will study three major theories that explain how exchange rates are determined, viz, Mint Parity Theory, which is based on gold; the Purchasing Power Parity Theory, which compares the cost of goods in different countries; and the Balance of Payments Theory, which links exchange rates to a country's trade and financial flows. These theories help us to understand why currency values go up or down in the global market.

Keywords

Exchange Rate, Mint Parity, Purchasing Power Parity, Balance of Payment

Discussion

5.2.1 Theories of Exchange Rate Determination

Exchange rate refers to the value of one country's currency in terms of another. To understand how these values are determined, economists have developed different theories. Some of the major ones include the Mint Parity Theory, the Purchasing Power Parity (PPP) Theory, and the Balance of Payments (BOP) Theory. These theories offer different explanations for how exchange rates are set between countries. Let us take a brief look at each of them.

5.2.1.1 The Mint Parity Theory

The Mint Parity Theory is one of the earliest explanations of how exchange rates are determined. It was relevant during the time when countries followed the gold standard. Under the gold standard, currencies were either made of gold or could be freely converted into gold of a specific purity. Each country fixed the value of its currency in terms of a certain weight of gold, which was called the mint price. For example, if the official price of gold in India was ₹1,500 per gram and in the UK it was £30 per gram, then the mint parity exchange rate would be ₹1,500/£30 = ₹50 per £1. This rate, based on the gold content of the two currencies, was known as the mint par of exchange.

Under the gold standard, countries settled their international payments by sending gold. If India imported more goods from the UK than it exported, it had a balance of payments (BOP) deficit. To settle this, India could either buy British pounds (£) in the foreign exchange market or send gold to the UK. However, sending gold included extra costs like freight, insurance, packing, and interest.

Let us say the fixed exchange rate called mint parity is ₹50 for £1, and the cost of sending gold worth ₹50 to the UK is ₹0.50. In this case, Indian importers, i.e., Indian businesses or individuals who buy goods from the UK, would not want to pay more than ₹50.50 for £1. If the exchange rate rose above ₹50.50, the Indian importers would find it cheaper to send gold to the UK instead of buying pounds. This maximum limit of ₹50.50 is called the gold export point or upper specie point.

On the other hand, if India had a BOP surplus, i.e., it was exporting more than importing, gold would flow into the country. If the exchange rate dropped below ₹49.50 per £1, Indian exporters would prefer to receive gold from the UK rather than accept fewer rupees for each pound. This lower limit is known as the gold import point or lower specie point.

So, under the Mint Parity Theory, the exchange rate could move slightly up or down, but only within a fixed range, like ₹49.50 to ₹50.50 in this example, because of the cost of exporting or importing gold.

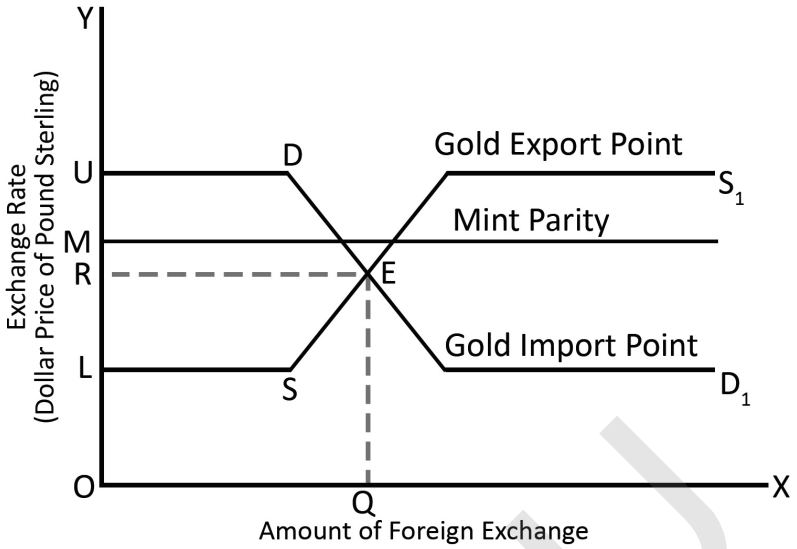

Fig 5.2.1 Determination of Rate of Exchange According to Mint Parity Theory

In the diagram above, the X-axis shows the amount of foreign exchange (British pounds), and the Y-axis shows the exchange rate, i.e., how many Indian rupees (₹) are needed to buy one British pound (£1).

The DD_1 curve represents India's demand for British pounds to import goods from the UK, and the SS_1 curve shows India's supply of British pounds from Indian exports to the UK.

The point where these two curves intersect is point E, which shows the equilibrium exchange rate marked as OR and the quantity of foreign exchange exchanged OQ. This is where the demand and supply of pounds are equal.

The horizontal line marked M shows the mint parity rate, say ₹50 = £1. This is the fixed rate based on the gold content of both currencies.

The line marked U is the gold export point or upper specie point, for example, ₹50.50 per £1. If the exchange rate goes above this point, Indian importers find it cheaper to send gold to the UK rather than buy pounds at a higher price. This is why the supply curve becomes perfectly elastic or flat at this point. India can get unlimited pounds by exporting gold.

The line marked L is the gold import point or lower specie point, say ₹49.50 per £1. If the rate drops below this point, Indian exporters would prefer to get gold from the UK instead of selling pounds at such a low rate. So, the demand curve becomes perfectly elastic here, as there is unlimited demand for pounds at this rate.

Thus, under the Mint Parity Theory, the exchange rate can only fluctuate between the gold export point (₹50.50) and the gold import point (₹49.50). If it goes outside these limits, gold movements will bring it back within range.

However, the mint parity theory has been strongly criticised for several reasons. Firstly, the international gold standard no longer exists. It collapsed during the Great Depression of the 1930s, and since then, countries have stopped using gold to back their currencies. So, using mint parity to understand modern exchange rates is unrealistic. Secondly, the theory assumes free international movement of gold. But today, most governments do not allow the free buying and selling of gold across borders. Lastly, many countries now use inconvertible paper currencies, which means their money cannot be exchanged for gold. In such a system, the mint parity theory has no practical use in determining exchange rates.

Because of these limitations, the Mint Parity Theory is no longer applied in real-world economics. It is now considered more of a theoretical or academic concept than a tool for modern exchange rate determination.

5.2.1.2 The Purchasing Power Parity (PPP) Theory

The Purchasing Power Parity Theory explains how the exchange rate between two inconvertible paper currencies is determined. It was developed systematically by Gustav Cassel, though earlier references were made by Wheatley and Ricardo.

The core idea is that the equilibrium exchange rate is determined by the equality of purchasing power between two currencies. In simple terms, one unit of currency in one country should be able to buy the same quantity of goods as another currency does in a different country when converted at the proper exchange rate.

There are two versions of the theory, which are discussed as follows.

1. Absolute Version

According to the absolute version of the Purchasing Power Parity (PPP) Theory, the exchange rate between two currencies should reflect the ratio of their internal purchasing powers. For example, suppose a standard basket of goods costs ₹1500 in India (Country B) and the same basket of goods costs $25 in the United States (Country A).

$$Exchange\ Rate\ (R) = \frac{Price\ Level\ in\ Country\ B}{Price\ Level\ in\ Country\ A} = \frac{P_B}{P_A}$$

This means that ₹1500 in India can buy the same quantity of goods that $25 can buy in the U.S.

$$Exchange\ Rate = \frac{₹1500}{\$25} = ₹60/\$1$$

This means that ₹1500 in India can buy the same quantity of goods that $25 can buy in the U.S. Based on this, the exchange rate between the Indian Rupee and the

U.S. Dollar should be ₹1500/$25, which equals ₹60 per $1. In other words, under the absolute version of PPP, $1 should be exchanged for ₹60, as both amounts have equal purchasing power in their respective countries.

2. Relative Version

The relative version explains changes in exchange rates over time by comparing changes in the price levels (inflation) of two countries from a base period to the current period.

$$Rt = R_0 \times \frac{P_{Bt}/P_{B0}}{P_{At}/P_{A0}}$$

Where:

R_t = exchange rate in the current period

R_0 = exchange rate in the base period

P_{Bt}, P_{B0} = price indices in Country B in the current and base period

P_{At}, P_{A0} = price indices in Country A in the current and base period

According to the relative version of the Purchasing Power Parity (PPP) Theory, changes in exchange rates between two currencies are influenced by changes in their respective price levels over time. Suppose the base period exchange rate between the U.S. dollar and the Indian rupee is $1 = ₹50. Over time, the price index in India rises from 100 to 180, and in the U.S., it increases from 100 to 150. This indicates that inflation has been higher in India than in the U.S. As a result, the value of the rupee has fallen in comparison to the dollar, causing the rupee to depreciate.

The new exchange rate is calculated using the formula,

$$R_t = R_0 \times \frac{P_{Bt}/P_{B0}}{P_{At}/P_{A0}} = 50 \times \frac{180/100}{150/100} = 50 \times \frac{180}{150} = {₹60}/{\$1}$$

This means that due to higher inflation in India, the rupee has depreciated, and now ₹60 is required to buy $1, instead of ₹50 earlier.

The Purchasing Power Parity theory can be explained with the following figure.

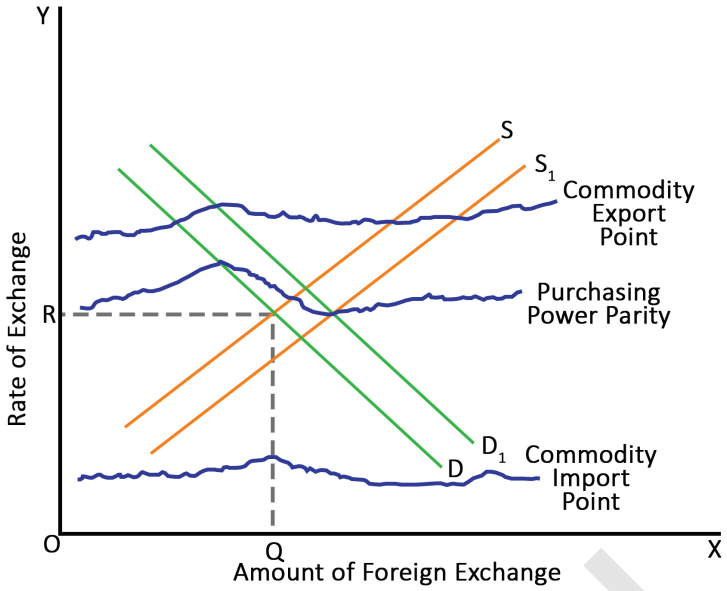

Fig 5.2.2 Purchasing Power Parity

The figure illustrates the Purchasing Power Parity (PPP) theory in relation to the determination of exchange rates. On the vertical axis, the rate of exchange is shown, while the horizontal axis indicates the amount of foreign exchange. The fluctuating horizontal line labelled 'Purchasing Power Parity' represents the normal or theoretical exchange rate based on the relative price levels of two countries. Above and below this PPP line are two other fluctuating curves. The upper one is the 'Commodity Export Point' and the lower one is the 'Commodity Import Point.' These lines indicate the upper and lower limits within which the exchange rate can fluctuate in practice. The intersection of the downward-sloping demand curve (DD) and the upward-sloping supply curve (SS) determines the actual market exchange rate at point R, with the corresponding quantity of foreign exchange being OQ. If demand or supply changes, these curves shift, as shown by D_1 and S_1. As a result, the equilibrium exchange rate may change, but it will still remain within the boundaries set by the export and import points. The graph, therefore, shows that while the market exchange rate fluctuates due to shifts in demand and supply, it usually remains within the limits around the PPP level.

Criticisms of PPP Theory

Despite its clarity, the theory has been criticised for the following reasons.

1. No direct link in reality between purchasing power and exchange rate due to other influences like capital flows, BOP situation, and speculation.

2. Price indices may not be comparable due to differences in goods, base years, and methods.

3. Does not consider capital account transactions, which are important for modern economies.

4. Assumes equilibrium in the base period, which might not hold true.

5. Overlooks structural changes like shifts in preferences, technology, and resources.

6. Ignores the demand and supply of foreign exchange as actual determinants.

7. Assumes free trade and no government interference, which is unrealistic.

8. It assumes that changes in price levels always lead to changes in exchange rates, but it ignores the fact that exchange rate changes can also influence price levels.

9. Fails to include non-traded goods, whose prices affect general price indices.

10. Only applies to long-run scenarios, not short-term fluctuations.

5.2.1.3 The Balance of Payments Theory of Exchange Rate

The Balance of Payments (BOP) Theory explains that the exchange rate between two countries' currencies is mainly determined by the demand and supply of foreign exchange, and not just by internal factors like price levels or the money supply of a country. According to this theory, the condition of a country's balance of payments plays a key role in deciding the exchange rate.

When a country has a BOP deficit, it means that it is spending more on imports and foreign payments than it is earning from exports and foreign receipts. This causes a higher demand for foreign exchange than the supply available at the existing exchange rate. Since foreign currency is in short supply, its value increases. As a result, the home currency depreciates, i.e., it takes more units of the home currency to buy one unit of foreign currency.

On the other hand, a BOP surplus means that the country is earning more from exports and foreign income than it is spending on imports and other foreign obligations. In this case, there is an excess supply of foreign exchange. As foreign currency becomes more easily available, its value goes down, and the home currency appreciates, i.e., it becomes stronger relative to the foreign currency.

The equilibrium exchange rate is the rate at which the demand for foreign exchange equals its supply, and there is no surplus or deficit. At this point, the exchange rate remains stable.

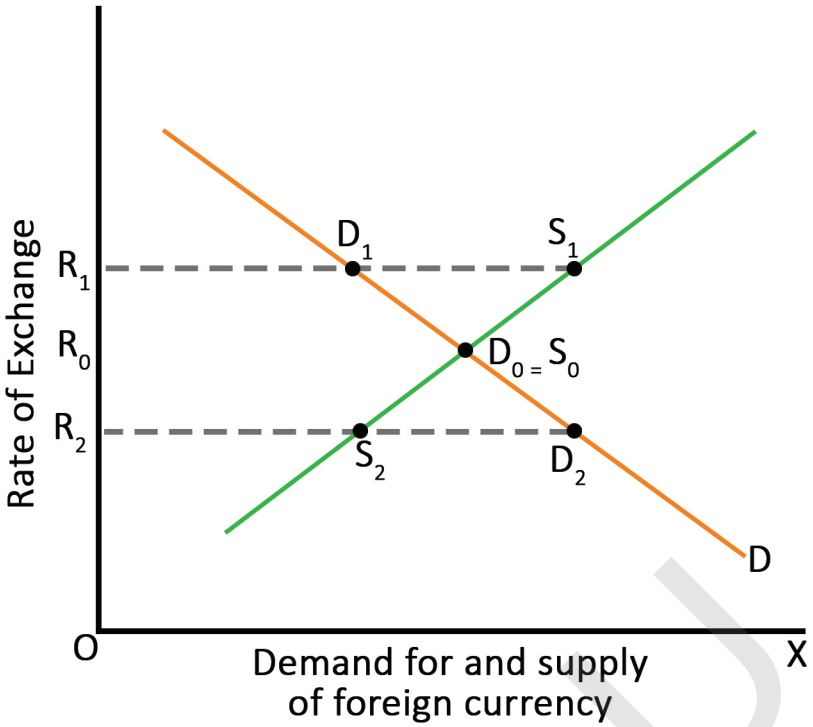

Fig 5.2.3 Equilibrium Rate of Exchange

The figure 5.2.3 illustrates the determination of the equilibrium rate of exchange through the interaction of demand and supply for foreign currency. The horizontal axis represents the demand for and supply of foreign exchange, while the vertical axis indicates the rate of exchange. The downward-sloping demand curve (D) shows that as the exchange rate decreases, the demand for foreign currency increases. The upward-sloping supply curve (S) indicates that as the exchange rate increases, the supply of foreign currency also rises. The point where the demand and supply curves intersect ($D_0 = S_0$) determines the equilibrium exchange rate (OR_0), where the quantity demanded equals the quantity supplied. If the exchange rate rises above OR_0 to OR_1, the supply of foreign currency (S_1) exceeds demand (D_1), resulting in a surplus. This surplus leads to appreciation of the home currency and depreciation of the foreign currency, reducing exports and increasing imports, which eventually brings the exchange rate back to equilibrium. Conversely, if the exchange rate falls below OR_0 to OR_2, the demand for foreign currency (D_2) exceeds the supply (S_2), causing a deficit. This leads to depreciation of the home currency and appreciation of the foreign currency, encouraging exports and discouraging imports, again restoring equilibrium.

Merits of Balance of Payments Theory

a. Based on Demand and Supply

The BOP theory explains the exchange rate using the forces of demand and supply of foreign currency, just like how prices are determined in general markets.

b. Covers the Entire BOP, Not Just Trade

Unlike the Purchasing Power Parity (PPP) theory, which only considers merchandise trade, the BOP theory includes all inflows and outflows of foreign currency, such as trade, services, investments, and remittances.

c. Better for Policy Decisions

The theory suggests that exchange rate adjustments (like devaluation or revaluation) can help to correct disequilibrium in the balance of payments.

In contrast, PPP or Mint Parity Theory recommend changes through inflation or deflation, which can have more harmful effects on the economy.

Criticism of BOP Theory

i. Assumption of Perfect Competition

The theory assumes perfect competition and free trade between countries. In reality, many countries have trade restrictions and exchange controls, which make this assumption unrealistic.

ii. Ignores Price Level Influence

It wrongly assumes that there is no link between domestic price levels and exchange rates. But in practice, price level changes can impact the balance of payments and affect the exchange rate.

iii. Neglects the Basic Value of Currency

Under the gold standard, the metallic content of a currency gave it a real value. The BOP theory doesn't consider this and cannot define the optimum value of inconvertible paper currencies.

iv. Just a Truism (Always Balanced Assumption)

If we accept that the BOP is always balanced, then there would be no reason for the exchange rate to change. But in reality, exchange rates can exist even with BOP deficits or surpluses.

v. Indeterminate Theory

This theory says that the rate of exchange is determined by the balance of payments (BOP). At the same time, any changes in the exchange rate are expected to adjust the BOP deficit or surplus. This means that while the exchange rate affects the BOP, the BOP also influences the exchange rate, creating a circular relationship. In other words, the theory assumes a given exchange rate and then argues that the BOP adjusts accordingly, but it does not clearly explain how that initial exchange rate is actually set. Due to this circular reasoning, the theory is considered indeterminate.

Recap

- Exchange rate refers to the value of one country's currency in terms of another
- Mint Parity Theory explains exchange rates based on the gold standard, where currencies were tied to a specific amount of gold
- Gold Standard- countries fixed their currency's value in terms of gold
- Mint parity exchange rate is based on the price of gold in each country. For example, if 1 gram of gold costs ₹1500 in India and £30 in the UK, the mint parity is ₹50/£
- Gold Export and Import Points: The exchange rate fluctuates within a fixed range determined by the cost of exporting or importing gold
- Mint parity is no longer relevant since the gold standard collapsed, and countries no longer use gold to back currencies
- Purchasing Power Parity (PPP) Theory - Explains exchange rates based on the idea that the same basket of goods should cost the same in different countries when converted at the proper exchange rate
- Absolute Version of PPP-The exchange rate between two currencies should reflect the ratio of their internal purchasing powers
- The relative version of PPP explains changes in exchange rates over time based on price levels (inflation) in different countries
- PPP criticises due to issues with price index comparisons, failure to consider capital flows, and assumptions like free trade
- Balance of Payments (BOP) Theory-Exchange rates are determined by the demand and supply of foreign exchange, influenced by a country's balance of payments
- BOP Equilibrium - The exchange rate remains stable when the demand for foreign exchange equals its supply

Objective Questions

1. What was the Mint Parity Theory based on?
2. What is the Mint Parity Exchange Rate?

3. What does the Mint Parity Theory assume about international gold movement?
4. What is the upper specie point in Mint Parity?
5. Which version of PPP compares price levels over time?
6. What does the Absolute version of PPP suggest?
7. What causes currency depreciation in the BOP theory?
8. What causes currency appreciation in the BOP theory?

Answers

1. Gold standard
2. Exchange rate based on the gold content of currencies
3. Free movement of gold across borders
4. Gold export point
5. Relative version
6. The exchange rate reflects the ratio of internal purchasing power
7. BOP deficit
8. BOP surplus

Assignments

1. Explain the Mint Parity Theory of exchange rate determination.
2. How does the Purchasing Power Parity (PPP) Theory determine exchange rates?
3. What is the difference between the absolute and relative versions of the PPP theory?

4. Describe the Balance of Payments (BOP) theory and its role in determining exchange rates.

5. What are the merits and criticisms of the Balance of Payments theory?

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UNIT 3

Exchange Rate Systems

Learning Outcomes

After completing this unit, the learner will be able to:

- understand the various systems of exchange rates
- distinguish between fixed and flexible exchange rates
- evaluate the advantages and disadvantages of fixed and flexible exchange rate systems

Prerequisites

In the previous unit, you learned that an exchange rate tells us how much one country's currency is worth compared to another. For example, if $1 = ₹83, then that is the exchange rate between the US dollar and the Indian rupee.

Now, we move on to understand how exchange rates are determined, noting that different countries follow different systems. In a flexible exchange rate system, the value of a currency is allowed to change based on market forces like demand and supply. In a fixed exchange rate system, the government or central bank tries to keep the currency's value steady by intervening in the foreign exchange market.

A good way to understand the difference between fixed and flexible exchange rate systems is by looking at real-world examples. The United States follows a flexible exchange rate system, where the value of its currency- the US dollar- fluctuates daily based on global demand and supply. This means that the dollar's exchange rate can change due to factors like international trade, investment flows, or economic conditions. On the other hand, Bhutan follows a fixed exchange rate system by pegging its currency, the Ngultrum, to the Indian Rupee. In this system, 1 Ngultrum is always equal to ₹1. Bhutan's central bank ensures this fixed rate by actively managing and regulating currency exchanges with India. This example shows how some countries allow their currencies to move freely in the market, while others keep them stable by linking them to another currency.

Keywords

Exchange Rate, Gold Standard, Fixed Exchange Rate, Flexible Exchange Rate

Discussion

5.3.1 Different Systems of Exchange Rate Determination

Over time, the world has experienced various systems of foreign exchange rate determination. Each period in history reflects a different way in which countries managed their exchange rates and adjusted their balance of payments (BOP). Between 1870 and 1914, the Gold Standard was followed, where exchange rates were fixed and currencies were directly linked to gold. The period between World War I and World War II, known as the inter-war period, was marked by chaotic exchange rate conditions. Many countries struggled to maintain stability in their currencies, leading to uncertainty in international trade and payments.

After World War II, from 1944 to 1973, the world adopted the Bretton Woods System, another form of fixed exchange rate system. Under this arrangement, currencies were pegged to the US dollar, which in turn was convertible to gold. However, due to increasing imbalances and pressures on the US dollar, the Bretton Woods System collapsed in 1973.

Since then, most countries have moved towards a flexible exchange rate system, where the value of a currency is determined by market forces of demand and supply in the foreign exchange market. In this system, exchange rates fluctuate based on various economic factors such as trade flows, capital movements, and investor confidence. Let us look into the concepts and features of fixed and flexible exchange rate systems in detail.

5.3.2 Fixed or Pegged Exchange Rate System

In a fixed or pegged exchange rate system, the value of a country's currency is kept stable at a rate decided by the monetary authority, such as the central bank or the government. This rate, known as the fixed exchange rate, is either legally set by the government or maintained through active intervention in the foreign exchange market by the authorities.

If the actual market rate begins to move away from the fixed equilibrium level due to changes in market forces like supply and demand, or because of the actions of speculators, the government steps in to control the situation. This government action is known as pegging. Pegging involves either buying or selling foreign exchange in the market to keep the exchange rate stable.

For example, when there is too much supply of foreign exchange in the market, the government buys the extra foreign currency. On the other hand, when there is too much demand for foreign exchange, the government sells from its reserves. Through these pegging operations, the authorities are able to keep the exchange rate at the desired level. The working of a fixed or pegged exchange rate system can be better understood with the help of Fig. 5.3.1 (a) and (b).

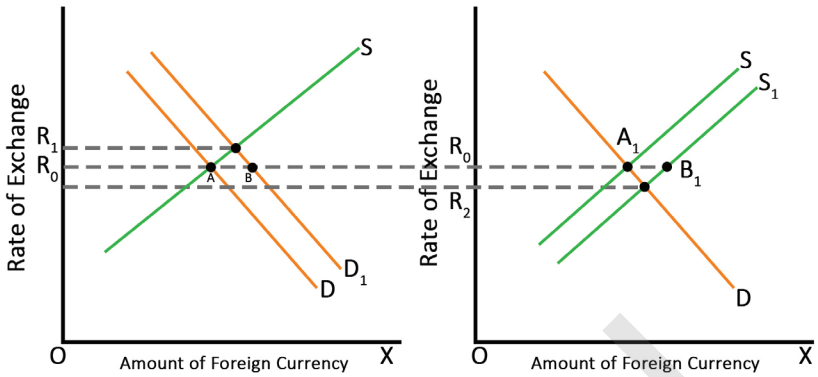

Fig 5.3.1 (a) and (b) Fixed Exchange Rate

In both diagrams, the horizontal axis shows the amount of foreign currency, while the vertical axis represents the rate of exchange, i.e., the value of foreign currency in terms of domestic currency.

In Fig. 5.3.1 (a), the equilibrium fixed official rate of exchange is shown as Ro, which is determined by the intersection of the demand curve (D) and the supply curve (S) for foreign currency. Now, suppose the demand for foreign currency increases, shifting the demand curve from D to D_1. This creates an excess demand gap shown by the distance AB. If no action is taken, the foreign currency will appreciate to R_1, and the domestic currency will depreciate in value.

To maintain the exchange rate at the official level, Ro, the monetary authority, must sell foreign currency equal to the excess demand (AB) in the foreign exchange market. This pegging operation ensures that the exchange rate remains stable. The government can meet this gap in one of the following three ways.

i. Using foreign exchange reserves that were built during earlier balance of payments (BOP) surpluses,

ii. Borrowing short-term funds from abroad, known as accommodating transactions, or

iii. Exporting monetary gold to earn foreign exchange.

In Fig. 5.3.1 (b), the official rate of exchange is again Ro. This time, there is an increase in the supply of foreign currency, for example, due to a BOP surplus. The supply curve shifts from S to S_1, resulting in an excess supply gap A_1B_1. If the government does not intervene, the value of foreign currency will depreciate to R_2, and the domestic currency will appreciate.

To avoid this, the government or central bank will need to buy the excess foreign currency (A_1B_1) from the market. This pegging operation helps to maintain the exchange rate at the fixed official level, Ro.

Thus, in a fixed exchange rate system, the sale or purchase of foreign currency by the monetary authority, known as pegging operations, helps to maintain the exchange rate at the desired level.

5.3.2.1 Arguments in Favour of Fixed Exchange Rates

The key arguments in favour of a stable or pegged exchange rate system are as follows:

1. Helps in International Trade

When exchange rates are fixed, prices of goods in international trade become more predictable. Exporters and importers know the value they will receive or pay in domestic currency. This stability encourages more international trade.

2. Supports Specialisation and Division of Labour

A stable currency encourages countries to specialise in producing goods where they have an advantage. This leads to greater productivity and higher output.

3. Promotes Economic Integration

Fixed exchange rates are helpful for countries in economic unions (like the Eurozone). It works like having a common currency, which encourages coordination of economic policies and smoother trade among member countries.

4. Encourages Long-Term Investments

With stable exchange rates, investors feel more confident to make long-term investments across borders. This leads to more foreign capital inflow and boosts economic growth.

5. Controls Harmful Speculation

Under fixed exchange rates, there is less chance for harmful speculative activities. This helps to keep the currency stable and reduces market risk.

6. Builds Confidence in the Currency

People and investors feel more secure holding a currency that does not suddenly lose its value. Fixed exchange rates avoid sudden devaluation or appreciation and build trust in the domestic currency.

7. Useful in Currency Areas

For groups of countries using the same or linked currencies, like the dollar area or euro area, fixed exchange rates help to maintain smooth trade, capital flows, and balance of payments (BOP) adjustments.

8. Protects Trade-Dependent Economies

Countries that rely heavily on foreign trade benefit from exchange rate stability. Frequent changes in exchange rates can harm their trade and production systems.

9. Boosts Money and Capital Markets

Stable exchange rates help to grow the financial sector by supporting international lending and borrowing. It ensures the smooth flow of funds across borders, which supports the development of capital markets.

10. Promotes Price Discipline

Fixed exchange rates force governments to control inflation. If a country has higher inflation, it will lose foreign reserves to cover BOP deficits. To avoid this, governments adopt responsible economic policies. This acts like an 'anchor' to keep prices stable.

5.3.2.2 Arguments Against Fixed Exchange Rates

The fixed or pegged exchange rate system faces criticism due to the following major concerns.

1. Too Much Focus on Exchange Stability

Governments may focus more on keeping the exchange rate stable and ignore goals like controlling inflation or reducing unemployment. This can lead to recession or deflation just to maintain the exchange rate.

2. Spreads Economic Problems Between Countries

Fixed exchange rates can cause one country's economic issues, like inflation or deflation, to spread to others through trade. This is called the international transmission of economic variations.

3. Need for Large Foreign Exchange Reserves

Governments must keep large foreign currency reserves to manage the exchange rate. This is costly and inefficient, as the reserves are often unused.

4. Puts Pressure on Monetary Authorities

If a country keeps facing BOP deficits, it must keep spending reserves or take loans. If reserves run out, it might be forced to devalue the currency, which reduces trust in it.

5. Hard for Developing Countries

Developing countries (LDCs) often face regular BOP deficits and find it difficult to build up enough reserves to maintain a fixed exchange rate system.

6. **Speculation Still Exists**

Even though the exchange rate is fixed, speculators can still guess about future devaluation or the government's pegging actions, and profit from it. This can lead to economic instability.

7. **Leads to Exchange Controls**

Fixed exchange systems often require strict government control over currency transactions. This can cause resource misallocation, inefficiency, and even corruption.

8. **Does Not Solve BOP Problems**

Instead of solving the real causes of BOP deficits, fixed rates only hide the problem through government intervention. The focus stays on exchange rate stability, not on correcting the real economic imbalance.

9. **Not Suitable in the Long Run**

As economies change over time, a fixed exchange rate may no longer match real economic conditions. Sooner or later, countries may be forced to change it. Fixed rates are more practical in the short term, not in the long term.

10. **Greater Dependence on Institutions**

Under a fixed exchange rate, countries may need support from international institutions like the IMF to deal with liquidity shortages or BOP issues, making them more dependent on external help.

5.3.3 Flexible or Fluctuating Exchange Rate System

The flexible or fluctuating exchange rate system is a system where the value of a country's currency is determined by the free market forces of demand and supply in the foreign exchange market. In this system, the government or central bank does not interfere in fixing the exchange rate. Instead, the rate changes naturally depending on how much foreign currency people want (demand) and how much is available (supply). Let us understand this with a simple example.

Suppose people in India want to buy a lot of goods from the United States. To do this, they need to exchange Indian Rupees (INR) for US Dollars (USD). If the demand for USD becomes greater than the supply, the value of the USD will appreciate, and the value of INR will depreciate. As a result, American goods become more expensive for Indians, while Indian goods become cheaper for Americans. This makes Indian exports cheaper and imports costlier, thereby improving the balance of payments (BOP).

Now, let us take the opposite case. Suppose many foreigners want to invest or buy goods from India, and there is a large supply of USD in exchange for INR. In this case, the supply of foreign currency (USD) becomes greater than the demand, so the USD depreciates, and the INR appreciates. Now, imported goods become cheaper for Indians, and Indian exports become more expensive for foreigners, reducing demand for

exports, while imports become cheaper for Indians, increasing the demand for imports. So, in a flexible exchange rate system, the exchange rate automatically adjusts based on changes in demand and supply for foreign currency, without needing government intervention.

The figures 5.3.2(a) and 5.3.2(b) illustrate how changes in the demand for and supply of foreign currency affect exchange rates and consequently influence balance of payments adjustments.

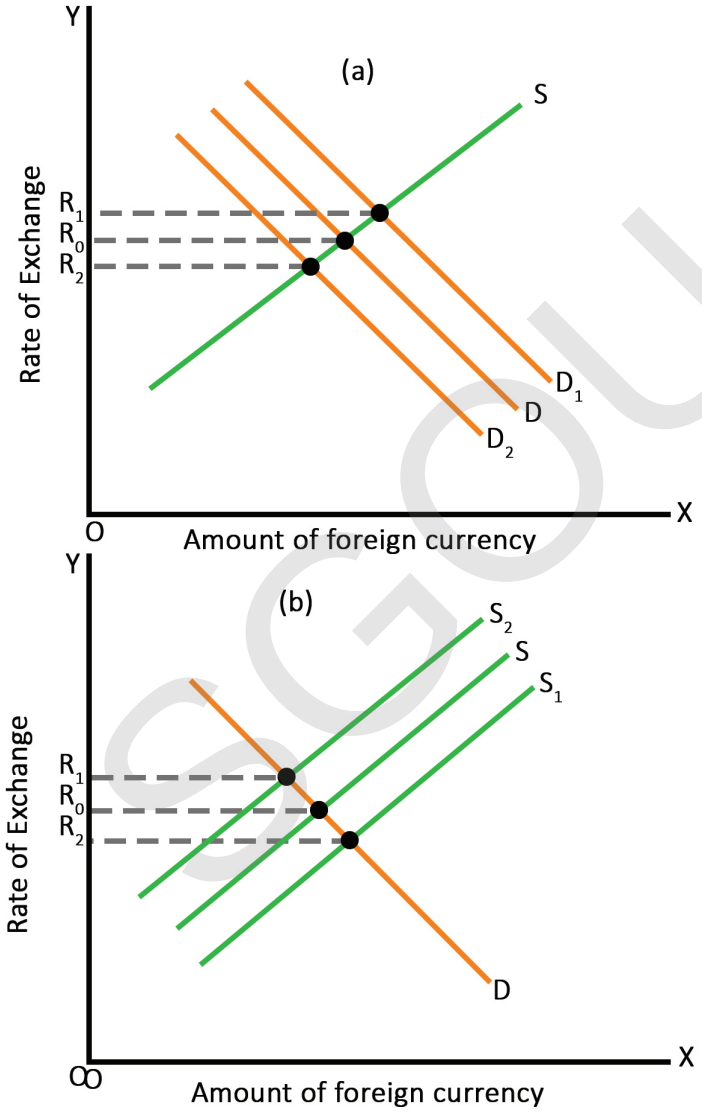

Fig 5.3.2(a) and 5.3.2(b) Flexible Exchange Rate and BoP Adjustments

In figure 5.3.2 (a) and (b), the horizontal axis shows the amount of foreign currency, and the vertical axis shows the rate of exchange.

Let us look at figure 5.3.2 (a) first. The original demand curve (D) and supply curve (S) of foreign currency meet at point where the exchange rate is R_0, which is the initial equilibrium. Now, imagine people in the home country want more foreign currency-for example, to buy more foreign goods or travel abroad. This causes the demand curve to shift to the right, from D to D_1. At the old rate R_0, there is now an excess demand for foreign currency. Due to this pressure, the value of foreign currency appreciates (increases) to R_1, and the home currency depreciates. This appreciation of foreign currency makes imports more expensive and exports more attractive, helping to correct the balance of payments (BOP) automatically.

On the other hand, if the demand for foreign currency decreases, the demand curve shifts left, from D to D_2. Now, at the original rate R_0, there is less demand. As a result, the foreign currency depreciates to R_2, and the home currency appreciates. This means foreign goods become cheaper, but exports may be reduced. This movement also restores the BOP balance on its own.

Now let us look at figure 5.3.2 (b). Again, the starting point is the original exchange rate R_0. If the supply of foreign currency increases-for example, due to more exports or foreign investment- the supply curve shifts to the right from S to S_1. This causes the foreign currency to depreciate to R_1, and the home currency to appreciate.

On the opposite side, if the supply of foreign currency falls, the supply curve shifts left from S to S_2, creating a shortage at the old rate R_0. This leads to an appreciation of foreign currency up to R_2, and the home currency depreciates.

In both diagrams, we can see that under a flexible (or floating) exchange rate system, the rate of exchange changes automatically depending on the demand and supply of foreign currency. There is no need for the government or monetary authority to interfere by buying or selling foreign exchange. The market forces handle the adjustments by themselves, bringing the BOP (Balance of Payments) back into balance without the help of accommodating capital transactions.

5.3.3.1 Arguments for Flexible Exchange Rate System

The debate between fixed and flexible exchange rate systems becomes meaningful only when we understand the reasons why economists support or oppose flexible exchange rates. Below are the main arguments in favour of a flexible (or fluctuating) exchange rate system.

1. **Simple Mechanism**: In a flexible exchange rate system, the value of a currency is decided by the market forces of demand and supply. This system works quickly and smoothly without any need for the government or central bank to interfere. It clears the foreign exchange market automatically.

2. **Continuous Adjustments:** Unlike the fixed exchange rate system, where big changes are made after long delays, flexible rates allow for small and continuous adjustments. These changes help to maintain the balance of payments (BOP) equilibrium regularly and avoid major financial crises.

3. **No Need for Gold or Capital Movements**: In a fixed system, countries may need to move gold or borrow capital to correct their BOP. In the flexible system, such movements are not necessary because the exchange rate itself adjusts to keep the BOP balanced.

4. **No Need for Price or Income Changes:** Under a fixed system, countries may have to use deflationary or inflationary policies, like reducing spending or increasing taxes, to fix the BOP. These policies can affect the economy negatively. But in a flexible system, simple exchange rate adjustments can fix the BOP without disturbing overall income or price levels.

5. **Solves the Problem of International Liquidity:** In a fixed system, countries need large amounts of foreign currency reserves to fix their exchange rates. This creates a problem called a shortage of international liquidity. But in a flexible system, there is no such issue because exchange rates adjust automatically. Speculators also play a role by bringing in more foreign currency or pulling out the extra, depending on market needs.

6. **Economical:** Countries under a flexible system do not need to hold idle foreign exchange reserves. This helps them to use their available resources more efficiently and save costs.

7. **Supports International Trade:** Some people think that changing exchange rates makes trade uncertain. But actually, flexible rates reflect the true or natural value of a currency. This helps to avoid trade problems caused by overvalued or undervalued currencies, which are common in fixed systems. As a result, flexible rates can support steady growth in international trade and the economy.

8. **Dependence on International Institutions:** Fixed exchange rate systems depend on organisations like the International Monetary Fund (IMF) to lend or borrow funds and help to maintain exchange rate levels. But flexible exchange rates can manage everything on their own, without needing such international arrangements.

9. **Freedom in Domestic Policy:** In a fixed system, countries often have to change their monetary and fiscal policies, like interest rates or government spending, just to keep exchange rates stable. This can harm goals like controlling inflation or maintaining employment. In contrast, the flexible system gives countries more independence to focus on their own economic goals, as exchange rates adjust automatically to fix the BOP.

10. **No Need for Import-Export Controls:** To maintain BOP in a fixed system, governments may apply strict controls on imports, exports, and capital flows. These controls often reduce efficiency and lead to issues like corruption or red tape. In a flexible system, there is no need for such controls because the exchange rate adjusts naturally through market forces.

11. **Less Risk of Retaliation:** In the past, countries with fixed exchange rates often got into competitive devaluations -deliberately lowering their currency value to gain trade advantages, leading to tariff wars. Such conflicts are less

likely in a flexible system, where exchange rates are based on real market demand and supply.

12. **Supports Monetary Policy:** A flexible exchange rate system can also strengthen a country's monetary policy. During inflation and a BOP deficit, a country can raise interest rates to reduce spending and imports. This will reduce inflation and improve the BOP. During a recession, lowering interest rates may lead to currency depreciation, which boosts exports and limits imports. In both cases, changes in exchange rates help to make the monetary policy more effective.

5.3.3.2 Arguments Against Flexible Exchange Rate System

While the flexible exchange rate system has many supporters, several economists have raised strong objections against it. Let us look at the main arguments against flexible exchange rates.

1. **Possibility of Disequilibrium**: The flexible exchange rate system is supposed to automatically correct imbalances in the Balance of Payments (BOP) through changes in the exchange rate. However, in reality, the demand and supply of foreign exchange may push the exchange rate away from its natural or equilibrium level. This means instead of correcting the BOP imbalance, the currency may keep moving in the wrong direction, making the problem worse.

2. **Indirect Government Intervention:** Even though flexible exchange rates assume no government interference, governments can still influence the market indirectly through monetary and fiscal policies. For example, higher excise duties can raise production costs and reduce exports, while subsidies can encourage exports. Interest rate changes affect capital flows, and government borrowing or investment abroad also impacts exchange rates. Therefore, the system is rarely completely 'free' from government influence.

3. **Not Practical in Real Life**: In today's world, most governments regulate prices, wages, rents, and other economic variables. Allowing the exchange rate to be determined purely by market forces does not fit with this reality. Leaving foreign exchange unregulated while the rest of the economy is controlled is impractical.

4. **Exchange Risks and Uncertainty:** Flexible exchange rates change frequently, which creates uncertainty in international trade and capital movement. If the rupee suddenly depreciates, Indian importers must pay more for goods in dollars. This discourages trade. Similarly, exporters may also face risks. According to economist Bo Sodersten, this uncertainty discourages marginal importers and exporters and reduces the overall volume of international trade.

5. **Destabilising Speculation:** Frequent exchange rate changes attract speculators who try to profit from currency movements. If speculators expect the currency to fall, their actions can speed up the depreciation. Economists like R. Nurkse and S.C. Tsiang argue that such speculation worsens exchange

rate fluctuations, making them more unstable. Even though Milton Friedman believed speculation could be stabilising, real-world evidence, especially after 1973, showed extreme currency volatility caused by speculative activities.

6. **Inflationary Tendencies:** Flexible exchange rates often lead to inflation. When the domestic currency depreciates, imports become expensive, raising production costs for many industries that rely on imported inputs. This leads to cost-push inflation. At the same time, if the currency appreciates, importers may keep the extra profits instead of lowering prices, causing an asymmetry in price changes. According to economist Triffin, this creates a ratchet effect, where prices go up during depreciation but do not fall during appreciation. This can lead to a cycle of depreciation-inflation-depreciation, worsening the economy.

7. **Fragmentation of the World Market:** A flexible exchange rate system makes it hard to maintain a stable international currency. As a result, world trade gets divided into smaller currency zones. This limits the efficient allocation of global resources and reduces international specialisation. In the long run, it can lower the level of world trade and global welfare.

8. **Unsuitable for Less Developed Countries (LDCs)** Flexible exchange rates may help advanced economies adjust their BOP. However, they are not ideal for Less Developed Countries (LDCs). These countries often have limited ability to increase exports, and cutting imports is difficult because many are essential. They also do not receive enough foreign capital to cover their deficits. As a result, they may face continuous depreciation, leading to persistent inflation and economic instability.

Recap

- Under the Gold Standard (1870-1914), exchange rates were fixed, and currencies were linked to gold
- Inter-War Period (1914-1944)-Exchange rate conditions were unstable and chaotic, affecting international trade
- Bretton Woods System (1944-1973)-Currencies were pegged to the US dollar, which was convertible to gold, but collapsed in 1973
- Since 1973, most countries have adopted a flexible system where exchange rates are determined by market forces
- In the fixed exchange rate system, the currency value is maintained by government or central bank interventions through 'pegging' operations
- In fixed systems, governments buy or sell foreign currency to maintain the official exchange rate

- Flexible Exchange Rate System-The value of a currency is determined by demand and supply in the foreign exchange market, without government interference
- Flexible rates help automatically balance BOP by adjusting to changes in demand and supply
- Both exchange rate systems have pros and cons, and the choice depends on a country's economic goals, stability, and level of development

Objective Questions

1. Which exchange rate system was followed between 1870 and 1914?
2. Which event led to the collapse of the Bretton Woods System in 1973?
3. What determines the value of a currency in a flexible exchange rate system?
4. What is a characteristic of a fixed exchange rate system?
5. What is a major advantage of a fixed exchange rate system?
6. What is a major disadvantage of a fixed exchange rate system?
7. What can cause a currency to appreciate in a flexible exchange rate system?
8. What happens when the supply of foreign currency increases in a flexible exchange rate system?
9. In which exchange rate system does the government intervene to adjust the exchange rate?
10. Which system allows exchange rates to fluctuate based on market forces without government interference?

Answers

1. Gold Standard
2. Pressures on the US dollar and BOP imbalances
3. Market forces of demand and supply
4. Government Intervention
5. Stability
6. Reserves Requirement
7. Decreased Supply
8. Depreciation
9. Pegged
10. Flexible

Assignments

1. Write a short note on the gold standard period in the history of exchange rate systems.
2. Graphically illustrate the fixed exchange rate system.
3. Explain how the exchange rate is determined under a flexible exchange rate system.
4. List out the advantages and disadvantages of a fixed and flexible exchange rate system.
5. In what ways can government intervention influence the functioning of a flexible exchange rate system?

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Foreign Exchange 2

UNIT 1

Types of Foreign Exchange

Learning Outcomes

After completing this unit, the learner will be able to:

- distinguish between spot and forward transactions
- comprehend on forward premium and discount
- acquire awareness on currency swaps

Prerequisites

The foreign exchange market is a global platform where individuals, firms, and banks engage in the buying and selling of foreign currencies. For any given currency, such as the U.S. dollar, this market includes all major financial centres around the world where that currency is traded, including London, Paris, Zurich, Frankfurt, Singapore, Hong Kong, Tokyo, and New York. These global monetary hubs are interconnected through electronic networks, allowing for real-time communication and continuous trading across different time zones. As a result, the foreign exchange market operates as a highly integrated and dynamic system. The integration and working of exchange markets are seen via the working of spot, forward rates, swapping of currency, etc. Let us see these rates in detail.

Keywords

Spot Rate, Forward Rates, Forward Premium, Forward Discount, Currency Swaps

Discussion

6.1.1 Spot and Forward Rates

Spot transaction is one of the most common types of foreign exchange transactions, where the payment and receipt of foreign currency occur within two business days following the agreement date. This two-day window allows sufficient time for both parties to transmit instructions for debiting and crediting the relevant bank accounts domestically and internationally. The exchange rate applied is called the spot rate. For example, the exchange rate R = ₹/€ = 1 (Note that the exchange rate of rupee to euro equal to 1 given here is a hypothetical one. Usually, the Euro is a much stronger currency than the rupee, and one euro amounts to almost 100 rupees in mid-2025).

In addition to spot transactions, there are also forward transactions. A forward transaction involves an agreement made today to buy or sell a specified amount of foreign currency on a specific future date, using a rate that is agreed upon in the present. This is known as the forward rate. For instance, one may enter into a contract today to purchase €100 three months from now at a rate of ₹1.01 = €1. Importantly, no currency is exchanged at the time the contract is signed, aside from the security margin, typically 10 per cent. When the three months elapse, the buyer receives €100 by paying ₹101, regardless of the spot rate on that future date.

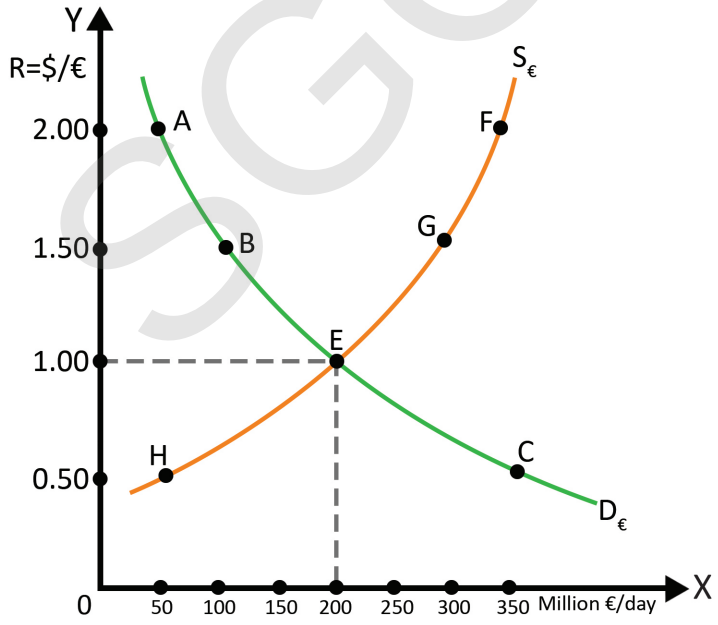

Fig 6.1.1 Spot Rate

The vertical axis measures the rupee price of the euro (R = ₹/ €), and the horizontal axis measures the quantity of euros. With a flexible exchange rate system, the equilibrium exchange rate is R = 1, at which the quantity demanded and the quantity supplied are equal. At equilibrium, the spot rate is determined.

Forward contracts typically have durations of one month, three months, or six months, with three-month contracts being the most common. Longer-term forward contracts are less frequent due to the greater uncertainty associated with predicting future market conditions. Nevertheless, such contracts can be renegotiated or extended for one or more periods when they reach maturity. In the discussion that follows, we will focus exclusively on three-month forward contracts and rates. However, the underlying procedures remain the same for forward contracts of different durations.

The equilibrium forward rate is determined at the point where the market demand and supply curves for future delivery of foreign exchange intersect. The demand and supply for forward foreign exchange arise primarily from three sources, viz., hedging, foreign exchange speculation, and covered interest arbitrage. These factors, along with the relationship between spot and forward rates, will be elaborated upon in the next unit. For now, it is important to understand that, at any given moment, the forward rate may be equal to, greater than, or less than the corresponding spot rate.

When the forward rate is lower than the current spot rate, the foreign currency is said to be trading at a forward discount relative to the domestic currency. Conversely, if the forward rate is higher than the spot rate, the foreign currency is said to be trading at a forward premium. For example, if the spot rate is ₹1 = €1 and the three-month forward rate is ₹0.99 = €1, then the euro is said to be at a three-month forward discount of 1 cent or 1 per cent, equivalent to a 4 per cent forward discount on an annual basis. On the other hand, if the spot rate remains ₹1 = €1 but the three-month forward rate is ₹1.01 = €1, then the euro is said to be at a forward premium of 1 cent or 1 per cent over three months, or 4 per cent annually.

$$FD \text{ or } FP = \frac{FR - SR}{SR} \times 4 \times 100$$

where FR is the forward rate and SR is the spot rate. The multiplication by 4 is to express the FD(−) or FP(+) on a yearly basis, and the multiplication by 100 is to express the FD or FP in percentages. Thus, when the spot rate of the pound is SR = ₹1.00 and the forward rate is FR = ₹0.99, we get

$$FD = \frac{₹0.99 - ₹1.00}{₹\ 1.00} \times 4 \times 100 = \frac{-₹0.01}{₹1.00} \times 4 \times 100$$

$$= -0.01 \times 4 \times 100 = -4\%$$

(₹ instead of dollar symbol)

Similarly, if SR = ₹1 and FR = ₹1.01

$$FP = \frac{₹1.01 - ₹1.00}{₹\ 1.00} \times 4 \times 100 = \frac{-₹0.01}{₹1.00} \times \frac{-}{4} \times 100$$

= 0.01 x 4 x 100 = +4%

6.1.2 Currency Swaps

A foreign exchange swap is a single transaction that combines a spot sale of one currency with a forward repurchase of the same currency. For instance, if the State Bank of India receives ₹1 million that it will not need for three months but wants to invest it in euros, it can enter into a swap deal with Deutsche Bank. This allows SBI to convert rupees to euros now and agree to convert euros back to rupees in three months, all in one deal. This method reduces brokerage costs compared to executing two separate transactions (a spot sale and a forward purchase). The swap rate, typically annualised, is the difference between the spot and forward exchange rates.

In global interbank currency trading, most future currency purchases or sales are carried out through foreign exchange swaps rather than stand-alone forward contracts. As of April 2010, foreign exchange swaps totalled $1,765 billion, making up 44% of total interbank trading. Spot transactions accounted for $1,490 billion or 37%.

6.1.3 Foreign Exchange Futures and Options

Individuals, firms, and banks can manage currency exposure not only through spot and forward contracts but also by trading in foreign exchange futures and options. Trading in currency futures began in 1972 with the establishment of the International Monetary Market (IMM) at the Chicago Mercantile Exchange (CME). A foreign exchange future is essentially a forward contract but with standardised amounts and delivery dates, and it is traded on an organised exchange. The IMM offers futures contracts for a limited number of currencies, including the Japanese yen, Canadian dollar, British pound, Swiss franc, Australian dollar, Mexican peso, and the euro. Each currency contract comes in standard sizes. For example, the Japanese yen contract covers ¥12.5 million, the Canadian dollar contract covers C$100,000, the British pound contract is for £62,500, and the euro contract is for €125,000. These contracts are available for delivery only on four fixed dates each year: the third Wednesday of March, June, September, and December.

Futures trading on the IMM includes daily limits on how much the exchange rate can fluctuate. Traders must pay brokerage commissions and place a security deposit, or margin, usually about 4 per cent of the contract value. Other futures markets similar to the IMM include the NYSE Euronext Liffe and the Frankfurt-based Eurex.

Futures contracts differ from forward contracts in several key ways. In the futures market, only a few major currencies are traded. Trades are standardised and restricted to specific amounts and dates. Also, trading is confined to a few global exchanges like those in Chicago, New York, London, Frankfurt, and Singapore. Futures contracts typically involve smaller amounts than forward contracts, making them more accessible to small firms. Futures contracts can be sold or closed at any point before maturity on the exchange, unlike forward contracts, which are binding and must be settled at maturity.

Although the currency futures market is smaller than the forward market, it has seen rapid growth. These markets are also interconnected through arbitrage, especially when there are price differences between them. Since 1982, foreign exchange options have also been available to individuals, firms, and banks. These can be traded on exchanges such as the Philadelphia Stock Exchange and the Chicago Mercantile Exchange since 1984, or obtained directly from banks.

A foreign exchange option grants the buyer the right but not the obligation to either buy, i.e., call option i.e., or sell a standard amount of foreign currency. This can be done either on a specific date, European option or at any time up to a specific date, American option, at a fixed price known as the strike or exercise price. The size of foreign exchange options matches that of IMM futures contracts. The buyer pays a premium, typically between 1 to 5 per cent of the contract's value, for the right to exercise the option. If the market moves favourably, the option is exercised, and if not, the buyer can let it expire with no further obligation. However, the seller of the option is obligated to honour the contract if the buyer chooses to exercise it. As of April 2010, about $207 billion worth of currency options were outstanding.

It's important to note that forward and futures contracts are not options. Both types must be honoured on the agreed delivery date unless offset earlier, e.g., by entering an opposite contract. In contrast, options offer flexibility, allowing the buyer to decide whether to proceed based on market conditions. Options can be especially useful in uncertain situations. For example, if an Indian company is bidding to acquire a European firm and is required to commit to payment in euros, it can buy an option to acquire euros. If the bid succeeds, the company exercises the option, and if not, it lets the option expire, limiting its loss to the premium paid.

Recap

- Spot transaction - a foreign exchange deal where payment and currency exchange happen within two business days
- The exchange rate used in a spot transaction is called the spot rate
- Forward transaction - a deal made today to exchange currency at a future date, using a pre-agreed rate
- The rate used in a forward transaction is called the forward rate

- In forward contracts, no currency is exchanged when the deal is signed, except for a security margin (usually 10%)
- Spot rate is determined where the supply and demand of currency are equal in the market
- Forward contracts usually last for 1, 3, or 6 months, with 3-month contracts being most common
- Longer forward contracts are rare because it's harder to predict the market far into the future
- Forward rate is set by market demand and supply for foreign exchange at a future date
- Forward exchange demand comes from hedging, speculation, and covered interest arbitrage
- Forward rate can be higher, lower, or equal to the spot rate at any given time
- If the forward rate is lower than the spot rate, the foreign currency is at a forward discount
- A foreign exchange swap combines a spot transaction and a forward transaction in one deal to save costs

Objective Questions

1. What is the typical time frame for the settlement of a spot foreign exchange transaction?
2. What term is used to describe the exchange rate applied in a spot transaction?
3. In a forward contract, when is the foreign currency actually exchanged between parties?
4. What is a common duration for forward contracts in foreign exchange markets?
5. At what point is the equilibrium forward rate determined?
6. What are the three main sources of demand and supply for forward foreign exchange?

7. What does it mean when the forward rate is higher than the spot rate?

8. How is an annualised forward premium or discount calculated?

9. How does a currency swap differ from conducting a spot and forward transaction separately?

10. Why are foreign exchange swaps more commonly used than standalone forward contracts in interbank trading?

Answers

1. Within two business days following the agreement date

2. The spot rate

3. On the specified future date agreed upon at the time of the contract

4. Three months

5. At the intersection of the market demand and supply curves for future delivery of foreign exchange

6. Hedging, foreign exchange speculation, and covered interest arbitrage

7. The foreign currency is said to be at a forward premium

8. By taking the difference between the forward and spot rate, multiplying by 4 (for a quarterly duration), and then by 100 to express as a percentage

9. A currency swap combines a spot and forward transaction into a single deal, reducing brokerage costs

10. More cost-effective and efficient for future currency purchases or sales

Assignments

1. Explain the difference between spot and forward foreign exchange transactions with suitable examples. What role does the spot rate play in determining the cost of a forward contract?

2. Discuss the factors that influence the determination of the forward rate in the foreign exchange market. How can the forward rate reflect a premium or a discount? Illustrate with numerical examples.

3. What are currency swaps, and how do they differ from separate spot and forward transactions? Discuss their advantages and explain why they are preferred in interbank currency trading.

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UNIT 2

Foreign Exchange Risks

Learning Outcomes

After completing this unit, the learner will be able to:

- comprehend foreign exchange risks
- distinguish between hedging and speculation
- understand how hedging is used to reduce foreign exchange risks
- know how speculation works in the foreign exchange market

Prerequisites

In today's highly interconnected global economy, businesses, financial institutions, and governments routinely engage in cross-border transactions that expose them to fluctuations in exchange rates. Foreign exchange risk, also known as currency risk, arises when the value of a financial transaction is affected by changes in the relative value of different currencies. As exchange rates are influenced by a multitude of factors ranging from interest rates and inflation differentials to geopolitical events and capital flows, such volatility can lead to unexpected gains or losses for entities engaged in international trade, investment, or financing. For instance, an importer contracted to pay in a foreign currency may end up paying significantly more in domestic terms if the exchange rate moves unfavourably before the payment is made. Managing foreign exchange risk has therefore become a central concern in international financial management.

Keywords

Foreign Exchange Risks, Transaction Exposure, Hedging, Speculation

Discussion

6.2.1 Foreign Exchange Risks

Over time, a country's demand and supply for foreign exchange continuously shift, causing frequent changes in both spot and forward exchange rates. These shifts are influenced by various dynamic factors such as changes in consumer preferences between domestic and foreign goods, variations in economic growth and inflation rates, shifts in interest rates, and evolving market expectations. For instance, if Indian consumers develop a greater preference for products from the European Monetary Union (EMU), the increased demand for euros raises the supply of rupees in the forex market, leading to a depreciation of the rupee. Conversely, if India, experiences a lower inflation rate than the EMU, Indian goods become more affordable to EMU buyers. This increases the supply of euros to the Indian market, causing the dollar to appreciate. Even expectations about future currency movements, such as the belief in a stronger dollar, can cause the dollar to appreciate in advance.

Exchange rate fluctuations are a natural consequence of these continuous economic shifts. Historical trends confirm this volatility. For example, the Japanese yen appreciated sharply against the U.S. dollar from 360 yen per dollar in 1971 to 180 yen in 1978. It later weakened to 260 yen per dollar in 1982 and 1985 before strengthening again to just over 80 yen per dollar by 1995. Between 1996 and 2007, the yen remained between 109 and 125 per dollar and averaged 82 in March 2012. The euro followed a similar pattern of fluctuation. Initially valued at $1.17/€ in 1999, it fell to $0.85/€ in 2000 but then rose to $1.36/€ by 2004. After more changes, it peaked at $1.58/€ in 2008 before dropping again to $1.32/€ in 2012. Meanwhile, the British pound depreciated sharply in the early 1980s and again in 2008, while the Canadian dollar appreciated significantly from 2002 to early 2008 before weakening again.

The effective exchange rate of the dollar, a weighted average of the dollar's value against multiple currencies, also shows significant volatility. From 1980 to 1985, the dollar appreciated sharply, followed by a notable depreciation through 1987. These movements reflect not only changes in specific currency pairs but also broader global financial dynamics. Such fluctuations expose businesses and individuals to foreign exchange risk, especially when payments or receipts are expected in a foreign currency at a future date. For example, an Indian importer who agrees to pay €100,000 in three months might face a higher cost if the exchange rate shifts from ₹1/€1 to ₹1.10/€1, increasing the rupee payment from ₹100,000 to ₹110,000. Conversely, if the rate shifts to ₹0.90/€1, the importer benefits by paying only ₹90,000. Although the outcome may be favourable or unfavourable, the uncertainty itself is risky. Similarly, an Indian exporter expecting to receive €100,000 in three months may receive less than expected if the exchange rate drops, reducing their rupee earnings. Investors are also exposed to those who invest in EMU assets, hoping to benefit from higher interest rates, might see those gains erased if the euro weakens significantly before they convert back to rupees.

These examples highlight that whenever a business expects to make or receive a payment in a foreign currency at a future date, it faces foreign exchange risk, also known as an open position. This risk arises because spot exchange rates fluctuate over time, making the actual value of future payments uncertain. Since most business people are risk-averse, they typically seek ways to protect themselves against such uncertainties, often through hedging strategies. Foreign exchange risk is not limited to future transactions alone, i.e., transaction exposure, the risk from pending payments or receipts in a foreign currency. It also includes translation or accounting exposure, the risk from converting the value of foreign-held assets and liabilities into the domestic currency for financial reporting, and economic exposure, the risk from changes in exchange rates that may affect a firm's future profits and overall value. However, the following discussion focuses primarily on transaction exposure due to its direct and immediate impact on trade and investment decisions.

6.2.2 Hedging

Hedging refers to the act of avoiding foreign exchange risk or covering an open position. For instance, an importer who needs to pay €100,000 in three months can borrow that amount today at the current spot rate of ₹1/€1 and deposit it in a bank to earn interest. This way, the importer eliminates the risk of a higher spot rate in the future that would otherwise increase the cost of payment. The cost of this hedging method is the difference between the interest paid on the loan and the lower interest earned on the deposit. Similarly, an exporter expecting to receive €100,000 in three months could borrow that amount now, convert it to ₹100,000 at today's spot rate, and deposit it to earn interest. When the payment arrives in euros, the exporter repays the loan. Again, the cost of this hedge is the difference between the borrowing and deposit interest rates.

However, hedging through the spot market has a major drawback. It requires borrowing or tying up one's own funds for the entire period. To avoid this, hedging is more commonly done in the forward market, where funds do not need to be committed immediately. For example, the importer can agree to buy euros for delivery in three months at today's forward rate. If the euro carries a three-month forward premium of 4 per cent annually, the importer will pay ₹101,000 for €100,000, resulting in a hedging cost of ₹1,000, or 1 per cent over three months. On the other hand, the exporter can lock in a forward contract to sell euros and receive a known rupee amount in three months, without needing to borrow funds upfront. If the euro is at a forward discount of 4 per cent annually, the exporter will receive ₹99,000. If at a forward premium, the exporter receives ₹101,000, providing certainty of revenue.

Hedging can also be done using futures or options markets. Suppose an importer must pay €100,000 in three months, and the forward rate is ₹1/€1. The importer can either purchase the euros forward, guaranteeing a payment of ₹100,000, or buy an option to purchase €100,000 at the same rate, paying a premium, say, ₹1,000. If, after three months, the spot rate drops to ₹0.98/€1, the importer can ignore the option and buy euros at the lower spot rate, paying just ₹98,000. In this case, the ₹1,000 premium acts like an insurance policy, and the importer ends up saving ₹2,000 compared to the forward contract.

In a world where exchange rates fluctuate constantly, the ability to hedge foreign exchange risk greatly supports international trade and investment. Without hedging, international capital flows would decline, trade and specialisation would shrink, and the overall benefits of trade would be reduced. Large firms, such as multinational corporations, typically hedge only their net open position, meaning the difference between payments and receipts in the same currency due at the same time. Likewise, a bank has an open position only equal to its net exposure in each foreign currency for each future date. Banks try to close these positions as much as possible by trading with other banks through brokers and may hedge the rest in the spot, futures, or options markets.

6.2.3 Speculation

Speculation is essentially the opposite of hedging. While a hedger aims to avoid foreign exchange risk, a speculator deliberately accepts, and even seeks out, such risk, referred to as an open position with the goal of making a profit. A speculator earns a profit when their predictions about future spot rate movements are correct; if not, they incur a loss. Like hedging, speculation can occur in the spot, forward, futures, or options markets, though it most often takes place in the forward market. To begin, consider how speculation works in the spot market.

If a speculator anticipates that the spot rate of a particular foreign currency will rise, they can purchase that currency now and deposit it in a bank, planning to sell it later at a higher rate. If the forecast is accurate and the spot rate increases, the speculator gains the difference between the original lower rate at which the currency was bought and the higher rate at which it is later sold. However, if the prediction is wrong and the spot rate falls, the speculator faces a loss, as the resale price will be lower than the purchase price.

Conversely, if the speculator expects the spot rate to decrease, they may borrow the foreign currency for three months, immediately convert it to domestic currency at the prevailing spot rate, and deposit the domestic currency to earn interest. If the spot rate drops as predicted, they can repurchase the foreign currency at the lower rate and repay the loan, thus profiting from the transaction. Of course, for the trade to be profitable, the drop in the spot rate must be sufficient to outweigh any interest rate differential in favour of the foreign currency. If the rate unexpectedly rises, the speculator ends up with a loss.

In both of these spot market examples, the speculator either ties up personal funds or must borrow, which presents a significant disadvantage. To avoid this issue, speculation typically occurs in the forward market. Suppose a speculator believes that the spot rate of a currency in three months will be higher than the current three-month forward rate. They would enter into a forward contract to purchase a specific amount of the foreign currency, agreeing to receive and pay for it in three months. If, when the contract matures, the spot rate is higher than the contracted forward rate, the speculator buys the currency at the lower forward rate and sells it at the higher spot rate, thereby making a profit. If the spot rate ends up being lower than the forward rate, the speculator incurs

a loss. Regardless, no currency is exchanged until the contract matures, except for the standard margin requirement of around 10 per cent that must be paid when signing the forward contract.

As a concrete example, consider a case where the three-month forward rate for the euro is ₹1.01/€1, and the speculator expects the future spot rate to be ₹0.99/€1. If the spot rate in three months turns out to be ₹0.99/€1, the speculator buys euros at that rate and sells them via the forward contract at ₹1.01/€1, making a profit of 2 cents per euro. If the spot rate is ₹1.00/€1, the profit is only 1 cent per euro. If the spot rate matches the forward rate at ₹1.01/€1, there is no gain or loss. If the spot rate exceeds ₹1.01/€1, the speculator suffers a loss equivalent to the difference between the two rates.

As an alternative, a speculator who believes the euro will depreciate might purchase an option to sell a specific amount of euros in three months at, say, ₹1.01/€1. If their prediction is correct and the future spot rate is ₹0.99/€1, they would buy euros in the spot market and sell them under the option contract for $1.01/€1, earning 2 cents per euro. After subtracting the option premium, the net profit may be slightly lower. If the spot rate turns out to be higher than expected, the speculator can let the option expire, incurring only the loss of the premium. This limited downside risk makes options a safer speculative tool than forward contracts, where the trader must fulfil the commitment and potentially face larger losses.

When a speculator purchases a foreign currency in the spot, forward, or futures market or buys an option to do so, expecting the spot rate to rise, they are said to take a long position. Conversely, if a speculator borrows or sells a foreign currency forward, expecting the spot rate to fall and aiming to repurchase it later at a lower rate, they take a short position, essentially selling what they do not yet own.

Speculation can have either stabilising or destabilising effects. Stabilising speculation occurs when a currency is purchased as its value falls or is low, in anticipation of a rebound, or when it is sold as its value rises or is high, expecting a correction. This type of activity reduces volatility in exchange rates over time and is generally beneficial. Destabilising speculation, by contrast, involves selling a currency when its value is already falling or buying it when its value is rising, expecting those trends to continue. Such behaviour can amplify exchange rate swings and disrupt global trade and capital flows. Determining whether speculation is mostly stabilising or destabilising is a key question. Generally, it is believed that under normal market conditions, speculation tends to be stabilising, and this assumption is used throughout.

Speculators are typically wealthy individuals or large firms rather than banks. Still, anyone anticipating a future payment or receipt in foreign currency can engage in speculation through their timing. For example, an importer expecting the exchange rate to rise might accelerate payments to avoid higher future costs. Conversely, an exporter expecting a rate increase might delay shipments or offer extended credit terms to receive payment later at a more favourable rate. These tactics, known as leads and lags, represent a form of speculation.

In recent years, speculation has occasionally resulted in massive financial losses. One notable example is Showaka Shell Sekiyu, a Japanese oil refiner half-owned by

Royal Dutch Shell. Between 1989 and 1992, the company's finance team speculated on a rise in the dollar's value using futures contracts. When the dollar instead weakened against the yen, the company suffered a $1.37 billion loss on a $6.44 billion position. In another case, John Rusnak of Allfirst Bank, a U.S. subsidiary of Allied Irish Banks, lost $750 million over five years by betting on the U.S. dollar against the yen, losses uncovered in 2002. In early 2004, four currency dealers at National Australia Bank generated $360 million in losses from unauthorised forex trades in just three months. These examples underscore that speculation in the foreign exchange market carries significant risk and can lead to devastating financial outcomes.

Recap

- Foreign exchange rates change often due to shifts in demand and supply
- These shifts are influenced by inflation, interest rates, growth, and preferences
- If India's demand for EMU goods increases, the rupee depreciates
- If India's inflation is lower than EMU's, the rupee appreciates
- Expectations of a stronger rupee can increase its value before it actually does
- Exchange rates are volatile and can change frequently over time
- Fluctuations expose businesses to foreign exchange risk
- Foreign exchange risk occurs when future payments in foreign currency are uncertain
- Business people often hedge to protect against currency risk
- There are three types of exposures: transaction, translation, and economic
- Transaction exposure deals with future payments and receipts
- Hedging helps avoid or reduce foreign exchange risk
- Hedging can be done using spot, forward, futures, or options markets
- Forward contracts do not require upfront funds and are commonly used
- Options act like insurance, giving the right, but not the obligation, to buy or sell

- Speculators take risks to earn profits from expected currency changes
- Speculation can be stabilising or destabilising
- Speculation can lead to large profits but also massive financial losses

Objective Questions

1. What is the term for the risk involved in future foreign payments?
2. What strategy is used to avoid foreign exchange risk?
3. Which market allows future delivery of currencies at a fixed rate?
4. What is the opposite of hedging?
5. What is the risk due to reporting foreign assets in domestic currency?
6. Which type of exposure affects a firm's future profitability?
7. What do we call the act of buying currency expecting its value to rise?
8. What is it called when speculation increases market volatility?
9. What is the term for advancing or delaying payments based on rate expectations?
10. Who are more likely to be speculators, banks or firms?
11. Which market requires funds to be tied up when hedging through borrowing?
12. What is the cost of an option contract called?
13. What type of position is taken when expecting a currency's value to rise?
14. What is a forward contract's usual margin requirement?
15. What happens if a forward rate is lower than the future spot rate in speculation?
16. What is the primary advantage of using options for hedging?
17. What term refers to selling currency expecting it to drop in value?

18. What happens to the rupee when Indian goods become cheaper for foreign buyers?

19. What is the risk of holding assets in foreign currency on the balance sheet?

Answers

1. Foreign exchange risk
2. Hedging
3. Forward market
4. Speculation
5. Translation exposure
6. Economic exposure
7. Long position
8. Destabilising speculation
9. Leads and lags
10. Firms
11. Spot market
12. Premium
13. Long position
14. 10 per cent
15. Profit
16. Limited downside risk
17. Short position
18. Appreciation
19. Translation exposure

Assignments

1. Explain the three types of foreign exchange exposures with examples.
2. Discuss the advantages and disadvantages of hedging through forward contracts versus options.
3. Describe the role of speculation in the foreign exchange market and its potential impact.
4. Analyse how a multinational corporation can manage its net open position in foreign currency.

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UNIT 3

India in the Contemporary Foreign Exchange Scenario

Learning Outcomes

After completing this unit, the learner will be able to:

- understand the exchange controls in India
- know the recent trends in foreign exchange reserves

Prerequisites

India experienced a severe external payments crisis during 1990–1991, primarily triggered by deep-rooted macroeconomic imbalances that emerged in the latter half of the 1980s. Key domestic factors included the monetisation of fiscal deficits, an overvalued exchange rate, high import tariffs, and an inward-looking industrial policy. These internal weaknesses were compounded by a series of global developments, such as the economic recession in industrialised countries, the outbreak of the First Gulf War in August 1990, and the tightening of external credit by international banks. Collectively, these factors eroded global investor confidence and left India with a crisis. Following that challenging period, the country embarked on a path of structural reforms and liberalisation, which led to sustained progress with no major setbacks. Over the years, India's foreign exchange reserves have shown a consistent upward trend, reflecting strengthened macroeconomic fundamentals and improved external stability.

Keywords

Exchange Controls, Special Drawing Rights, Effective Exchange Rate, Nominal Effective Exchange Rate

Discussion

6.3.1 Foreign Exchange Markets and Exchange Control in India

India's approach to managing its exchange rate has undergone significant transformations since gaining independence, evolving from a rigid fixed system to its current market-driven form. This journey spans over six decades, adapting to changing global economic landscapes and domestic priorities. Initially, from 1947 to 1971, India operated under a Par Value System, aligning with the IMF's framework. The Indian rupee's external value was fixed at 4.15 grains of fine gold, and it was directly pegged to the British pound sterling at Rs. 13.33 per pound (or Rs. 4.76 per U.S. dollar) as of September 1949. This rate remained constant until June 1966, when the rupee underwent a devaluation of 36.5 per cent, adjusting to Rs. 21 per pound sterling (or Rs. 7.50 per U.S. dollar). This fixed exchange rate persisted until 1971, when the collapse of the Bretton Woods system, triggered by the U.S. suspension of dollar convertibility, necessitated a change.

Following the breakdown of Bretton Woods, India transitioned to a Pegged Regime from 1971 to 1992. Initially, the rupee was pegged to the U.S. dollar and then to the pound sterling. However, downward pressure on the pound sterling and the diminishing importance of the UK in India's trade led to a misalignment of the rupee against other major currencies. To address these weaknesses, the Indian rupee was delinked from the pound sterling in September 1975 and subsequently pegged to a basket of currencies representing India's primary trading partners. Throughout the period from 1975 to 1992, the Reserve Bank of India officially determined the rupee's exchange rate, maintaining it within a nominal band of +/-5 per cent relative to this weighted currency basket.

After liberalisation, India's foreign exchange market has experienced steady growth, largely due to the rising volume of the country's international trade, enhanced communication infrastructure, and improved access to global foreign exchange markets. Despite this progress, the daily transaction volume, which averages around USD 2 billion, remains modest compared to the volume handled by more established and globally recognised foreign exchange markets. This limited volume can be attributed to several factors. The Indian Rupee is not widely traded internationally and lacks strong demand in global markets. Most of India's external trade is conducted in major global currencies such as the US dollar, British pound, euro, Japanese yen, and Swiss franc. These are also the primary currencies traded in India's domestic foreign exchange market.

6.3.1.1 Exchange Control in India

All foreign exchange transactions in India are governed by the Foreign Exchange Management Act (FEMA), 1999. The origins of exchange control in India trace back

to the Defence of India Rules (DIR) 1935, introduced during the Second World War to manage the country's scarce foreign exchange reserves. These rules eventually evolved into the Foreign Exchange Regulation Act (FERA), 1973 which later underwent amendments and came into effect on January 1, 1974. In 1994, the government began relaxing several provisions under FERA, reflecting India's move towards economic liberalisation. Eventually, FERA was repealed and replaced by FEMA on June 1, 2000, marking a shift from regulation to management of foreign exchange. Since then, FEMA has served as the key legislative framework guiding India's foreign exchange policy.

Under FEMA, the Reserve Bank of India (RBI) has the central authority to regulate the movement of foreign exchange in the country. As per Section 11(1) of FEMA, the RBI may issue directions to authorised persons such as banks and financial institutions regarding payments, or actions to be taken or avoided concerning foreign securities, to ensure compliance with FEMA and its associated rules and notifications. According to Section 11(2), the RBI can also require authorised persons to furnish information in a specified manner to verify compliance with the Act. Further, under Section 11(3), if an authorised person violates any direction issued by the RBI or fails to submit returns as directed, the RBI has the authority to impose a penalty. This may be up to ₹10,000, with an additional ₹2,000 per day for continuing violations, under FEMA provisions.

The Exchange Control Manual, published by the RBI, provides detailed guidelines to authorised dealers in foreign exchange. These authorised dealers, usually banks and other financial institutions, are expected to strictly adhere to the instructions and policies outlined by the RBI. Any deviation from these directives is treated seriously and may result in regulatory action.

6.3.2 Foreign Exchange- Indian Scenario in the Contemporary World

India's foreign exchange reserves consist of four main components: foreign currency assets (FCA), gold, special drawing rights (SDRs), and the reserve tranche position (RTP) with the International Monetary Fund (IMF). After briefly crossing the USD 700 billion mark, the reserves stood at USD 640.3 billion at the end of December 2024. These reserves are sufficient to cover around 90% of India's total external debt, which was USD 711.8 billion as of September 2024, indicating a robust financial cushion against global uncertainties and external shocks.

As of 2024, India ranked 4th globally in terms of foreign exchange reserves, trailing only China, Japan, and Switzerland. The increase in reserves was largely driven by net positive capital inflows, with foreign currency assets (FCA) contributing the most to the overall rise. In 2024 alone, India's reserves increased by USD 27.1 billion, further strengthening its external position.

An important measure of external sector resilience is the import cover, which reflects how many months of imports the country's reserves can finance. As of December 2024, India's import cover rose to 10.9 months, far exceeding the IMF's recommended minimum of three months for emerging economies. This high level of reserve adequacy enhances India's ability to manage external risks and maintain economic stability. A significant contributor to this improvement was the Balance of Payments (BoP) surplus

of USD 63.7 billion in FY24, which was further supported by a valuation gain of USD 4.3 billion. During the first half of FY25, India's forex reserves grew by an additional USD 59.4 billion, primarily due to a BoP surplus of USD 23.9 billion and a valuation gain of USD 35.5 billion.

The following figures show the trend in foreign exchange reserves from April 2023 to December 2024, and from June 2024 to June 2025, respectively.

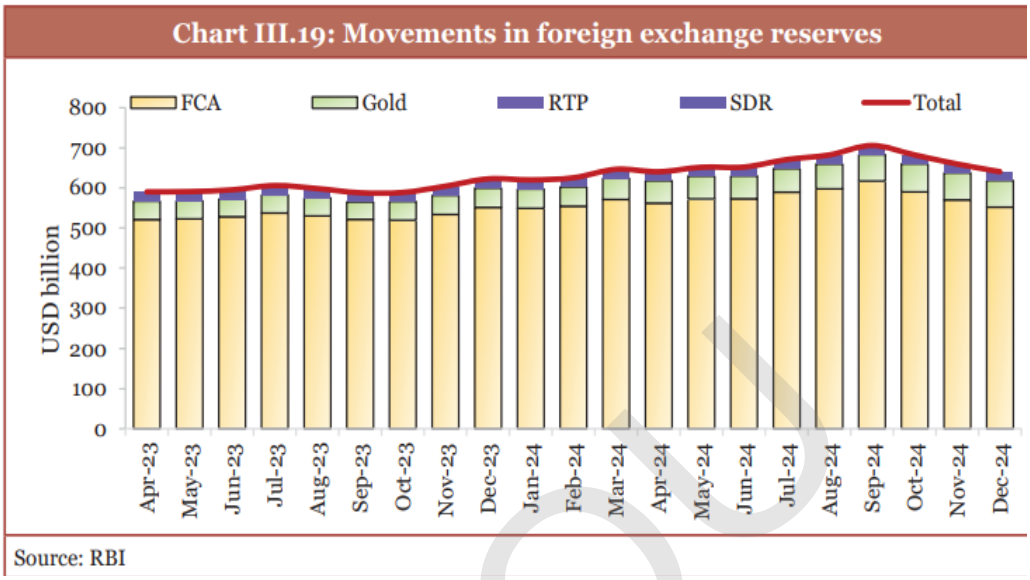

Fig 6.3.1 Foreign exchange reserves from April 2023 to December 2024

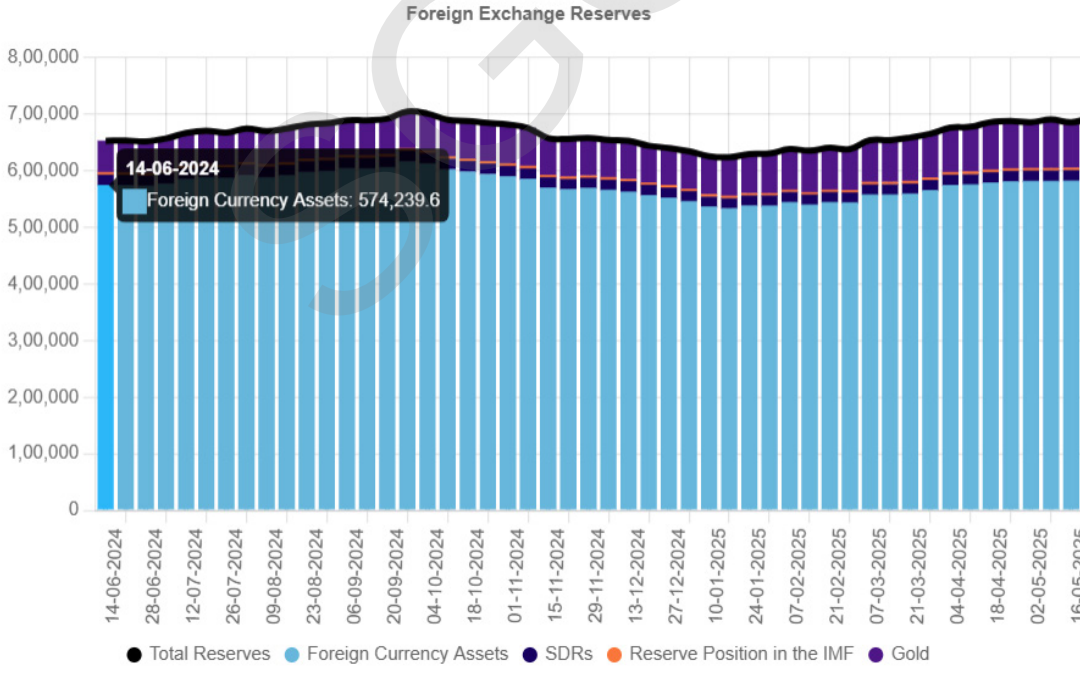

Fig 6.3.2 Foreign exchange reserves from June 2024 to June 2025

The Indian Rupee (INR) operates under a market-determined exchange rate system, with no pre-set target level or fixed trading band. The value of the INR is influenced by a range of domestic and international factors, including movements in the US Dollar Index, trends in capital flows, fluctuations in interest rates, crude oil prices, and the current account deficit. During the first nine months of FY25, up to January 6, 2025, the rupee experienced a modest depreciation of 2.9%. Despite this, the INR outperformed several other emerging market currencies. In comparison, the Canadian Dollar depreciated by 5.4%, the South Korean Won by 8.2%, and the Brazilian Real by 17.4% during the same period. A key driver of the rupee's depreciation in 2024 was the broad-based strengthening of the US Dollar, which was largely influenced by geopolitical tensions in the Middle East and uncertainty surrounding the US elections. The change in the bilateral exchange rate of major countries against the dollar is shown below.

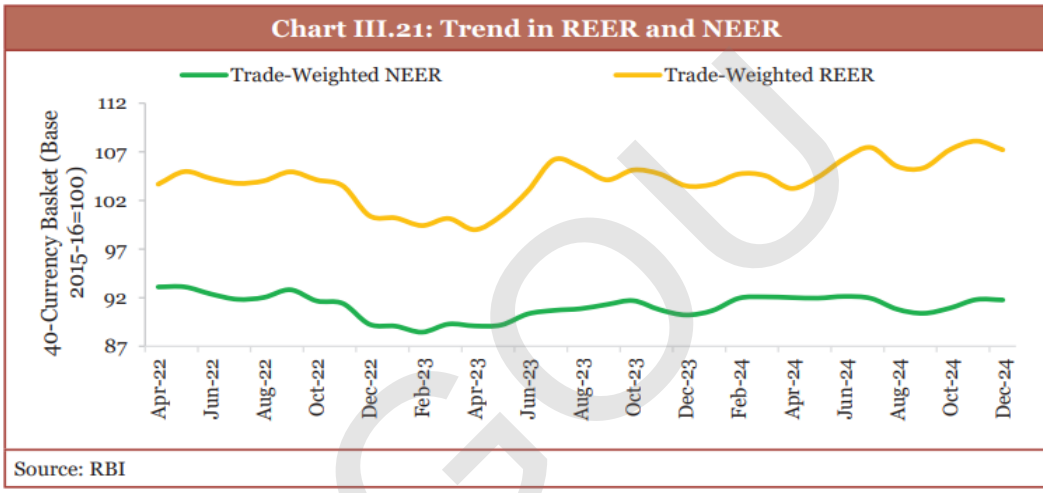

Fig 6.3.3 Exchange Rates of Major Currencies from April to December 2024

Since India adopted a floating exchange rate regime, the Effective Exchange Rates (EER) have gained importance as indicators of the country's external competitiveness.

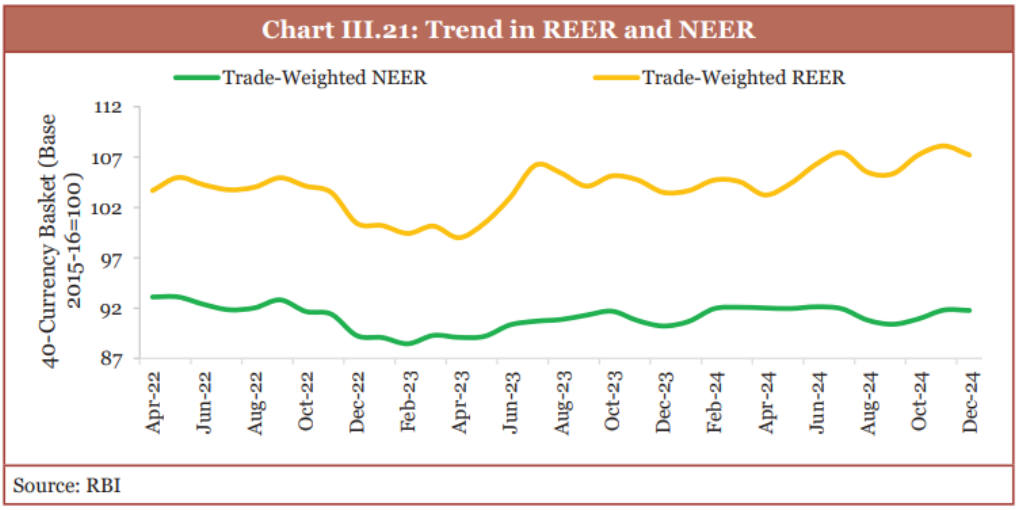

Fig 6.3.4 Trend in NEER and REER

The Nominal Effective Exchange Rate (NEER) of the INR remained relatively stable, fluctuating within the 90–92 range between April and November 2024, indicating resilience in the face of global volatility. Meanwhile, the Real Effective Exchange Rate (REER), which accounts for inflation differentials and reflects the real purchasing power of the currency, showed a steady appreciation. It rose from 103.2 in April 2024 to 107.2 in December 2024, suggesting an increase in the real value of the rupee relative to a basket of trading partner currencies, as shown in the figure.

Recap

- India's foreign exchange market has grown due to increased trade, better communications, and improved global access
- Despite growth, India's daily forex trading volume is about USD 2 billion, low compared to major global markets
- The Indian Rupee is not an internationally traded currency and lacks global demand
- Most of India's trade is conducted in major currencies like the US dollar, euro, pound, yen, and Swiss franc
- The Foreign Exchange Management Act (FEMA), 1999, governs all foreign exchange transactions in India
- Exchange control in India began with the Defence of India Rules in 1935 and evolved through the FERA Act of 1947
- FERA was eventually replaced by FEMA in 2000 to support a liberalised and market-driven foreign exchange regime

- The Reserve Bank of India (RBI) regulates foreign exchange through directives issued under FEMA
- RBI has the authority to impose penalties on entities that violate FEMA provisions or fail to report as required
- Authorised dealers, such as banks, must follow the RBI's Exchange Control Manual strictly
- India's foreign exchange reserves include foreign currency assets (FCA), gold, SDRs, and RTP in the IMF
- As of December 2024, India's forex reserves stood at USD 640.3 billion, covering around 90% of its external debt
- India ranked 4th globally in foreign exchange reserves, after China, Japan, and Switzerland
- The country's import cover reached 10.9 months in December 2024, far above the IMF's recommended 3-month level
- The Real Effective Exchange Rate (REER) of the rupee appreciated from 103.2 to 107.2 between April and December 2024

Objective Questions

1. Which act currently governs foreign exchange in India?
2. What does FEMA stand for?
3. Which institution regulates foreign exchange transactions in India?
4. What replaced FERA in 2000?
5. What component forms the largest part of India's forex reserves?
6. How much did India's forex reserves total in December 2024?
7. What was India's global rank in foreign exchange reserves in 2024?
8. What is the full form of REER?
9. What factor largely caused the rupee's depreciation in 2024?

Answers

1. FEMA (Foreign Exchange Management Act), 1999
2. Foreign Exchange Management Act
3. Reserve Bank of India (RBI)
4. FEMA
5. Foreign Currency Assets (FCA)
6. USD 640.3 billion
7. 4th
8. Real Effective Exchange Rate
9. Strengthening of the US Dollar

Assignments

1. Discuss the evolution of exchange control regulations in India and the transition from FERA to FEMA. How has this shift impacted India's foreign exchange policy?
2. Explain the composition and current status of India's foreign exchange reserves. What does the high import cover indicate about India's economic resilience?
3. Analyse the major factors influencing the value of the Indian Rupee in recent years. How do REER and NEER help assess the rupee's competitiveness?

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2. Krugman, P. R., Obstfeld, M., & Melitz, M. J. (2018). *International Economics: Theory and Policy* (11th ed.). Pearson Education.

3. Sodersten, B., & Reed, G. (1994). *International Economics* (3rd ed.). Macmillan Education UK

MODEL QUESTION PAPER SETS

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MODEL QUESTION PAPER I
SECOND SEMESTER - BA ECONOMICS EXAMINATION
DISCIPLINE CORE – 04 – B21EC05DE
INTERNATIONAL ECONOMICS
(CBCS - UG)
2022-23 - Admission Onwards

Time: 3 Hours Max Marks: 70

Section A - Objective Type Questions

I Answer any 10 questions. Each question carries 1 mark

1. Define international economics.
2. What is opportunity cost?
3. What is meant by community indifference curve?
4. Who is regarded as the father of mercantilism?
5. State the meaning of Leontief Paradox.
6. What is free trade?
7. What is dumping?
8. Define Balance of Payments.
9. What is SDR?
10. Define current account in BOP.
11. Define foreign exchange market.
12. What is equilibrium exchange rate?
13. Define spot exchange rate.
14. What is Hedging?
15. Define forward rate.

(10×1=10 marks)

Section B- Very Short Answer

II Answer any 10 questions. Each question carries 2 marks

16. Mention two features of international trade.
17. What is production possibility curve?
18. Give two assumptions of absolute advantage theory.
19. Mention two criticisms of comparative advantage theory.
20. Distinguish between tariff and non tariff barriers.
21. List out two functions of WTO.
22. Name any two regional trade agreements.
23. Write any two causes of disequilibrium in BOP.
24. What is meant by deliberative measures to correct BOP disequilibrium.
25. Write a short note on devaluation.
26. Mention two functions of foreign exchange market.
27. What is meant by a flexible exchange rate system.
28. Describe the features of currency swap.
29. Define exchange rate.
30. What is meant by speculation in foreign exchange?

(10×2=20 marks)

Section C- Short Answer

III Answer any 5 questions. Each question carries 4 marks.

31. Explain the importance of international trade in economic development.
32. Briefly explain the mercantilist approach to trade.
33. Explain the different types of dumping.
34. Discuss the structure of Balance of Payments.
35. Explain the Purchasing power parity theory of exchange rate.
36. Elucidate on the working of hedging in foreign exchange market.
37. Discuss static gains from international trade.
38. Explain two arguments in favour of protection.

39. Describe Bretton Woods system.

40. Distinguish between balance of trade and balance of payments.

(5×4=20 marks)

Section D- Long Answer/Essay

IV Answer any 2 questions. Each question carries 10 marks.

41. Evaluate the concept of Gains from Trade. Distinguish between static and dynamic gains.

42. Examine the Heckscher–Ohlin Theory with suitable examples.

43. Discuss the origin, objectives, and functions of WTO.

44. Compare and contrast fixed and flexible exchange rate systems.

(2×10=20 marks)

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MODEL QUESTION PAPER II
SECOND SEMESTER - BA ECONOMICS EXAMINATION
DISCIPLINE CORE – 04 – B21EC05DE
INTERNATIONAL ECONOMICS
(CBCS - UG)
2022-23 - Admission Onwards

Time: 3 Hours Max Marks: 70

Section A - Objective Type Questions

I Answer any 10 questions. Each question carries 1 mark

1. Define international economics.
2. What is an offer curve?
3. Define PPC.
4. Who introduced comparative advantage theory?
5. What is factor endowment?
6. Define international cartels.
7. Expand SAARC.
8. What is disequilibrium in BOP?
9. What is exchange control?
10. Define balance of trade.
11. What is mint parity ?
12. Define a flexible exchange rate.
13. What is the forward exchange rate?
14. Define speculation.
15. What is meant by currency swaps?

(10×1=10 marks)

Section B- Very Short Answer

II Answer any 10 questions. Each question carries 2 marks

16. What is meant by the real and monetary sides of international economics?
17. What is the j-curve effect?
18. Define double factorial terms of trade .
19. What do you mean by disequilibrium in the balance of payments ?
20. What is meant by the vent for surplus theory?
21. What is the absolute version of purchasing power parity theory?
22. Who introduced the theory of absolute advantage?
23. Write a short note on the clearing houses in the foreign exchange market.
24. Define import quotas.
25. What is meant by comparative advantage in trade ?
26. What is persistent dumping?
27. Write a short note on the mercantilist view on international trade .
28. What is the meaning of trade related intellectual property rights?
29. What is the effective exchange rate?
30. What do you mean by the financial account in the balance of payments?

(10×2=20 marks)

Section C- Short Answer

III Answer any 5 questions. Each question carries 4 marks.

31. Explain Leontief paradox.
32. Explain the structure of bop.
33. Discuss the types of terms of trade.
34. What is the elasticity approach of bop?
35. Discuss the major methods to overcome foreign exchange risks.
36. What are the key challenges facing SARRC and the way forward?
37. What are the major differences between the balance of trade and balance of payments.
38. Discuss absorption approach .

39. Explain the determination of equilibrium exchange rate.

40. Discuss the effects of devaluation.

(5×4=20 marks)

Section D- Long Answer/Essay

IV Answer any 2 questions. Each question carries 10 marks.

41. Describe the BOP theory of exchange rate.

42. Discuss the objectives and functions of the European Union.

43. Describe the process of determining trade equilibrium with the help of offer curves.

44. Describe the foreign exchange Indian scenario in the contemporary world.

(2×10=20 marks)

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ISBN 978-81-988746-5-8

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